

These two volumes present a nice balance of review and new results and make a useful addition to any library. A warning that the binding of the book is not of the highest quality is probably in order.

DAVID SCHRAMM

JAMES N. FRY

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## Books Received

**Advances in Enzymology and Related Areas of Molecular Biology.** Vol. 53. Alton Meister, Ed. Interscience (Wiley), New York, 1982. viii, 460 pp., illus. \$40.

**Advances in Perinatal Medicine.** Vol. 2. Aubrey Milunsky, Emanuel A. Friedman, and Louis Gluck, Eds. Plenum, New York, 1982. xvi, 384 pp., illus. \$39.50.

**Algebraic Topology.** A First Course. Marvin J. Greenberg and John R. Harper. Benjamin/Cummings Advanced Book Program, Reading, Mass., 1981. xiv, 312 pp., illus. Cloth, \$31.50; paper, \$19.50. Mathematics Lecture Note Series, 58.

**The Alkaloids.** Chemistry and Physiology. Vol. 19. R. G. A. Rodrigo, Ed. Academic Press, New York, 1981. xvi, 228 pp., illus. \$39.

**The American Cockroach.** William J. Bell and K. G. Adiyodi, Eds. Chapman and Hall, London, 1981 (U.S. distributor, Methuen, New York). xviii, 530 pp., illus. \$65.

**Analysis of Visual Behavior.** Papers from a NATO Advanced Study Institute, Waltham, Mass., June 1978. David J. Ingle, Melvyn A. Goodale, and Richard J. W. Mansfield, Eds. MIT Press, Cambridge, Mass., 1982. x, 834 pp., illus. \$75.

**Annual Review of Fluid Mechanics.** Vol. 14. Milton van Dyke, J. V. Wehausen, and John L. Lumley, Eds. Annual Reviews, Palo Alto, Calif., 1982. viii, 456 pp., illus. \$22.

**Annual Review of Psychology.** Vol. 33. Mark R. Rosenzweig and Lyman W. Porter, Eds. Annual Reviews, Palo Alto, Calif., 1982. xiv, 744 pp. \$22.

**Bone Scintigraphy.** Papers from a course, Leiden, Jan. 1980. Ernest K. J. Pauwels, Henri E. Schütte, and Wybren K. Taconis, Eds. Leiden University Press, The Hague, 1981 (U.S. distributor, Kluwer Boston, Hingham, Mass.). viii, 212 pp., illus. \$47. Boerhaave Series for Postgraduate Medical Education, vol. 20.

**Brain Mechanisms of Behaviour in Lower Vertebrates.** Papers from a symposium, Belfast, July 1979. P. R. Laming, Ed. Cambridge University Press, New York, 1981. x, 318 pp., illus. Cloth, \$49.95; paper, \$22.95. Society for Experimental Biology Seminar Series, 9.

**Breeding Plants for Less Favorable Environments.** M. N. Christiansen and Charles F. Lewis, Eds. Wiley-Interscience, New York, 1982. x, 460 pp., illus. \$47.50.

**Cardiovascular Hemorheology.** Syoten Oka. Cambridge University Press, New York, 1981. xii, 208 pp., illus. \$39.95.

**The Cell Cycle.** P. C. L. John, Ed. Cambridge University Press, New York, 1981. x, 276 pp., illus. Cloth, \$47.50; paper, \$18.95. Society for Experimental Biology Seminar Series, 10.

**Cellular Controls in Differentiation.** Papers from a symposium, Vlaardingen, Netherlands, Dec. 1980. Clive W. Lloyd and David A. Rees, Eds. Academic Press, New York, 1981. x, 324 pp., illus. \$25.

**Current Topics in Survey Sampling.** Proceedings of a symposium, Ottawa, Canada, May 1980. D. Krewski, R. Platek, and J. N. K. Rao, Eds. Academic Press, New York, 1981. xvi, 510 pp., illus. \$29.50.

**Cyanide in Biology.** Papers from a workshop, Canterbury, England, Aug. 1978. B. Vennesland, E. E. Conn, C. J. Knowles, J. Westley, and F. Wissing, Eds. Academic Press, New York, 1981. xiv, 548 pp., illus. \$45.50.

**Development in Infancy.** T. G. R. Bower. Freeman, San Francisco, ed. 2, 1982. xii, 304 pp., illus. Cloth, \$20; paper, \$9.95. A Series of Books in Psychology.

**Differential Equations and Applications in Ecology, Epidemics, and Population Problems.** Proceedings of a conference, Claremont, Calif., Jan. 1981. Stavros N. Busenberg and Kenneth L. Cooke, Eds. Academic Press, New York, 1981. xvi, 360 pp., illus. \$34.50.

**Discovery in Cell Biology.** Joseph G. Gall, Keith R.

Porter, and Philip Siekevitz, Eds. Rockefeller University Press, New York, 1981. xii, 306 pp., illus. Paper, \$16.75. *The Journal of Cell Biology*, vol. 91, No. 3, part 2.

**Diseases of Tropical and Subtropical Field, Fiber and Oil Plants.** Allyn Austin Cook. Macmillan, New York, and Collier Macmillan, London, 1981. xiv, 450 pp., illus. \$45.

**Disorders of Mineral Metabolism.** Vol. 3, Pathophysiology of Calcium, Phosphorus, and Magnesium. Felix Bronner and Jack W. Coburn, Eds. Academic Press, New York, 1981. xiv, 522 pp., illus. \$62.

**Experiments in Electronics, Instrumentation, and Microcomputers.** F. James Holler, James P. Avery, Stanley R. Crouch, and Christie G. Enke. Benjamin/Cummings, Menlo Park, Calif., 1982. x, 326 pp., illus. Paper, \$13.95.

**Farm Investment and Financial Analysis.** John B. Penson, Jr., Danny A. Klinefelter, and David A. Lins. Prentice-Hall, Englewood Cliffs, N.J., 1982. xviii, 302 pp., illus. \$24.95.

**Feasting with Cannibals.** An Essay on Kwakiutl Cosmology. Stanley Walens. Princeton University Press, Princeton, N.J., 1982. xii, 192 pp. \$15.

**The Final Epidemic.** Physicians and Scientists on Nuclear War. Ruth Adams and Susan Cullen, Eds. Educational Foundation for Nuclear Science, Chicago, 1982 (distributor, University of Chicago Press, Chicago). xii, 254 pp. Paper, \$4.95.

**The Finite Element Method in Engineering.** S. S. Rao. Pergamon, New York, 1981. xxvi, 626 pp., illus. Paper, \$20.

**Finite Element Methods in Radiation Physics.** Proceedings of a seminar, London, Apr. 1981. M. M. R. Williams and A. J. H. Goddard, Eds. Pergamon, New York, 1981. vi + pp. 539-722, illus. Paper, \$37. *Annals of Nuclear Energy*, vol. 8, Nos. 11/12.

**GABA and the Basal Ganglia.** Gaetano Di Chiara and Gian Luigi Gessa, Eds. Raven, New York, 1981. x, 242 pp., illus. \$28. *Advances in Biochemical Psychopharmacology*, vol. 30.

**Gangliosides in Neurological and Neuromuscular Function, Development, and Repair.** Papers from a symposium, New York, Nov. 1980. Maurice M. Rapport and Alfredo Gorio, Eds. Raven, New York, 1982. xx, 276 pp., illus. \$33.

**An Introduction to Nuclear Physics, with Applications in Medicine and Biology.** N. A. Dyson. Horwood, Chichester, England, and Halsted (Wiley), New York, 1982. 244 pp., illus. \$54.95. Ellis Horwood Series in Medicine and Biology.

**Introduction to Physics.** A. Kitaigorodsky. Translated from the Russian edition (Moscow) by O. Smith and L. Levant. Mir, Moscow, 1981 (U.S. distributor, Imported Publications, Chicago). 590 pp., illus. \$23.

**Introduction to Quantitative Genetics.** D. S. Falconer. Longman, New York, ed. 2, 1981. x, 340 pp., illus. Paper, \$22.

**Laser Beams in the Atmosphere.** V. E. Zuev. Translated from the Russian edition by James S. Wood. Consultants Bureau (Plenum), New York, 1982. xii, 504 pp., illus. \$75.

**Levels of Genetic Control in Development.** Papers from a symposium, Storrs, Conn., June 1980. Stephen Subtelny and Ursula K. Abbott, Eds. Liss, New York, 1981. xvi, 256 pp., illus. \$32.

**Morphology of the Rat Brain Ventricles, Ependyma, and Periventricular Structures.** A. Mitro and M. Palkovits. Karger, Basel, 1981. x, 110 pp., illus. Paper, \$58.75. *Bibliotheca Anatomica*, No. 21.

**Multicentre Trials.** Papers from a symposium, Göteborg, Sweden, 1980. N. Sartorius and H. Helmchen, Eds. Karger, Basel, 1981. xii, 114 pp., illus. \$47.50. *Modern Problems of Pharmacopsychiatry*, vol. 16.

**Multivariable System Theory and Design.** Rajnikant V. Patel and Neil Munro. Pergamon, New York, 1981. xii, 374 pp., illus. Cloth, \$45; paper, \$20. *International Series on Systems and Control*, vol. 4.

**Neural Substrates of Limbic Epilepsy.** Makram Girgis. Warren H. Green, St. Louis, 1981. xiv, 192 pp., illus. \$42.50.

**Neutrino Physics and Astrophysics.** Papers from a conference, Erice, Italy, June 1980. Ettore Fiorini, Ed. Plenum, New York, 1982. xii, 422 pp., illus. \$49.50. *Ettore Majorana International Science Series (Physical Sciences)*, vol. 12.

**Neutron Cross Sections.** Vol. 1. Neutron Resonance Parameters and Thermal Cross Sections, Part A, Z = - 60. S. F. Mughabghab, M. Divadeenam, and N. E. Holden. Academic Press, New York, 1981. Various pages, illus. \$58.

**Operational Water Quality Management.** Beyond Planning and Design. M. B. Beck. International Institute for Applied Systems Analysis, Laxenburg, Austria, 1981. x, 74 pp. Paper. Executive Report 7.

**Order and Skepticism.** Human Geography and the Dialectic of Science. Richard Szymanski and John A. Agnew. Association of American Geographers, Washington, D.C., 1981. viii, 80 pp., illus. Paper, \$5.

**Palaeoecology of Africa and the Surrounding Islands.** Vol. 13. J. A. Coetzee and E. M. van Zin-

deren Bakker, Eds. Balkema, Rotterdam, 1981 (U.S. distributor, Merrimack Book Service, Salem, N.H.). viii, 280 pp., illus. \$27.50.

**Particulate Carbon.** Atmospheric Life Cycle. Proceedings of a symposium, Warren, Mich., Oct. 1980. George T. Wolff and Richard L. Klimisch, Eds. Plenum, New York, 1982. x, 412 pp., illus. \$49.50. *General Motors Symposia Series*.

**Pathobiology Annual.** Vol. 11. Harry L. Joachim, Ed. Raven, New York, 1981. x, 422 pp., illus. \$42.50.

**Pharmacokinetics II.** H. Schönfeld, Ed. Karger, Basel, 1982. xiv, 224 pp., illus. \$88.75. *Antibiotics and Chemotherapy*, vol. 31.

**Phyletic Approaches to Cancer.** Proceedings of a symposium, Tokyo, 1980. Clyde J. Dawe, John C. Harshbarger, Sohei Kondo, Takashi Sugimura, and Shozo Takayama, Eds. Japan Scientific Societies Press, Tokyo, 1981 (U.S. distributor, ISBS, Beaverton, Ore.). xx, 400 pp., illus. \$49.50.

**Physiology and Biochemistry of Exercise.** Roy J. Shephard. Praeger, New York, 1982. x, 672 pp., illus. \$67.50.

**The Properties of Groundwater.** Georg Matthess. Translated from the German edition (1973) by John C. Harvey. Wiley-Interscience, New York, 1982. xiv, 406 pp., illus. \$45.95.

**Psychiatrist of America.** The Life of Harry Stack Sullivan. Helen Swick Perry. Belknap Press (Harvard University Press), Cambridge, Mass., 1982. xii, 462 pp. + plates. \$20.

**Psychopathology and Adaptation in Infancy and Early Childhood.** Principles of Clinical Diagnosis and Preventive Intervention. Stanley I. Greenspan. International Universities Press, New York, 1982. xvi, 264 pp. \$27.50. *Clinical Infant Reports*.

**Psychopharmacology of Depression.** A Guide for Drug Treatment. Thomas A. Ban. Karger, Basel, 1981. viii, 128 pp., illus. Paper, \$19.25.

**Psychosomatic Disorders.** A Psychophysiological Approach to Etiology and Treatment. Stephen N. Haynes and Linda Gannon, Eds. Praeger, New York, 1981. xiv, 546 pp. \$42.95.

**Recent and Fossil Bryozoa.** Papers from a conference, Durham, England, Sept. 1980. Gilbert P. Larwood and Claus Nielsen, Eds. Olsen & Olsen, Fredensborg, Denmark, 1981. viii, 334 pp., illus. Paper, \$55.

**Revolution and the Rebirth of Inequality.** A Theory Applied to the National Revolution in Bolivia. Jonathan Kelley and Herbert S. Klein. University of California Press, Berkeley, 1982. xvi, 280 pp., illus. \$26.50.

**Rheometers for Molten Plastics.** A Practical Guide to Testing and Property Measurement. John M. Dealy. Van Nostrand Reinhold, New York, 1981. xviii, 302 pp., illus. \$37.

**Rickettsiae and Rickettsial Diseases.** Papers from a conference, Hamilton, Mont., Sept. 1980. Willy Burgdorfer and Robert L. Anacker, Eds. Academic Press, New York, 1981. xxii, 650 pp., illus. \$47.50.

**The Story of the Earth.** HMSO Books, London, ed. 2, 1981. 36 pp., illus. Cloth, £1.95; paper, £0.90.

**Stress Effects on Natural Ecosystems.** Papers from a symposium, Jerusalem, Sept. 1978. Gary W. Barrett and Rutger Rosenberg, Eds. Wiley-Interscience, New York, 1982. xviii, 306 pp., illus. \$47.95. *Environmental Monographs and Symposia*.

**Styles de Vie Intime.** Bernard I. Murstein, Ed. Translated from the English edition (1978) by Michèle Schoffeniels, Tiziana Monacelli, and Chantal Quoirin. Mardaga, Brussels, 1981. 350 pp. Paper, 650 BF. *Psychologie et Sciences Humaines*.

**Theology and Science in Mutual Modification.** Harold P. Nebelsick. Oxford University Press, New York, 1981. 192 pp. \$15.95. *Theology and Scientific Culture*, 2.

**The Theory of Eisenstein Systems.** M. Scott Osborne and Garth Warner. Academic Press, New York, 1981. xiv, 386 pp. \$55. *Pure and Applied Mathematics*, 99.

**The Theory of Vibrational Spectroscopy and Its Application to Polymeric Materials.** Paul C. Painter and Jack L. Koenig. Wiley-Interscience, New York, 1982. xx, 530 pp., illus. \$60.

**Thinking About Development.** Lisa Peattie. Plenum, New York, 1981. x, 198 pp. \$19.95. *Environment, Development, and Public Policy*.

**Wood Combustion.** Principles, Processes, and Economics. David A. Tillman, Amadeo J. Rossi, and William D. Kitto. Academic Press, New York, 1981. x, 208 pp., illus. \$19.50.

**Wood Identification Handbook.** Commercial Woods of the United States. Marshall S. White. Scribner, New York, 1982. 80 pp., illus. \$9.95.

**Worked Examples in Electrical Machines and Drives.** John Hindmarsh. Pergamon, New York, 1981. xvi, 284 pp., illus. Cloth, \$25; paper, \$12.

**Worldwide Furbearer Conference Proceedings.** Frostburg, Md., Aug. 1980. Joseph A. Chapman and Duane Pursley, Eds. Worldwide Furbearer Conference Book Distribution Center, Baltimore, 1981. Three volumes. vols. xxxiv, 2056 pp., illus. \$60.

# Personnel Placement

SCIENCE publishes each Friday, except the last Friday of the year. Advertising is accepted only in writing; no abbreviations. 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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## POSITIONS WANTED

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**Entomologist.** M.S. (1980). Seeks research position: 1 year of experience in purification of granulosis virus; 1½ years of bioassay of insecticides; 3 years of supervision in plant quarantine. Box 110, SCIENCE. X

**Histochemist.** Ph.D. Experience in histology, histochemistry, histopathology, and also in electron microscopy and fluorescence microscopy. Good research background in histochemistry, atherosclerosis, and also in diagnostic histopathology. Supervisory experience in histopathology laboratory. Many publications. Seeking position in university, industry, or supervisory position in laboratory. Box 122, SCIENCE. X

**Immunologist.** Ph.D. 1970. University research experience in cellular immunity in infectious and autoimmune disease, lymphocyte mediated target cell killing, and lymphokines. Excellent publications and references. Seeking research position in academia or industry. Box 112, SCIENCE. X

## POSITIONS WANTED

**Immunochemist/Cell Biologist.** Ph.D. 1979. Experienced in immunochemistry, gel electrophoresis, RIA, ELISA, monoclonal antibody, cell hybridization, tissue culture, protein purification. Seeking industrial position. Box 123, SCIENCE. X

**Virologist.** Ph.D. 1968. Research, teaching, administration. Plant pathology, virology, botany, and so forth; 17 years. Editing and press. Publications. References. United States, Europe, Australia, Asia. Prefers editing, writing for publisher; teaching and research for college/university; research and administration in company. Box 124, SCIENCE. X

## POSITIONS OPEN

**ACADEMIC POSITION IN CLINICAL AND INVESTIGATIONAL CARDIOLOGY.** A position is available for a fully trained cardiologist who desires an academic career emphasizing clinical and/or basic cardiovascular research. The candidate should have special training and demonstrated expertise in his or her area of interest. Send curriculum vitae to: **Bertram Pitt, M.D., Chief of the Cardiology Division, W-11611, University Hospital, 1405 East Ann Street, Ann Arbor, Michigan 48109.** The University of Michigan is a nondiscriminatory, Affirmative Action Employer. Code 208HO.

**ANALYTICAL PHARMACOLOGY**—Established clinical pharmacology program invites applications for a chemist position in the Therapeutic Drug Monitoring Laboratory. Division closely affiliated with the Department of Pharmacology, Case Western Reserve University. Responsibilities include supervision of laboratory, managing and maintaining GC/MS facility, pharmacokinetics studies, and development of new assays for drugs. Ph.D. in a pharmacological science with experience in mass spectroscopy, pharmacokinetics, computer programming. Salary: \$33,586 per annum. Fringe benefits of regular pay increases, 13 days sick leave each year accrued without limit, 13 to 26 days annual vacation, generous retirement plan, and low-cost life and health insurance. Must be U.S. citizen. Submit résumé and three letters of reference to: **Dr. Charles Hoppel, Clinical Pharmacology 151, Veterans Administration Medical Center, 10701 East Boulevard, Cleveland, Ohio 44106.** Telephone: 216-791-3800, extension 7602. An Equal Opportunity Employer.

The Department of Internal Medicine is seeking a **JUNIOR FACULTY MEMBER.** The individual will have patient care and teaching activities in both ambulatory care and inpatient settings. Candidates should be Board-eligible in internal medicine and have an interest in health services and research. Address inquiries, including curriculum vitae, to: **Jeffrey K. Stross, M.D., Department of Internal Medicine, The University of Michigan Medical School, Ann Arbor, Michigan 48109.** The University of Michigan is a nondiscriminatory, Affirmative Action Employer. Code 272HO.

The University of Michigan Medical School, Department of Surgery, seeks a **SECTION HEAD OF UROLOGY.** Need individual to direct the academic, patient care, research, educational, and administrative programs of the Section of Urology. Responsible for recruitment of faculty and residents. Candidates should be eligible for appointment at the professor or associate professor rank, be certified by the American Board of Urology or its equivalent, and have evidence of national prominence. Qualifications include clinical expertise, research productivity, medical student and resident teaching experience, and administrative ability. In addition, skills in leadership, organization, and interpersonal relationships are necessary. Reply to: **Jeremiah G. Turcotte, M.D., Chairman, Department of Surgery, University of Michigan, Ann Arbor, Michigan 48109.** The University of Michigan is a nondiscriminatory, Affirmative Action Employer. Code 3020.

## TRANSPLANT SURGEON

Qualified transplant surgeon with appropriate credentials for appointment as assistant professor or instructor. Completed residency in general surgery at major university with substantial training and experience in renal transplants. Experience in clinical and laboratory investigation. Dedicated to a career in academic surgery. Reply to: **Box 120, SCIENCE.** A nondiscriminatory, Affirmative Action Employer. Code 168.

## POSITIONS OPEN

**ANATOMISTS**—The Department of Anatomy is seeking applicants with specialty in neuroanatomy. Candidates should possess the Ph.D., M.D., or combined degrees, should have completed at least one year of postdoctoral research experience, and have demonstrated excellence in research. Rank and salary are negotiable depending upon experience. The position is available 1 July 1982. Please send curriculum vitae, list of publications, and letters of reference by 21 May 1982 to:

**Robert D. Yates, Ph.D.**  
Chairman of Anatomy  
Tulane Medical School  
1430 Tulane Avenue  
New Orleans, La. 70112

*Tulane is an Equal Opportunity/Affirmative Action Employer. Applications from qualified women and qualified minority group members are encouraged.*

**AQUATIC OR VERTEBRATE ECOLOGIST.** Indiana State University, Terre Haute. The Department of Life Sciences invites applications for a position as assistant professor (tenure-track, tentative, dependent on budgetary approval) beginning as early as August 1982. Persons with research interests in environmental toxicology, ethology, evolutionary ecology, or systematics are encouraged to apply. Applicants must have a strong interest in teaching at both the undergraduate and graduate levels, and conduct and direct research in the doctoral program. Please send, by 30 May 1982, a résumé, research papers, and three letters of reference to: **Dr. William Brett, Chairperson, Department of Life Sciences, Indiana State University, Terre Haute, Ind. 47809.** Indiana State University is an Equal Opportunity/Affirmative Action Employer.

**ASSISTANT PROFESSOR.** Divisions of Developmental Therapeutics and Medicine. We are seeking to fill two positions at the assistant professor level in the Divisions of Developmental Therapeutics and Medicine at the Sidney Farber Cancer Institute with concomitant appointment at the Harvard Medical School. Candidates should have a doctorate (M.D. and/or Ph.D.). Candidates for the position in developmental therapeutics should be prepared to develop an independent research program in an area of biochemical pharmacology relevant to cancer. Areas of interest include mechanisms of action of oncogenic proteins and protein kinases, regulation of gene expression in mammalian cells and development of new therapeutic approaches based on recent advances in cell and molecular biology. Candidates for the position in medicine should be prepared to develop an independent research program in the areas of preclinical and clinical pharmacology. Areas of interest include systemic and regional pharmacokinetics, molecular mechanisms of drug action, and genetics of drug resistance. Applicants should send curriculum vitae and bibliography, including names of three references, to: **Dr. Emil Frei III, SIDNEY FARBER CANCER INSTITUTE, 44 Binney Street, Boston, Mass. 02115.** An Affirmative Action/Equal Opportunity Employer.

**TWO ASSISTANT PROFESSOR POSITIONS** open in the Biology Department, Xavier University, beginning August 1982. Must be qualified to teach comparative anatomy or microbiology/botany. Ability and willingness to assist in introductory biology required. A dedication to undergraduate teaching is essential. Application deadline: 21 May 1982. Send résumé to: **Sister Grace Mary Flickinger, Chairman, Biology Department, Xavier University, New Orleans, Louisiana 70125.**

**ASSISTANT/ASSOCIATE PROFESSOR—BIOLOGY, UNIVERSITY OF ALASKA, JUNEAU.** The School of Fisheries and Science is recruiting for an assistant/associate professor of biology with emphasis in marine invertebrates. Candidate must have a Ph.D. in biology or related field with emphasis in invertebrate biology. It is desirable that the candidate specialize in marine invertebrates. Incumbent will be expected to teach undergraduate and graduate courses in invertebrate biology and other areas of interest, develop a research program with emphasis in invertebrates or shell fisheries, advise students, and perform university and public service. This is a 9-month, tenure-track position with full university benefits. Position is subject to availability of funds. Closing date is 1 June 1982 but may be extended. A letter of application, current résumé, transcripts, and three letters of reference should be sent to: **Head of Search Committee, School of Fisheries and Science, University of Alaska, Juneau, 11120 Glacier Highway, Juneau, Alaska 99801.** Telephone: 907-789-2101. An Equal Opportunity/Affirmative Action Employer.

## POSITIONS OPEN

**TWO ASSISTANT/ASSOCIATE PROFESSOR POSITIONS**, tenure-track in Institute of Natural and Environmental Resources (INER) to begin September 1982 or when suitable candidate is available. Teach some combination of forest resource management, natural and environmental resource management, forest recreation, contemporary conservation issues, remote sensing, and approach to research; advise forestry and environmental conservation undergraduates, also resource administration and management and forestry graduates; develop and perform research appropriate to specialty and compatible with Institute research goals; participate in administrative procedures in Institute, College, and University. Qualifications: Ph.D. in forestry or related resource management field; prefer combination of social science and forestry or forestry-related fields; candidates with at least one degree in forestry will receive preference. Candidates seeking appointment as associate professor must present evidence of significant scientific accomplishment and promise. Contact by 15 July 1982: **Owen Durgin, Director, INER, James Hall, University of New Hampshire, Durham, N.H. 03824.** *The University is an Affirmative Action/Equal Opportunity Employer.*

### ASSISTANT PROFESSOR—BIOCHEMISTRY

The Department of Biochemistry at the University of Pittsburgh School of Medicine invites applications for a tenure-track position to be filled effective 1 September 1982. Applicants must hold a Ph.D. degree in biochemistry with training in enzymology and immunochemistry. Postdoctoral experience in the study of membrane-bound vitamin K-dependent enzymes is desirable. The candidate is expected to carry out a productive research program with external grant support in this area of biochemistry and to participate in the teaching of medical and graduate students. Send curriculum vitae, a statement of research interests, and three letters of reference prior to 1 July 1982 to:

**Norman P. Curthoys, Ph.D.**  
Department of Biochemistry  
University of Pittsburgh  
School of Medicine  
Pittsburgh, Pennsylvania 15261

## POSITIONS OPEN

**ASSISTANT PROFESSOR OF DERMATOLOGY, FULL TIME.** Candidates must be Board-certified in dermatology; have prior experience in immunology, photobiology, particularly monoclonal antibodies; and have demonstrated competence in teaching, research, and patient care. *An Equal Opportunity/Affirmative Action Employer.* Résumés should be submitted to: **Department of Dermatology, College of Physicians and Surgeons, 630 West 168 Street, New York, N.Y. 10032.**

### ASSOCIATE VICE PRESIDENT FOR RESEARCH THE UNIVERSITY OF TENNESSEE

The associate vice president for research is a member of the staff of the vice president for academic affairs and research in the statewide administration of The University of Tennessee, responsible for assisting the vice president in all universitywide aspects of research coordination and in the development of universitywide policies governing the conduct of research and the relationships between research sponsors and the University, its faculty, and its staff. The associate vice president for research also works closely with the University of Tennessee Research Corporation in developing patents and/or commercial applications of University research results. He/she is responsible for maintaining close liaison between the University of Tennessee Space Institute and the vice president. Qualifications, among others, that may prove advantageous to an applicant are an academic background in science or engineering; advanced study in business or law; experience in research administration in industry, government, and/or university settings; and demonstrated ability to relate effectively to all three sectors. Salary level will be commensurate with qualifications and experience. Open immediately. To apply, send résumé with names, addresses, and telephone numbers of three professional references to: **Dr. John W. Prados, Vice President for Academic Affairs and Research, The University of Tennessee, Knoxville, Tenn. 37996-0170.** Applications and supporting materials will be accepted until 31 May 1982. *The University of Tennessee is an Equal Opportunity/Affirmative Action Employer.*

## POSITIONS OPEN

**ASSISTANT PROFESSOR OF PHARMACOLOGY.** Applications are invited by the Department of Pharmacology, University of Tennessee, for a tenure-track position available 1 July 1982. The applicant should possess the Ph.D. in pharmacology, biochemistry, or a related discipline, or an M.D., should have approximately 3 years of postdoctoral experience, should have demonstrated excellence in research, and should have an active interest in teaching. The candidate will be expected to establish and support an independent research program. Preference will be given to candidates experienced in biochemical aspects of drug metabolism, neuropharmacology, immunopharmacology, or cancer chemotherapy. Please submit complete curriculum vitae, three letters of reference, and a brief statement of future research plans, no later than 1 July 1982, to: **Dr. Murray Heimberg, University of Tennessee Center for the Health Sciences, Memphis, Tennessee 38163.** *An Equal Opportunity/Affirmative Action Employer.*

### ASSISTANT PROFESSOR— VERTEBRATE BEHAVIORAL ECOLOGY

Teaching assignment includes ornithology and animal behavior at undergraduate and graduate levels. Research activities should emphasize northern environments. Appointment: September 1982 or later. Send résumé and list of three references by 31 May 1982 to: **R. D. Guthrie, Division of Life Sciences, University of Alaska, Fairbanks, Alaska 99701.** *Equal Opportunity/Affirmative Action Employer.*

**BIOLOGY LECTURER**, nontenure-track, M.S. or Ph.D. Responsibilities include teaching lectures and laboratories in introductory biology courses and in two-semester human anatomy/physiology course. Preference given to candidates presenting evidence of effective teaching experience in these areas. Applicants should send curriculum vitae, transcripts of all academic work, three letters of recommendation, and other pertinent documents to: **Dr. Jerry Warner, Chairman, Biology Search Committee, Department of Biological Sciences, Northern Kentucky University, Highland Heights, Ky. 41076; telephone: 606-572-5277.** Application deadline: 24 May 1982. *An Affirmative Action/Equal Opportunity Employer.*

## VACANCY ANNOUNCEMENT

### National Eye Institute National Institutes of Health Public Health Service

#### Department of Health and Human Services

The National Eye Institute invites applications and nominations for the position of Health Scientist Administrator (Biological Sciences) in the Strabismus, Amblyopia, and Visual Processing Branch. As a program director, the person selected will have responsibility for planning and coordinating a combination of research grants, training grants, fellowships, and other support programs related to central visual information processing, eye movements, and their disorders. Applicants should have a background in one of the neurosciences (preferably central visual processes) or in visual psychophysics and significant postdoctoral experience in the administration of scientific research.

This position is in the Civil Service at the GS-13 or GS-14 level, with a salary of \$33,586 or \$39,689. Further information about the position and qualification requirements may be obtained by contacting Ms. Lelia Hooton, NEI Personnel Office, (301) 496-4274. Applications (SF-171, Personal Qualifications Statement) accompanied by a current curriculum vitae should be submitted to Ms. Hooton at: **NEI Personnel, Bldg. 31, Room 6A23, National Institutes of Health, Bethesda, MD 20205.** Applications must be postmarked no later than May 31, 1982.

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## DIRECTOR

### International Centre for Diarrhoeal Disease Research, Bangladesh

(formerly Cholera Research Laboratory)

**Invites applications for Director**  
(three year term, renewable for three years)

**The position will be available 1 July, 1983.**

The successful applicant will have:

- Established leadership in research and training.
- Experience in the administration and finance of research organizations.
- Recognized ability of working in developing countries.
- Seniority (over 40 years of age).
- A willingness to work with personnel from many countries and agencies which support the Centre.

The Centre offers UN Director-level salary and allowances, pension, education grant for children, insurance, home leave and other benefits.

For further information about the Centre or to apply write to:



Director,  
ICDDR,B,  
G.P.O. Box 128,  
Dacca-2  
Bangladesh.

## POSITIONS OPEN

### ASSOCIATE IN PHARMACOLOGY

The Department of Pharmacology at Columbia University, College of Physicians and Surgeons, is seeking an associate with skills in electrophysiologic and cell culture techniques. Applicants should have the Ph.D. or M.D. degree and should have completed postdoctoral fellowship training. The position requires expertise in cellular and intact animal electrophysiologic studies as well as expertise in disaggregation and culture techniques for studies of isolated cardiac myocytes. There will be responsibility for teaching at the graduate level as well.

Salary will be commensurate with experience. Candidates should submit curriculum vitae and the names of three references to: **Dr. Michael R. Rosen, Department of Pharmacology, College of Physicians and Surgeons, 630 West 168 Street, New York, N.Y. 10032.** Columbia University is an Affirmative Action/Equal Opportunity Employer.

## POSITIONS OPEN

**CHAIRMAN AND PROFESSOR, ENTOMOLOGY DEPARTMENT, GENEVA, N.Y.** Administrative responsibilities include representing the department with the College of Agriculture and Life Sciences administration, providing leadership and guidance in the continued growth and development of the department programs, and assisting faculty in seeking internal and external support for research and extension. The candidate will be expected to maintain an active research program. Ph.D. in entomology required with broad experience in various phases of applied entomology, and professional visibility within the discipline. Send curriculum vitae, names of five references, and brief statement outlining applicant's perception of research priorities for development and implementation of future crop protection to: **C. J. Eckenrode, Department of Entomology, New York State Agricultural Experiment Station, Geneva, N.Y. 14456.** Applications accepted until 1 July 1982, or until position is filled.

## POSITIONS OPEN

**ASSISTANT/ASSOCIATE PROFESSOR, IMMUNOLOGY.** Applications are invited for a position at the assistant/associate professor level in the Department of Immunology, Mayo Medical School, Mayo Clinic and Mayo Foundation, Rochester, Minnesota. Applicants must have demonstrated ability and strong motivation for research in the immune response and its related phenomena. Opportunities for clinical investigation as a function of this appointment are available and encouraged. In applying, please send curriculum vitae, a brief statement of research interests (one to two pages only), and the names of four references to: **Dr. Gerald Gleich, Chairman, Department of Immunology, Mayo Medical School, Mayo Clinic and Mayo Foundation, Rochester, Minnesota 55905.** An Equal Opportunity/Affirmative Action Institution.

### ASSISTANT SCIENTIST POSITION

Basic research in cellular biology. The job involves isolation and analysis of the molecular components of the mitotic spindle of sea urchin eggs and mammalian tissue culture cells. Abilities required include knowledge of cell culture, cell fractionation, modern light microscopy, electron microscopy, analytical biochemistry, and monoclonal antibody technology. Requirements include Ph.D. and 2 years of postdoctoral research experience in relevant cellular biology. Salary: \$18,000 per annum; 40 hours per week, full time. Contact: **Sath Menon, Wisconsin Job Service, 206 North Broom Street, Madison, Wisconsin 53703. Telephone: 608-266-2341.** This ad is not paid by Job Service funds. Equal Opportunity/Affirmative Action Employer.

### CARBONATE PETROLOGY/ENVIRONMENTS

The Department of Geology, University of California, Davis, invites applications for a faculty position in carbonate petrology and environments. Candidates must demonstrate a thorough understanding of field and theoretical approaches, have a high caliber research program, and must contribute effectively to the undergraduate and graduate teaching program in petrology and sedimentology. The department has strong research programs and excellent technical and facility support in paleobiology, crust and mantle evolution, and environmental geology.

The position is authorized at the assistant professor level but upgrading to associate or full professor is possible. Appointment date is negotiable within 1983, but the candidate must possess the Ph.D. by the time of appointment. Closing date: 1 October 1982. *The University of California is an Equal Opportunity/Affirmative Action Employer.* Interested individuals should send their résumé and the names of three references to:

**Jere H. Lipps, Chair  
Department of Geology  
University of California  
Davis, California 95616**

### CHAIRPERSON DEPARTMENT OF PSYCHIATRY UNIVERSITY OF PENNSYLVANIA

Applications are invited from highly qualified individuals to head the Department of Psychiatry of the University of Pennsylvania School of Medicine.

Address inquiries to:

**Sidney Cohen, M.D.  
Chairman, Psychiatry Search Committee  
570 Maloney Building  
Hospital of the University of Pennsylvania  
36th and Spruce Streets  
Philadelphia, Pa. 19104**

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

### DEAN OF GRADUATE STUDIES

Wright State's dean of graduate studies is the chief academic officer for graduate education on our 618-acre campus, with special emphasis in graduate program supervision, records management, unit administration, program development, quality assurance, and internal and external communication. Candidates should hold a research-based doctoral degree, have previous faculty experience, and have experience in educational management, planning, and budgeting. Send curriculum vitae, including the names of three references, to: **Dr. Roger Iddings, Chairman, Advisory Search Committee for Dean of Graduate Studies, Office of the Provost, Wright State University, Dayton, Ohio 45435,** not later than 30 May 1982. *An Equal Opportunity/Affirmative Action Employer.*

## CHEMIST

# BIOCHEMIST

Personal Products, a member of the Johnson & Johnson family of companies, and a leader in the personal care products industry has an immediate opening for a gifted biochemist.

The successful candidate will have a doctorate in biochemistry with 2 to 4 years of increasingly responsible and results-oriented experience in extra-cellular fluid research.

Duties will include planning, developing and directing research relating to the regulation of physiological odor and the basics of rheological changes in excretable body fluids. Excellent communications and administrative skills are essential.

We offer a highly competitive salary, commensurate with experience, and a comprehensive benefits package.

Undeniably a unique opportunity to exercise unrestricted scientific and technical judgment and action within the framework of approved programs.

Qualified candidates are invited to submit résumé, including salary history and requirements, to:

**STAN DAVIS  
Senior Personnel Administrator**

 **Personal Products**

**A Johnson & Johnson Co**

**MILLTOWN • NEW JERSEY 08850**

**Leadership Beyond Compliance  
Equal Opportunity Employer, M/F/H/V**

# CLINICAL DIRECTOR

Opening Date: May 1, 1982/Closing Date: June 30, 1982

The National Institute of Neurological and Communicative Disorders and Stroke, National Institutes of Health, Public Health Service, invites nominations and applications for the position of Clinical Director. The incumbent administers clinical research activities in the Intramural Research Program, and supervises patient care resources. In addition, the Clinical Director has the opportunity to utilize outstanding hospital and laboratory facilities to conduct clinical and basic research in the neurological and communicative sciences. Mandatory requirements include a Medical Degree, clinical training and experience in neurology, neurosurgery or otolaryngology, and relevant research experience. Candidates are expected to demonstrate evidence of scholarly achievement and professional stature, leadership and skill in the development and administration of clinical and basic research programs, and the capacity for training investigators in the neurological and communicative disorders and the ability to implement equal opportunity objectives. Candidates will be evaluated by

a panel of experts in the field. The vacancy may be filled through the Public Health Service Commissioned Corps, or a career Civil Service appointment, subject to competitive procedures prescribed by the Office of Personnel Management.

The basic salary (\$54,755-\$58,500) may be supplemented by the Physician's Comparability Allowances (\$5,000-\$10,000) as determined by qualifications. Applications include a Curriculum Vitae, bibliography, and a Personal Qualifications Statement (Form SF-171). These should be submitted by June 30, 1982 to:

**Mr. Wallace W. Holland**  
**Personnel Management Specialist**  
**Building 31, Room 8A25**  
**National Institutes of Health**  
**NINCDS Personnel Office**  
**9000 Rockville Pike**  
**Bethesda, Maryland 20205**

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## HOFFMANN-LA ROCHE

### Director of Immunopharmacology

Hoffmann-La Roche, one of the world's leaders in the pharmaceutical industry, has a career opportunity for an experienced leader with graduate training and expertise in pharmacology and immunology.

#### **Qualifications include:**

Ph.D. degree in immunology followed by 10 years experience in the field of cellular immunology and/or immunopharmacology. 3-5 years in the pharmaceutical industry highly desirable.

Demonstrated ability to direct a creative research program where the goal is the identification of novel immunomodulatory substances.

Strong background in lymphokines, cytokines and monokines.

Considerable understanding of natural products purification techniques and approaches.

Proven administrative and communications skills.

A significant bibliography of publications in prestigious journals.

Hoffmann-La Roche, located in suburban New Jersey, 12 miles from New York City, offers an excellent compensation package, including an attractive bonus, and an environment that encourages professional growth.

Only responses including present salary will be acknowledged. Please send C.V., the names of three referees, and list of publications to: Eleanor M. Malone, Professional Employment & Staffing Specialist, Hoffmann-La Roche, Inc., Nutley, New Jersey 07110.



**HOFFMANN-  
LA ROCHE INC.**  
Nutley, NJ 07110

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*Products that matter  
from people who care*

## POSITIONS OPEN

### CHIEF—SECTION OF CARDIOLOGY Department of Medicine University of Illinois College of Medicine Chicago

The untimely death of its prestigious chief has created this opening in this internationally renowned Cardiology Section located in one of the largest health science centers in the country. Its integrated program includes the University Hospital and Clinics and the neighboring West Side Veterans Administration Hospital. The clinical and laboratory facilities in the new hospital are state-of-the-art. Candidates should be Board-certified in medicine and cardiology, be eligible for licensure in Illinois, and have significant academic experience and an established investigative record as well as demonstrated evidence of ability to administer a program of research, medical care, and education at the undergraduate, graduate, and postgraduate levels. Please submit applications with curriculum vitae and three references to:

**Morton C. Creditor, M.D.**  
Chairman, Cardiology Search Committee  
University of Illinois at the Medical Center  
P.O. Box 6998  
Chicago, Illinois 60680

To insure full consideration, applications should be received by 31 May 1982. *The University of Illinois is an Affirmative Action/Equal Opportunity Employer.*

**COMMUNICATIONS: Associate Agricultural Experiment Station Editor.** Cultivate a good working relationship with Agricultural Experiment Station (AES) scientists in developing manuscripts. Provide scientific editing, writing, and other communication services. Coordinate layout and design with station artists and scientists. Maintain and improve media relations. Maintain adequate editorial records of manuscripts. Report to and complement the responsibilities of the AES editor. Bachelor's degree in a communications or science discipline plus at least 6 years of increasingly responsible experience as a journalist, editor, and communicator are required. Demonstrated writing and technical editing skills and extensive practical experience in journalism/communications. Ability to provide effective media relations and to counsel faculty and researchers on writing, publishing, and other communications. Ability to relate well with scientists and the AES editor. Ability to plan, develop, and complete projects independently and to initiate ideas. Salary commensurate with training and experience. Deadline is 1 June 1982. Send a letter of application, résumé, samples of work, all academic transcripts, and three letters of recommendation to: **Director of Research, Waters Hall 113, Kansas State University, Manhattan, Kansas 66506.** *Equal Opportunity Employer.*

**DEVELOPMENTAL BIOLOGIST.** Tenure-track position at the assistant professor rank is available August 1982. Ph.D. required with experience in semen analysis and sperm physiology. Position includes teaching responsibilities in histology and embryology (or related subjects) and co-directorship of an Andrology Laboratory. The development of a research program is expected. Salary commensurate with experience and qualifications. Applicants should submit curriculum vitae, three letters of reference, and statement of research interests by 21 May 1982 to: **Dr. H. G. Marshall, Chairman, Department of Biological Sciences, Old Dominion University, Norfolk, Va. 23508.** *An Affirmative Action/Equal Opportunity Employer.*

### DEVELOPMENTAL GENETICS

The Department of Anatomy at Case Western Reserve University intends to make a number of new appointments during the next year in the fields of developmental genetics and the molecular aspects of structural biology. Applications should be sent to: **Dr. Anthony P. Mahowald, Chairman, Department of Anatomy, Case Western Reserve University, 2119 Abington Road, Cleveland, Ohio 44106.** *Case Western Reserve University is an Equal Opportunity/Affirmative Action Employer and encourages applications from women and minority groups.*

### NEUROBIOLOGY

The Department of Anatomy at Case Western Reserve University intends to make a number of new appointments during the next year in the area of developmental neurobiology. Applications should be sent to: **Dr. Anthony Mahowald, Chairman, Department of Anatomy, Case Western Reserve University, 2119 Abington Road, Cleveland, Ohio 44106.** *Case Western Reserve University is an Equal Opportunity Employer and encourages applications from women and minority groups.*

## POSITIONS OPEN

Applications are invited for the position of **DEAN** of the West Virginia University School of Medicine. The position involves the duties of the chief executive and academic officer of the school.

Candidates must have academic administrative experience, preferably in a medical school. Candidates should have a career showing scientific and scholarly activity, and an M.D. degree is preferable.

Letter of application and curriculum vitae, including the names and addresses of at least three professional references, should be forwarded to:

**Alvin L. Watne, M.D.**  
Chairman, Dean's Search Committee  
West Virginia University Medical Center  
Morgantown, W. Va. 26506

The deadline for receipt of applications is 1 July 1982. *West Virginia University is an Equal Opportunity/Affirmative Action Employer.*

### DEAN, SCHOOL OF PUBLIC HEALTH AND COMMUNITY MEDICINE UNIVERSITY OF WASHINGTON

Applications and nominations are invited for the position of dean, School of Public Health and Community Medicine. Desired starting date: 1 September 1982, or as soon as possible thereafter. Desired qualifications include an earned doctorate, an established reputation in education related to public health, a strong record of research accomplishment, and demonstrated competence in organizational leadership and management. Salary open.

Deadline for nominations and applications: 31 May 1982. Nominations or applications with résumés should be sent to:

**Committee on the Deanship of the School of Public Health and Community Medicine**  
Office of the President  
301 Administration Building, AH-30  
University of Washington  
Seattle, Washington 98195

*An Equal Opportunity/Affirmative Action Employer*

### DIRECTOR CENTER FOR ENVIRONMENTAL TOXICOLOGY AND MEDICINE Thomas Jefferson University Philadelphia, Pennsylvania

Newly established research center, consisting of a toxicology laboratory and several collaborating groups, has position available for director. The successful candidate should be an accomplished scientist with research interests related to fundamental problems in toxicology.

The director will report to the dean of the College of Graduate Studies and is expected to qualify for senior faculty appointment. Qualified candidates should send résumés to:

**Dr. Jussi J. Saukkonen**  
Dean, College of Graduate Studies  
**THOMAS JEFFERSON**  
**UNIVERSITY**  
1020 Locust Street  
Philadelphia, Pa. 19107  
*Equal Opportunity Employer*

### DIRECTOR OF COMPUTER LABORATORY MICHIGAN STATE UNIVERSITY (MSU)

Responsible for planning and directing the operational and administrative activities of the MSU Computer Laboratory including guiding the continuing design and implementation of a campuswide data communication network.

The director reports to the office of the provost.

Minimum qualifications: Earned doctorate from an accredited academic institution. Extensive administrative experience in a computing environment providing computing services to a diverse group of instructional and research users. Established professional reputation in a computer discipline or in computer applications in another discipline.

Salary negotiable, depending on qualifications and experience.

Send letter of application, résumé, and references by 1 June 1982 to:

**Dr. Jack B. Kinsinger**  
Associate Provost  
Office of the Provost  
Michigan State University  
East Lansing, Michigan 48824

*An Affirmative Action/Equal Opportunity Institution*

## POSITIONS OPEN

### DIRECTOR, CLINICAL PHARMACOLOGY

The University of Alabama in Birmingham is seeking qualified candidates for the directorship of a newly created program in clinical pharmacology. Substantial space and state support are available. Appointments in an appropriate clinical department and pharmacology are available. Applicants should apply to: **John R. Durant, M.D., Chairman, Search Committee, Clinical Pharmacology, University of Alabama in Birmingham, University Station, Birmingham, Alabama 35294.** *An Equal Opportunity/Affirmative Action Employer.*

**FACULTY POSITIONS IN BIOMEDICAL ENGINEERING, BOSTON UNIVERSITY COLLEGE OF ENGINEERING.** at the assistant/associate/full professor levels in expanding Department of Biomedical Engineering for September 1982 or January 1983. Applicants should have an earned doctorate, be committed to quality teaching at both undergraduate and graduate levels, and have the desire to develop strong research programs. Collaboration with the Boston University School of Medicine or other departments may be facilitated through a joint faculty appointment. Candidates with backgrounds in mechanical design, electronics, computer engineering, biomechanics and materials, or robotics are especially welcome. Opportunities for part-time (adjunct) faculty positions and for collaborative arrangements with nearby institutions involved in biomedical research and development are also available. There may also be an opportunity for a visiting appointment of 1 or 2 years duration to replace faculty on sabbatical leave. Candidates should send résumé, list of publications, names and addresses of at least three references, and a brief statement of teaching and research interests to: **Dr. Henry D'Angelo, Chairman, Engineering Search Committee, College of Engineering, Boston University, 110 Cummings Street, Boston, Mass. 02215.** *Boston University is an Equal Opportunity/Affirmative Action Employer.*

University of Michigan Medical School, Department of Pharmacology, has a position of **INSTRUCTOR** in the area of neuropharmacology with research experience in regulation of neurotransmission and neurotransmitter-receptor interactions. Ph.D. or M.D. required; clinical experience desirable. Send curriculum vitae and résumé of past and present research, teaching, and clinical experience to: **Chairman, Search Committee, Department of Pharmacology, University of Michigan Medical School, M-6322 Medical Science I Building, Ann Arbor, Michigan 48109.** Deadline for application is 1 July 1982. *A nondiscriminatory, Affirmative Action Employer. Code 28.*

### NEURO-VISUAL SCIENTIST

Faculty position to be filled at the assistant or associate professor level. Rank and salary commensurate with experience. Ph.D. required; postdoctoral and/or academic experience preferred. Research should involve physiological optics, from the psychophysical and/or electrophysiological point of view. The successful applicant must maintain vigorous research program, solicit funding, and direct student research. Interest in the application of psychophysics to clinical problems, such as low vision, would be considered an asset. Ability to teach in the areas of binocular vision, color vision, and photometry are considered to be an asset. Applicants should enclose statement of research goals, curriculum vitae, and reprints of publications with letter of application. These materials plus names, addresses, and telephone numbers of three references should be sent to: **Dr. George Crozier, Chairman of the Faculty Recruitment Committee, Pennsylvania College of Optometry, 120 West Godfrey Avenue, Philadelphia, Pa. 19141,** by 1 June 1982. Position available 1 July 1982. *An Equal Opportunity/Affirmative Action Employer*

**POSTDOCTORAL FELLOW IN CARDIAC PATHOBIOLOGY.** Position involves the study of alterations in membrane permeability and ionic homeostasis with ischemia, hypoxia, drugs, and so forth, in isolated cardiac muscle. Ongoing research utilizes isolated perfused septal preparation, contractile measurements, ATP assays, electron microscopy, and quantitative x-ray microanalysis. Experience with one or more of these techniques is desired. Salary dependent on experience. Respond in writing with curriculum vitae and three letters of recommendation to: **Dr. L. M. Buja, Department of Pathology, The University of Texas Health Science Center at Dallas, 5323 Harry Hines Boulevard, Dallas, Texas 75235.** *An Equal Opportunity/Affirmative Action Employer.*



## BIOTECHNOLOGY

CHIRON CORPORATION, a young, rapidly expanding biotechnology company in the San Francisco Bay area, is inviting *scientists with significant records of achievement* in molecular biology and *leadership potential*, to join a strong team of innovative scientists in the application of recombinant DNA technology to the medical field. We offer an attractive working environment *close to the major universities of Northern California*, competitive salaries, stock ownership and an *outstanding scientific advisory board*. If you are interested in becoming a partner in a young research company *run by scientists*, send curriculum vitae and references in strict confidence, to **CHIRON CORPORATION, 4560 Horton St., Suite Q-214, Emeryville, California 94608**

## CIBA-GEIGY of India Limited

invites applications from scientists of Indian nationality for the following positions at their Biomedical Research Centre in Goregaon, Bombay.

The Research Centre is one of the largest and best-equipped establishments of its kind in India, and is principally engaged in the discovery and development of drugs for the treatment of tropical diseases. It is located in Goregaon, on the outskirts of Bombay.

### CHIEF-PATHOLOGIST

Candidates for this senior appointment as Head of the Department of Pathology and Toxicology reporting directly to the Director of Research should be graduates in medicine, or veterinarians, with post-graduate qualifications in pathology who are thoroughly conversant with all aspects of the toxicological investigation of drugs, including histology, teratology, mutagenicity and carcinogenicity. Experience in vivarium management would be an advantage.

### PROTOZOOLOGIST

This post is open to graduates in medicine with post-graduate qualifications in parasitology and experience of research in protozoal infections such as amoebiasis, trichomoniasis, giardiasis or malaria.

### PHARMACOLOGIST

This post is open to graduates in medicine with post-graduate qualifications in pharmacology. Applicants should be experienced both in general pharmacology and in basic and applied research in the cardiovascular and central nervous systems and accustomed to working independently. A knowledge of receptor biochemistry and experience of industrial pharmaceutical research is desirable.

### MICROBIAL PHYSIOLOGIST

This post is open to graduates in medicine with post-graduate qualifications in microbiology and experience of research in microbial diseases, including tuberculosis. Experience in immunology, experimental infections and molecular biology is also desirable.

### ORGANIC CHEMIST

Applicants should hold a Ph.D. degree in chemistry and have research experience in drug development and medicinal chemistry/synthesis in challenging areas of relevance to the tropics.

Preference will be given to candidates of about 35 years of age who have had at least five years' experience in research since obtaining their post-graduate qualifications.

Applications, accompanied with curriculum vitae, should be addressed to: Prof. D. Subrahmanyam, Research Director, CIBA-GEIGY of India Limited, Research Centre, P.O. Box 9002, Goregaon East, Bombay 400 063 / India.

# CIBA-GEIGY

## R&D COLLOID CHEMIST

Kraft, Incorporated R&D has a position available in our protein laboratory for an individual to participate in the investigation of the electrical and physicochemical properties of protein particles that control food texture. Qualified applicants should have a Ph.D in Colloid Chemistry, Physical Chemistry or related field, with at least 2 years of post-doctoral or industrial experience. Familiarity with electrokinetics and surface tension measurements is desirable. Send confidential resume to:

**Director of  
Personnel Administration**



**Research & Development  
801 Waukegan Road  
Glenview, Illinois 60025**

*An Equal Opportunity  
Employer M/F*

## Universiteit van Amsterdam

In the Subfaculty of Biology, the Department of Special Botany (Hugo de Vries-laboratory), there is a vacancy for an

## full professor (m/f) of special botany

The tasks of the functionary include:

- co-ordination of teaching and lecturing in special botany
  - leading a research group of Evolutionary Botany.
- (This group consists of 5 scientific officers and 4 laboratory assistants).

The qualifications required are an academically trained botanist (at least PhD or DSc level):

- having a wide interest in the discipline of evolutionary botany and being specialized in the aspects of micro- or macro-evolution of taxa demonstrable by publications of a high standard
- having adequate didactic qualifications
- willing to, and capable of, contributing towards the administrative and representative functions within the subfaculty and the institute
- having good organizing and contactual capacities
- willing to acquire sufficient proficiency in the Dutch language.

Salary min. Dfl. 6,352 max. Dfl. 9,075 per month (Dutch Civil Servants Code) but depending on age and experience nomination in a higher salary scale may be considered.

Information is obtainable from the Secretary of the Nomination Committee, dr. F. Bouman, Hugo de Vries-laboratory, Plantage Middenlaan 2a, 1018 DD Amsterdam, the Netherlands.

Applications accompanied by a curriculum vitae and a list of publications are invited - *within 2 months* - to the Dean Subfaculteit Biologie, Biologisch Centrum, Kruislaan 318, 1098 SM Amsterdam, the Netherlands, quoting number 5478.

## POSITIONS OPEN

**FACULTY POSITION IN INSTRUMENTATION.** Established scientist to teach and develop program in science instrumentation. Tenure-track; starts fall 1982; Ph.D. in engineering or physics preferred; basic research in areas such as biomedical instrumentation, imaging, radiotelemetry. Teach instrumentation and other science courses; conduct and supervise student research. Salary to \$36,500. Send résumé to: **Director, Center for Interdisciplinary Science, San Francisco State University, San Francisco, Calif. 94132**, by 21 May 1982. *An Equal Opportunity/Affirmative Action Employer.*

### UNIVERSITY OF OKLAHOMA COLLEGE OF MEDICINE

Applicants are solicited for **FACULTY POSITIONS** in the following departments:

**ADMINISTRATION/DEAN'S OFFICE**—(Number 390) **Deputy dean**, number two administrative official in the College of Medicine. Reports directly to the dean and in his absence acts for the dean. Provides the necessary liaison and assistance from the dean's office to the college and other areas. Depending upon personal qualifications, faculty status within the College of Medicine may be granted. Must have M.D. and/or Ph.D. with minimum of 5 years of administrative experience in high-level position in a College of Medicine or Health Sciences Center. (Number 391) **Associate dean—academic affairs**, incumbent reports directly to the dean. College of Medicine, and serves in a staff role to assist and support departments in all academic affairs. Assures that dean is kept cognizant of and provided necessary information on which to base timely decisions relating to such matters as curriculum, student advisory systems, educational programs, and other specific areas as determined by the dean. Candidate should hold doctorate degree in medical or related discipline with at least 5 years of demonstrated high-level administrative experience in a medical academic environment.

Applicants should send curriculum vitae, identifying vacancy number for which they are applying, to: **O. C. Coleman, Assistant Dean, College of Medicine, University of Oklahoma Health Sciences Center, P.O. Box 26901, Oklahoma City, Okla. 73190.** *We are an Equal Opportunity Employer.*

**FACULTY POSITION** available for Ph.D. immunobiologist experienced in tissue culture techniques. Candidate will participate in a program including growth and transplantation of tissue culture grown autologous and allogeneic skin. Rank and salary commensurate with experience. Please supply résumé to:

**David N. Herndon, M.D.**  
Chief of Staff  
Shriners Burns Institute  
Director of Burn Services  
University of Texas Medical Branch  
610 Texas Avenue  
Galveston, Texas 77550

**GEOSCIENCE DEPARTMENT/School of Natural Sciences and Mathematics—ASSISTANT PROFESSOR.** Applications are being accepted for a permanent, tenure-track position beginning 1 September 1982. Duties: Assist with teaching introductory geology and/or earth science lecture or laboratory courses; teach upper-level undergraduate and graduate paleontology and micropaleontology. Academic preparation: Prefer a paleontologist with a Ph.D. and experience with a paleontological application. Some experience desirable. Send application, transcripts, and three letters of recommendation to: **Chairperson, Search Committee, Geoscience Department, Indiana University of Pennsylvania, Indiana, Pa. 15705.** Application deadline is 30 May 1982.

*An Affirmative Action/Equal Opportunity Employer*

### MICROBIAL GENETICS

The University of Tennessee College of Medicine seeks candidates for a tenure-track faculty position at the assistant or associate professor rank in the Department of Microbiology and Immunology. The candidate must have demonstrated research capability and postdoctoral experience in bacterial or viral genetics and be able to teach microbial genetics and physiology to medical and graduate students. Send curriculum vitae and three letters of recommendation to:

**Bob A. Freeman, Chairman**  
Department of Microbiology and Immunology  
University of Tennessee  
Center for the Health Sciences  
42 North Dunlap, Room 628  
Memphis, Tennessee 38163

## POSITIONS OPEN

### DEPARTMENT HEAD Interdisciplinary Studies (Bioengineering) Clemson University

A department head is being sought for the Department of Interdisciplinary Studies. This department, housed in the College of Engineering, has a major research emphasis in biomaterials and biomechanics and offers M.S. and Ph.D. degrees in bioengineering. Prospective candidates must have an earned doctorate and should have an established reputation in research, a strong commitment to graduate education, an interest in faculty development, and proven administrative and leadership abilities.

Applications for the position will be accepted until 30 June 1982, or thereafter until the position is filled. Send curriculum vitae to: **Dr. D. D. Moyle, Chairman, Search Committee, Department of Interdisciplinary Studies, 301 Rhodes Engineering Research Center, Clemson University, Clemson, S.C. 29631.**

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

**HEAD OF BIOCHEMISTRY.** The University of Texas System Cancer Center, M.D. Anderson Hospital and Tumor Institute, invites applications for the head of the Department of Biochemistry. An individual with a proven record of excellence in biochemical research is being sought to provide leadership in the development of research programs within the department. New space and additional state-supported positions will be available to the head. Please send curriculum vitae by 31 May 1982 to: **Dr. William Plunkett, Chairman, Biochemistry Search Committee, Department of Developmental Therapeutics, The University of Texas System Cancer Center, M.D. Anderson Hospital and Tumor Institute, 6723 Bertner Avenue, Houston, Texas 77030.** *Affirmative Action/Equal Opportunity Employer.*

### MOLECULAR BIOLOGY, Ph.D.

**PHYTOGEN**, a leading genetic engineering company applying molecular biology and plant tissue culture techniques for the improvement of agriculturally important crops, has an immediate opening at the level of senior scientist for an individual to direct fundamental research in plant molecular biology. Applicants should have extensive knowledge and research experience in recombinant DNA techniques, including cDNA cloning. PhytoGen is located in southern California and offers a stimulating working environment. Applications accompanied by a résumé and a list of references should be sent to: **PHYTOGEN, 101 Waverly Drive, Pasadena, Calif. 91105.**

**PHARMACOLOGISTS**—The University of Nevada School of Medicine has two tenure-track positions open at the assistant/associate professor level (M.D. or Ph.D.). Must have a minimum of 2 years of postdoctoral training and demonstrated research experience in autonomic, cardiovascular, or neuropharmacology. Will be expected to develop an independent, funded research program. Interested persons should send curriculum vitae to: **Dr. David P. Westfall, Chairman-designee, University of Nevada, School of Medicine, Reno, Nevada 89557.** The positions will remain open until satisfactory candidates are found. *The University of Nevada is an Affirmative Action/Equal Opportunity Employer.*

Position available for a **POSTDOCTORAL FELLOW OR RESEARCH ASSOCIATE** for studies on isolation and analysis of cellular genes affected in chemical carcinogenesis of mouse cells exploiting DNA-mediated gene transfer. Prior experience in DNA manipulation or recombinant DNA cloning preferred.

Send curriculum vitae and names of three references to: **Dr. Harvey L. Ozer, Department of Biology, Hunter College of the City University of New York, 695 Park Avenue, New York, N.Y. 10021.**

*Hunter College is an Equal Opportunity/Affirmative Action Employer.*

**TWO POSTDOCTORAL POSITIONS** in plant biochemistry and cell culture available July 1982. Research involves: (i) mutagenesis, clonal selection, and plant regeneration, and (ii) studies of lignin production by cultured plant cells. Background in plant cell culture and/or phytochemistry/agricultural chemistry preferred. Send curriculum vitae, a description of research interests, and names and addresses of three references to: **Dr. William L. Pengelly and Dr. Michael H. Gold, Department of Chemistry and Biochemical Sciences, The Oregon Graduate Center, 19600 N.W. Walker Road, Beaverton, Oregon 97006.** *An Equal Opportunity/Affirmative Action Employer.*

## POSITIONS OPEN

**POSTDOCTORAL POSITION** available for studies on neurotransmitters and phospholipid metabolism in smooth muscle. Salary negotiable. Please submit curriculum vitae and names of three references to: **Dr. Ata Abdel-Latif, Department of Cell and Molecular Biology, Medical College of Georgia, Augusta, Ga. 30912.** *An Equal Opportunity/Affirmative Action Employer.*

**POSTDOCTORAL POSITION** available June or July 1982, to study the effects of opiates and related drugs on the visual system of rats. Background should include single cell or multi-unit recording, preferably in visual pathways of small mammals. Send curriculum vitae and names of references to: **Dr. Martin W. Adler, Department of Pharmacology, Temple University School of Medicine, 3420 North Broad Street, Philadelphia, Pa. 19140.** *Equal Opportunity/Affirmative Action Employer.*

**POSTDOCTORAL POSITION** available now to summer 1984 for research on the biochemistry and immunology of myelin and brain proteins. Must have Ph.D. in biochemistry, immunology, cell biology, or related area. Areas available: protein structure and function, neurologic mutant animals, immunocytochemistry, oligodendrocyte differentiation. Salary: \$15,000 first year, \$18,000 second year. Send curriculum vitae and names of three references to: **Dr. T. J. Sprinkle, VA Medical Center Research Service (151), Neurochemistry Laboratories, Augusta, Ga. 30910; telephone: 404-828-2029.** *Equal Opportunity/Affirmative Action Employer, M/F.*

**POSTDOCTORAL POSITION** starting between June and September 1982 to investigate the role of the brain in prolactin-induced estrous cyclicity. Background in neuroendocrinology, neuroanatomy, and/or neurochemistry necessary. Starting salary: \$15,000 for this 2- to 3-year position. Send curriculum vitae and direct three letters of recommendation to: **Dr. Phyllis M. Wise, Department of Physiology, University of Maryland, School of Medicine, 660 West Redwood Street, Baltimore, Maryland 21201.**

**POSTDOCTORAL POSITION**, 1 July 1982, for 1 to 2 years. Approximately \$15,000. U.S. citizen. Will join: **R. G. Allen (ACTH/endorphin regulation); J. C. Crabbe (alcohol pharmacogenetics); L. D. Keith (neuroendocrine secretion); J. W. Kendall (ACTH/endorphin pathophysiology); and E. S. Orwoll (parathyroid regulation, Ca<sup>2+</sup> metabolism).** Send curriculum vitae, names of three references, and statement of research interests to: **Dr. John Crabbe (151), VA Medical Center, Portland, Ore. 97201. Telephone: 503-222-9221, extension 656 (R.G.A., J.C.C., L.D.K.); extension 507 (J.W.K.); and extension 685 (E.S.O.).**

### DEPARTMENT OF PHARMACOLOGY UNIVERSITY OF CALIFORNIA, IRVINE

**POSTDOCTORAL POSITION** available immediately for research on cellular mechanisms of reinforcement. Background in single unit recording and neuropharmacology required. Experience with computers and in vitro preparations desirable. Salary is in accordance with current NIH stipends and is commensurate with experience. Second-year funding is probable.

Send curriculum vitae and names of three references before 1 June 1982 to: **Dr. Larry Stein, Chairman, Department of Pharmacology, University of California, Irvine, Calif. 92717.**

**POSTDOCTORAL RESEARCH ASSOCIATE POSITION** available 1 July 1982 to study nucleosome mobility in chromatin. Experience in chromatin research essential, hydrodynamic methods, and recombinant DNA techniques highly desirable. Salary: \$15,000 to \$18,000 per year, depending on experience. Deadline for applications: 1 June 1982. Send curriculum vitae and three references to: **Dr. K. E. van Holde, Department of Biochemistry and Biophysics, Oregon State University, Corvallis, Oregon 97331.** *Oregon State University is an Equal Opportunity/Affirmative Action Employer and complies with Section 504 of the Rehabilitation Act of 1973.*

**RESEARCH ASSOCIATE IN DEVELOPMENTAL BIOLOGY/MOLECULAR VIROLOGY.** Participates in research aimed at developing methods of infecting chicken germ-line cells with retroviruses. Temporary 1-year position with U.S. Department of Agriculture at Regional Poultry Research Laboratory in East Lansing, Michigan. Salary: \$23,566 to \$36,723, depending on qualifications. For applications, contact: **Marie Bishop, USDA-ARS-NCRO-C2, 2000 West Pioneer Parkway, Peoria, Ill. 61615. Telephone: 309-671-7134.** *Equal Opportunity Employer.*



## HARRIS LABORATORIES, INC.

### DIRECTOR CLINICAL RESEARCH DIVISION

Harris Laboratories, Inc., one of the largest diversified Independent Laboratories in the U.S., has a unique and excellent career opportunity for a Director of one of its major divisions, the Clinical Research Division. The Harris Laboratories Clinical Research Division conducts a variety of types of clinical research at its Lincoln facility on a contract basis for most major pharmaceutical companies.

The position requires a Ph.D. in the Life Sciences, or M.D. Requirements include strong management and communication skills, as well as good technical background. Technical background in Pharmacology or Clinical Research is preferred, but not necessary. Responsibilities will include management, technical liaison with sponsors and regulatory agencies, and business development.

Harris Laboratories is a rapidly growing, diversified organization offering great career opportunities to performance oriented qualified individuals. Salary commensurate with experience. Send c.v. and history of experience in confidence to **Human Resources Department, Harris Laboratories, Inc., P.O. Box 80837, Lincoln, NE 68501.**



## POSTDOCTORAL AND PREDOCTORAL FELLOWSHIPS

**TARBOX INSTITUTE, TEXAS TECH UNIVERSITY HEALTH SCIENCES CENTER.** Applications are invited for Tarbox Postdoctoral and Tarbox Predoctoral Fellowships for research training in neuroscience areas related to the vertebrate central nervous system.

**Tarbox Postdoctoral Fellowships.** Awards are granted for an initial 12-month period with the possibility of renewal up to a maximum of 3 years. Priority is given to individuals seeking postdoctoral training within 3 years of obtaining their terminal degree. Applications from more senior investigators wishing to receive further training will be considered; the latter awards may be tied to a sabbatical leave. Tarbox Postdoctoral Fellows receive each year a total of \$30,000 which supports an appropriate stipend, a research grant for supplies and equipment, and a travel allowance of \$1,000.

**Tarbox Predoctoral Fellowships.** Awards are granted for an initial 12-month period with the possibility of annual renewal until completion of Ph.D. degree. Fellows are enrolled in one of the five Ph.D. programs in anatomy, biochemistry, microbiology, pharmacology, or physiology. Fellowships are awarded only after students have completed an adequate number of graduate courses and have begun laboratory work on a doctoral research program in an area related to the vertebrate central nervous system. Tarbox Predoctoral Fellows receive each year a total of \$10,000 which supports an appropriate stipend (currently \$7,000), a research grant for supplies and equipment, and a travel allowance of \$500.

Requests for information and application material should be addressed to:

Alexander D. Kenny, Ph.D., D.Sc., Director  
Tarbox Parkinson's Disease Institute  
Texas Tech University Health Sciences Center  
Lubbock, Texas 79430  
Telephone: 806-743-2409

Equal Opportunity/Affirmative Action  
Employer

## Creative Soil Microbiologist

Are you seeking a challenging position with a leader in crop protection chemicals? Stauffer Chemical Company has an immediate opening for a skilled, imaginative, PhD soil microbiologist to study the fate and interaction of biologically active compounds with soil microorganisms. A strong understanding of the interrelationships among microflora, soil physics, chemistry and soil microbial metabolism of organic compounds is essential.

Superior PhD soil microbiologists are invited to send resumes to:  
**Stauffer Chemical Company, D.A. Walker, Personnel Manager, 1200 S. 47th Street, Richmond, CA 94804.** An equal opportunity, affirmative action employer.



## NON-OPIOID PHARMACOLOGIST

Sterling-Winthrop Research Institute has an excellent opportunity for a Pharmacologist with a minimum of 2 years experience in the application and development of methodologies in the characterization of non-opioid analgesics including biochemical approaches to prostaglandin involvement in nociception.

The successful candidate should have a PhD or equivalent and the ability to critically appraise research efforts at the IN VITRO level and develop/apply appropriate IN VIVO models.

The Institute which is located near Albany, New York will provide the appropriate facilities and technical staff to participate in drug development. We offer an excellent salary and benefit package along with the opportunity for career growth within a dynamic professional environment. Please send your Curriculum Vitae including salary requirements in confidence to:

John G. Barry, Employment Administrator



**STERLING-WINTHROP  
RESEARCH INSTITUTE**

Division of Sterling Drug Inc.  
Rensselaer, New York 12144

Equal Opportunity Employer M/F

## Plant Biologist

The Plant Genetics Department of Pfizer Central Research is seeking a creative Ph.D. level scientist to carry out research designed to develop plant tissue culture methods for genetic manipulation of corn and soybeans, with specific emphasis on the application of cellular approaches to practical breeding projects.

Successful candidate will join a multi-disciplinary research team which provides basic research support for the corn and breeding programs of Pfizer Genetics, Inc. Applicants should have strong training in plant biology, physiology or genetics, and plant tissue/cell culture. Experience with protoplast procedures, breeding methods, or somatic cell genetics for plant species, particularly field crops, is also desirable.

This position offers an excellent opportunity for professional recognition and career growth. We also offer a competitive compensation and benefit package and the opportunity to live in an attractive Connecticut shore community. Please send resume and description of research interests to: **Mr. F. G. Ziegler, Pfizer Inc., Eastern Point Road, Groton, CT 06340.**



An Equal Opportunity  
Employer

## POSITIONS OPEN

**POSTDOCTORAL POSITIONS** for recent Ph.D. or M.D.; U.S. citizen or permanent resident; available immediately and starting 1 July 1982; supported by NIH Training Grant (National Research Service Awards), in the area of basic cancer chemotherapy, clinical cancer chemotherapy, cancer biology, or cancer drug development (organic synthesis). Application deadline for immediate position: 1 month. Send résumé indicating area(s) of interest and two or more letters of reference to: **Dr. Sungman Cha, Brown University, Box G, Providence, R.I. 02912. Telephone: 401-863-3114. An Equal Opportunity/Affirmative Action Employer.**

### POSTDOCTORAL POSITION IN REPRODUCTIVE BIOLOGY

Research in the areas of: (i) mammalian fertilization, including capacitation and acrosome reaction, or (ii) mammalian ovulation with emphasis on the role of proteinases in ovulation. Salary: \$15,936. Send résumé to: **Dr. Prudence Talbot, Department of Biology, University of California, Riverside, Calif. 92521.**

**POSTDOCTORAL POSITION** available immediately to study the biochemistry of muscle development, particularly cell-cell and cell-matrix interactions in morphogenesis. Background in one or more of the following areas is desirable, but not essential: protein chemistry, immunochemistry (including hybridomas), cell culture, experimental embryology. Send curriculum vitae and names of three references to: **Dr. David C. Turner, Department of Biochemistry, State University of New York, Upstate Medical Center, Syracuse, N.Y. 13210. An Equal Opportunity/Affirmative Action Employer.**

**POSTDOCTORAL RESEARCH ASSOCIATE.** Position available immediately for recent Ph.D. in physics or chemical physics to perform a feasibility study leading to eventual construction of an electrostatic quadrupole linear ion accelerator, for the purpose of studying the chemistry of high-energy ion-molecule interactions and energy transfer in collisions of high molecular weight ions with solid surfaces. High velocity high molecular weight ions will be used to study properties of systems in condensed phases at extremely high temperatures. The applicant should have a background in theoretical and dynamic aspects of particle acceleration and instrumentation. Experience in ion-molecule chemistry is also desirable. Please submit résumé, transcripts, and three letters of recommendation to: **Dr. Alfred P. Wolf, Chairman, Department of Chemistry, Brookhaven National Laboratory, Associated Universities, Inc., Upton, Long Island, N.Y. 11973. An Equal Opportunity Employer, M/F.**

The University of California, Irvine, College of Medicine, is seeking applicants for a **RESEARCH ASSOCIATE**, Ph.D. position at the assistant professor level, to direct study of clinical uses of evoked potentials in neurological disorders with particular attention to electrophysiological correlation of cognitive disorders. Knowledge of digital computer use and programming, and prior experience in human evoked potentials required. *An Equal Opportunity/Affirmative Action Employer.* Send curriculum vitae and request three letters of reference to be sent to: **Arnold Starr, M.D., Department of Neurology, University of California, Irvine, Calif. 92717.** Appointment is for 3 years duration, contingent on grant funding. Position available 1 July 1982.

### SYSTEMATIC ENTOMOLOGIST POSITION ANNOUNCEMENT

The Department of Entomology, Smithsonian Institution, has a professional opening in Hymenoptera: Apoidea. The candidate should have an established research program in evolutionary systematics, with a demonstrated interest in its theory and a knowledge of computer applications. Preference will be given to an applicant with a Ph.D. Salary range (GS 11/12/13) will depend on experience and qualifications. Smithsonian entomology offers opportunities for development of field programs, interdisciplinary collaboration with members of other natural history departments, and use of a worldwide collection, as well as an excellent library. Special facilities include SEM, TEM, Smithsonian publication series, computer services, and potential for teaching courses and for advising graduate students. Interested applicants should send a statement of current and future goals, curatorial interests, curriculum vitae, U.S. Civil Service Standard Form 171, the names of three references, and a set of reprints to: **Dr. Wayne N. Mathis, Chairman, Department of Entomology, NHB 105, Smithsonian Institution, Washington, D.C. 20560. The Smithsonian Institution is an Equal Opportunity Employer.** Closing date: 15 June 1982.

## POSITIONS OPEN

**TWO POSTDOCTORAL RESEARCH ASSOCIATE** positions are currently available to study the molecular genetics of poxviruses. Research will be focused primarily on the refinement of poxviruses as eukaryotic cloning vectors. In addition, the localization and regulation of endogenous poxviral genes, analysis of RNA transcription, and protein synthesis will be investigated. Salary commensurate with qualifications and experience. Please apply with curriculum vitae and three letters of recommendation. **Dr. Enzo Paoletti, New York State Department of Health, Empire State Plaza, Albany, N.Y. 12201.**

**PSYCHOLOGIST.** Ph.D. clinical psychologist or its equivalent. Fully licensed or eligible for practice in the state of Michigan. Two to 3 years of supervised clinical work with emphasis on individual and family treatment. Strong interest in teaching residents and students in a family practice program. Commitment to multidisciplinary research. This will be a faculty appointment at a salary level and academic rank commensurate with credentials and experience. Applicants should submit a statement of interest and curriculum vitae to: **James F. Peggs, M.D., Chairman of Clinical Psychologist Search Committee, c/o Peggy Alford, Administrative Associate, Department of Family Practice, University of Michigan Medical School, B-1952 CFOB, Box 55, Ann Arbor, Michigan 48108. A nondiscriminatory, Affirmative Action Employer. Code 23.**

**RESEARCH ASSISTANT PROFESSOR** position available immediately for a Ph.D. with experience in the production of monoclonal antibodies and in the use of a fluorescence activated cell sorter, to join current studies on membrane markers of null lymphocytes and on hemic synthetic enzymes. Some internal funding is available while candidate is expected to be able to attract external funding. Candidates already having grant funding interested in taking charge of a modern FACS and participating in ongoing research will be preferred. Experience in protein purification and in the use of HPLC and isoelectric focusing techniques is also desirable. Salary commensurate with experience. Curriculum vitae and three letters of reference should be sent to: **Dr. C. J. Rosenthal, Department of Medicine, Westchester Medical Center, Munger Pavilion, New York Medical College, Valhalla, N.Y. 10595.**

**RESEARCH ASSOCIATES (two).** Openings expected 1 June 1982 for two research associates to work in marine biomass cultivation of seaweeds. One (Ph.D.) with background in physiology/ecology and reproduction and one (Ph.D./M.S.) in natural product chemistry (HPLC systems). Salary: \$15,000 to \$35,000, depending on experience. (Temporary until 30 November 1982, subject to renewal of contract.) Send résumé and names of three references to: **B. H. Brinhuys, Marine Sciences Research Center, State University of New York (SUNY), Stony Brook, Stony Brook, N.Y. 11794. SUNY, Stony Brook, is an Equal Opportunity/Affirmative Action Employer. AK Number 349.**

**SENIOR RESEARCH ASSOCIATE** position available in laboratory studying various aspects of SV40 tumor virology/immunology. Prior postdoctoral experience in cellular immunology, virology, or membrane protein biochemistry desirable. Salary range: \$15,000 to \$22,000. Please send curriculum vitae and letters of recommendation by 1 June 1982 to: **Dr. Linda R. Gooding, Department of Microbiology and Immunology, Emory University School of Medicine, Atlanta, Georgia 30322. Equal Opportunity/Affirmative Action Employer.**

**SENSORY NEUROPHYSIOLOGIST.** Tenure-track assistant professor; Ph.D. and postdoctoral experience required. Completely automated and equipped neurophysiological laboratory available. Serious commitment to collaborative work within Microsurgical Research Center. Collaborative opportunities include the study of structure-function relationships underlying cutaneous signal processing with intra- and extracellular recordings and morphological (LM/EM) and histochemical (single-cell HRP) techniques. Preferred: background in neurophysiology, cutaneous mechanoreception, single cell sensory neurophysiology at the dorsal horn and cortex, neuroanatomy (LM/EM), and histochemistry. Experience with small computers and animal surgery.

Send curriculum vitae, brief description of research experience, and names of three references to:

**Dr. J. K. Terzis  
Microsurgical Research Center  
Eastern Virginia Medical Authority  
P.O. Box 1980  
Norfolk, Va. 23501**

## POSITIONS OPEN

**POSTDOCTORAL RESEARCH POSITION** available in CNS pharmacology. Background in drug abuse research and in neurophysiology is desirable. Send curriculum vitae and names of references to: **Dr. Naim Khazan, Department of Pharmacology and Toxicology, University of Maryland School of Pharmacy, 636 West Lombard Street, Baltimore, Md. 21201. An Equal Opportunity/Affirmative Action Employer.**

**RESEARCH ASSOCIATE.** Experimental research in the field of molecular biology, using knowledge of protein chemistry, microbial physiology, genetics and nucleic acid biochemistry, electrophoresis, spectrophotometry, column chromatography, radioisotope techniques and ultracentrifugation; molecular cloning of genes for human clotting factors involving purification of mRNA containing gene sequences, operation of nucleotide synthesizer, development of affinity chromatography methodology, expression of human gene sequences in cultured cells, and production of gene products in bacteria. Ph.D. in biochemistry or microbiology with specialization in bacterial genetics and nucleic acid biochemistry and experience with ultracentrifugation, column chromatography, electrophoresis, and use of radioisotopes required. Forty hours, \$312 per week. Apply with résumé to:

**Dr. Robert A. Bambara  
Department of Biochemistry, Box 607  
University of Rochester Medical Center  
Rochester, N.Y. 14642**

## RESEARCH OFFICER—LIGHTING

The National Research Council Canada, Division of Building Research, is seeking a research officer with experience in scientific or engineering research to work in its lighting research unit. The incumbent will be expected to conduct original research to augment the current program designed to provide fundamental data for internationally recommended lighting practice. Candidates with strong backgrounds in vision, ergonomics, and experimental design are preferred. Candidates should also be graduates at the master's or Ph.D. levels. Salary of up to \$34,025 per annum will depend upon qualifications. Relocation allowance is available where applicable. Apply in writing to: **Employment Officer, National Research Council Canada, Ottawa, Ontario, Canada K1A 0R6.** In reply, please quote **BR-82-04-S.**

### SENIOR EPIDEMIOLOGIST

To develop a programme on diet and cancer. Experience in nutrition, hormones, and related factors in the causation of human cancer required, as well as a broad background in the management of studies of chronic disease epidemiology. Apply to: **International Agency for Research on Cancer, 150 Cours Albert Thomas, 69372 Lyon Cedex 2, France, attention: Personnel.**

### VIROLOGIST

The Department of Microbiology and Immunology and Neurology, and the Rocky Mountain Multiple Sclerosis (MS) Center at the University of Colorado School of Medicine are soliciting applications for a faculty member with a strong research interest and background in latent viral infections, molecular virology technology, and pathogenesis of viral infections in animals. The applicant must be interested in developing an independent research program investigating demyelination mechanisms with coronavirus research currently ongoing. Academic rank and salary commensurate with applicant's credentials. Outstanding applicants should submit curriculum vitae, explanation of current research interests, list of publications, and names of references to: **Dr. Jack S. Burks, Executive Director, Rocky Mountain MS Center, University of Colorado Health Sciences Center, Box B 181, 4200 East Ninth Avenue, Denver, Colorado 80262. The University of Colorado is an Equal Opportunity/Affirmative Action Employer.**

**VIROLOGIST/VETERINARY VIROLOGIST.** Conducts basic and applied research on avian tumors and viral diseases. Team-oriented, multidisciplinary program utilizes basic/molecular approaches to solve practical problems. Ph.D. or D.V.M. desirable. Career position with U.S. Department of Agriculture at Regional Poultry Research Laboratory in East Lansing, Mich. Minimum salary: \$28,245. For applications, contact: **Marie Bishop, USDA-NCR-02, 2000 West Pioneer Parkway, Peoria, Ill. 61615. Telephone: 309-671-7134. Equal Opportunity Employer.**

**CENTRE FOR CELLULAR AND MOLECULAR BIOLOGY  
HYDERABAD-500009  
INDIA**

**INDEPENDENT POSTS AVAILABLE**

Centre for Cellular & Molecular Biology (CCMB), a constituent national laboratory of the Council of Scientific & Industrial Research (CSIR), India, invites correspondence from outstanding Indian scientists resident abroad but interested in returning to India. The CCMB is a well-equipped, recently established institution, at present located in the buildings of the Regional Research Laboratory Hyderabad. Its own buildings are under construction next to its present location and the first phase of the construction should be over by mid-1983, providing nearly 100,000 sq. ft. of space. The Centre is designed to have, at full strength, 20 independent groups each led by an outstanding scientist. The CCMB will have, in addition, a number of technique-oriented and service groups. The total staff strength finally envisaged is 650-700.

The charter of the CCMB calls upon it to develop into an institution of a high level of excellence (from international standards) in the growing areas of modern biology. It is already well-equipped, and its facilities will be further expanded when it shifts to the new buildings. Some groups already established, are headed by Dr G N Ramachandran, F.R.S.; Dr M R Das; Prof. D Balasubramanian; and Dr P M Bhargava (Director).

Those appointed as group leaders, for which positions correspondence is invited, must have demonstrated ability to work independently and to generate new, original and worthwhile ideas; qualities of leadership; a wide-based knowledge of modern biology; the capability of interacting with at least two-thirds of the existing groups; and the ability to cope with problems that are intrinsic to the Indian set up that one may face even in the best of the research institutions in the country. Posts available for the independent positions will be in the grade of either Rs. 1500-60-1800-100-2000 (Scientist EI: total emoluments will be Rs. 2,500/- on the minimum salary in the grade and Rs. 3,015/- on the maximum salary) or Rs. 1800-100-200-125/2-2250 (Scientist EII: total emoluments will be Rs. 2,785/- on the minimum salary and Rs. 3,590/- on the maximum salary). Those appointed in the Scientist EI grade would be likely to have had, generally speaking, a minimum of five years of post-doctoral experience, and those appointed to the Scientist EII grade, a minimum of 8 years of post-doctoral experience. There is a provision for higher start in the case of exceptionally qualified and suitable persons.

Those considered suitable on a prima facie basis, will be invited to visit the CCMB as and when they happen to visit India. Their travel expenses within India and living expenses in Hyderabad will be met by the CCMB. It may be possible to offer the position immediately to those considered suitable for the above posts after such a visit.

Some posts in the grade of Deputy Director (Scientist 'F': Rs. 2000-125/2-2500) may also be available for exceptionally qualified candidates who already have had considerable experience of leading independent groups and have an established international reputation.

Letters and enquiries may be addressed to Mr P S Venkateswaran, Administrative Officer or Dr P M Bhargava, Director at the address given above.



**QUEEN'S  
FELLOWSHIPS  
IN  
MARINE SCIENCE**

To commemorate the Royal visit to Australia in 1970 the Australian Government established the Queen's Fellowships Scheme. Under this scheme up to five fellowships may be awarded each year for full-time research by scientists of exceptional promise and proven capacity for original work. These awards are tenable at an Australian university or approved research institution normally for 2 years. Tenure of a fellowship is expected to commence within 9 months of the announcement of the award.

**QUALIFICATIONS:** Queen's fellows should have a Ph.D. or equivalent qualifications, or equivalent research or professional experience, in a discipline applicable in marine science or coastal engineering.

Awards will, in general, be restricted to applicants who are not more than 30 years of age on the date when applications close.

**SALARY:** A\$21,509 per annum, increased to A\$23,107 at age of 28 years (at present under review).

**TRAVEL EXPENSES:** Necessary travel expenses are payable.

**APPLICATIONS:** Persons interested in applying for the above fellowships should obtain application forms from: **The Executive Officer, Queen's Fellowships Scheme, Department of Science and Technology, P.O. Box 65, Belconnen, ACT 2616, Australia.**

The next round of awards will be announced in December 1982. Applications close on 30 July 1982.

**SECTION HEAD  
ATHEROSCLEROSIS  
RESEARCH**



The Pharmaceutical Research section of SANDOZ, INC., a leading pharmaceutical company with a worldwide reputation for notable research, seeks a Scientific Investigator in the area of atherosclerosis research. This individual should have the necessary knowledge and experience to lead an established group of Scientists in research on Atherosclerosis, with emphasis on lipoprotein metabolism. The goal of this group is the design of therapeutic agents useful in the prevention or treatment of atherosclerosis.

Located in Northern New Jersey, SANDOZ offers an attractive combination of salary, benefits, desirable working atmosphere and favorable prospects for professional growth. Please send resume, including salary information, in confidence to:

**Ms. Judith O'Hagen  
Personnel Manager,  
Research and Development  
Sandoz, Inc., Research and Development  
Route 10, East Hanover, N.J. 07936  
An equal opportunity employer M/F**

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□ \$103 air-surface delivery via Holland

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□ \$85 USA □ \$109 Canada □ \$112 Foreign  
□ \$140 air-surface delivery via Holland

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## POSITIONS OPEN

**RESEARCH ASSOCIATE** to culture mammalian cells, make karyotypes of mammalian cells, do in situ hybridization, isolate DNA, do Southern analyses of DNA, and continue a research project already in progress which involves determining whether various genes in different animals replicate early or late in cell cycle. Must have M.S. in biology with 3 years of experience **OR** Ph.D. in biology. Must be adept at tissue culture, in situ hybridization, and handling of radioactive materials; \$13,900 per year. Forty hours per week. Apply at: **Texas Employment Commission, Houston, Texas**, or send résumé to: **Texas Employment Commission, TEC Building, Austin, Texas 78778**. Job Order Number 2578089. *Ad paid by an Equal Opportunity Employer.*

### SKIN RESEARCH PRINCIPAL SCIENTIST

The Gillette Research Institute, a Division of The Gillette Company, has a career opportunity for an established researcher, seven or more years beyond doctorate with recognized accomplishment and broad experience in skin-related research. Cell structure-function relationships or receptor-related biochemical experience preferred. Must have ability to transfer new findings and methodologies from academia to industrial research environment.

Primary responsibility will be to initiate and develop research programs leading to the development of a new generation of skin products on basis of recent and anticipated advances in biological sciences. Will also maintain productive liaison with academic and other researchers in allied fields.

The Gillette Company is a leading worldwide manufacturer of consumer products including personal care and shaving products and writing instruments. In addition to an exceptional opportunity for recognition and growth, we offer a comprehensive salary and benefits package and a challenging work environment. Applicants should submit résumés to:



Gillette Research Institute  
Personnel Office  
1413 Research Boulevard  
Rockville, Maryland 20850  
*An Equal Opportunity Employer*

## TRAINEESHIPS

### POSTDOCTORAL TRAINEESHIPS IN BIOCHEMISTRY, MOLECULAR BIOLOGY, AND CELL BIOLOGY

Applications are invited for postdoctoral training in the Department of Biochemistry and Molecular Biology at The University of Texas Medical School at Houston. The primary areas of research include: membrane transport/structure and biochemistry of cell differentiation (Julia E. Lever); control of cell growth and purification of growth factors (David A. Sirbasku); cytochromes P-450 and the enzymology of drug metabolism and carcinogen activation (Henry W. Strobel); structure, function, and assembly of membrane components (William Dowhan); biogenesis of membrane bound multienzyme complexes and metalloenzymes (John A. DeMoss); synthesis, structure, and function of proteins and of glycoproteins (Finn Wold); development of new mass spectrometric methods for the sequence analysis of proteins (Richard M. Caprioli); enzymology and regulation of DNA synthesis (Charles S. McHenry); enzymology of DNA replication in eukaryotes (Michael Engler); morphology and assembly of virus particles (Peter B. Berget); chemical and spectroscopic probes of structure and function in folate-utilizing enzymes (Jack Henkin); and fast kinetic and nuclear magnetic resonance investigations of structure and folding of mutant proteins (Barry T. Nall). **Application:** Applicants can receive further information by writing to the individual with whom they are interested in working at: **The Department of Biochemistry and Molecular Biology, The University of Texas Medical School at Houston, P.O. Box 20708, Houston, Texas 77025**. Applicants should send curriculum vitae, area of research interest, and names of three references. *The University of Texas is an Equal Opportunity/Affirmative Action Employer.*

## TRAINEESHIPS

**POSTDOCTORAL TRAINEESHIPS** in developmental biology. Applications are invited for the postdoctoral positions in the Developmental Biology Training Program in the Zoology Department of the University of Iowa. The primary areas of research and research supervisors include: (i) protein biosynthesis (J. Menninger); (ii) gene expression in lambda (G. Gussin); (iii) DNA replication (C. Newlon); (iv) developmental biology of *Tetrahymena* (J. Frankel; N. Williams); (v) developmental biology of *Dictyostelium discoideum* and *Candida albicans* (D. Soll); (vi) developmental genetics of *Drosophila* (D. Mohler); (vii) cartilage cell differentiation (M. Solursh); (viii) developmental neurobiology (J. Denburg; S. Kater; J. Kollros; C. F. Wu); (ix) developmental parasitology (G. Cain); and (x) reproduction (E. Spaziani; R. Kessel; B. Stay).

United States citizens or permanent residents with Ph.D.'s are eligible. Financial support is primarily from NIH.

**APPLICATION:** Send curriculum vitae, area of research interest, and names of three references to: **Dr. David R. Soll or Dr. Michael Solursh, Department of Zoology, University of Iowa, Iowa City, Iowa 52242**. *The University of Iowa is an Equal Opportunity/Affirmative Action Employer.*

## COURSE

**COURSE ON MYCOPLASMA TECHNIQUES FOR DIAGNOSTIC OR RESEARCH WORKERS**, 20 June to 7 July 1983, University of Bordeaux II, France. Topics include: morphology, cultivation, serology, cell culture contamination, mycoplasmas of man, animals, plants, and insects. Course director: J. G. Tully. Deadline for applications is 1 June 1983. Limit: 30 students. Please write to: **J. M. Bove, Laboratoire Biologie Cellulaire et Moléculaire, Grande Ferrade, 33140 Pont-de-la-Maye, France**.

## FELLOWSHIPS

### Saint Mary's University, Halifax, Nova Scotia POSTDOCTORAL FELLOWSHIP

Synthesis of analogs of the antitumor drug DTIC and application of triazenes in heterocyclic synthesis. Stipend at current NSERC rates (maximum: \$16,380 per annum).

Curriculum vitae and two letters of recommendation to be sent to:

**Professor Keith Vaughan  
Department of Chemistry  
Saint Mary's University  
Halifax, Nova Scotia, Canada B3H 3C3**

**POSTDOCTORAL RESEARCH FELLOWSHIPS** are available immediately within the Department of Pathology, University of Texas Health Science Center, San Antonio. Studies will involve phospholipid/fatty acid/prostaglandin metabolism in cultured vascular and kidney cells. Applicants must be either U.S. citizens or permanent residents. Send curriculum vitae and names of three referees to: **M. A. Venkatachalam, M.B., B.S., 7703 Floyd Curl Drive, San Antonio, Texas 78284**. *Equal Opportunity/Affirmative Action Employer.*

### IMPERIAL CANCER RESEARCH FUND RESEARCH FELLOWSHIP

Applications are invited for a 3-year postdoctoral appointment to work with Dr. Ian Kerr on the biochemistry of interferon action, the regulation of the interferon response, and the role of the 2-5A system in relation to its wider possible significance in the control of cell growth and development. Experience with proteins and nucleic acids or genetic engineering techniques or membrane biochemistry and some familiarity with handling cells in tissue culture are desirable.

The position is available immediately and candidates should be free to take up the appointment by October 1982. Salary range: £8,787 to £10,837 (inclusive of London Allowance), with entry according to qualifications and experience.

For further information, contact: **Dr. Ian Kerr, telephone: 01 242 0200, extension 337**. Applications with full curriculum vitae and the names and addresses of two referees should be sent to: **Secretary, Imperial Cancer Research Fund, Lincoln's Inn Fields, London WC2, England**, by 31 May 1982, if possible quoting reference 45/82.

## FELLOWSHIPS

The University of California, Irvine, College of Medicine, offers a **POSTDOCTORAL FELLOWSHIP IN NEUROPHYSIOLOGY** to work on neuronal mechanisms of alcohol in the CNS. The research primarily involves using extracellular and intracellular recording techniques and a background in electrophysiology is required. *An Equal Opportunity/Affirmative Action Employer.* Interested persons please send curriculum vitae to and request three letters of reference to be sent to: **Nai-Shin Chu, M.D., Ph.D., Department of Neurology, College of Medicine, University of California, Irvine, Calif. 92717**. Salary range: \$1328 to \$1654 per month. Position available 1 July 1982.

**POSTDOCTORAL FELLOWSHIP IN NEURAL CONTROL OF THE CARDIOVASCULAR SYSTEM.** A limited number of fellowship positions are available funded by an NIH training grant. Clinical and basic scientists participate in the program with major emphasis on neural pathways, hypertension, cardiovascular pharmacology, exercise, alcoholic heart muscle disease and exercise, electrophysiology, cardiac biochemistry, and biofeedback. The positions are open to U.S. citizens and permanent residents who have Ph.D., M.D., or equivalent degrees in a basic biomedical discipline.

Applicants should send curriculum vitae with three references and specific area of interest to: **Dr. H. Lowell Stone, Department of Physiology and Biophysics, University of Oklahoma Health Sciences Center, P.O. Box 26901, Oklahoma City, Oklahoma 73190**.

*We are an Equal Opportunity Employer.*

**POSTDOCTORAL FELLOWSHIP IN IMMUNOBIOLOGY.** Postdoctoral fellowships in cancer immunobiology are available at Sloan-Kettering Institute for Cancer Research. Fellows will be trained in cellular immunology, development and interaction of lymphoid cells, molecular immunology, clinical immunology and cancer, human and mouse immunogenetics, tumor immunology, cell surface immunogenetics, and immunogenetics. Training methods include individualized research with qualified mentor training in clinical laboratory analysis, lectures, courses, seminars, discussions, rounds, clinics, and conferences. Individual research program will be offered either in New York City or at Walker Laboratory, Rye, N.Y. Only U.S. citizens or foreign nationals with permanent resident or immigrant visas will be considered. Send inquiry with brief résumé to: **Dr. Y. S. Choi, Immunobiology Training Program Director, Sloan-Kettering Institute for Cancer Research, 145 Boston Post Road, Rye, N.Y. 10580**. *An Equal Opportunity/Affirmative Action Employer.*

**POSTDOCTORAL FELLOWSHIP**—Three-year fellowship available immediately at the University of Pennsylvania to study molecular aspects of growth factor action on cells in tissue culture. Experience with recombinant DNA technology useful. Applicants should submit their curriculum vitae, a description of research interests, and the names of two references to:

**Dr. Charles D. Scher  
Children's Hospital of Philadelphia  
3400 Civic Center Boulevard  
Philadelphia, Pa. 19104**

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

## MARKETPLACE

### CLONES

Celtek, Inc. has produced monoclonal antibodies against varied infectious agents, and these antibodies are for sale at competitive prices. Celtek, Inc. can also custom produce antibodies to your antigen preparations. For more information, call or write **Hydroma Contract Officer, Celtek, Inc., 102 W. Eufala, Norman, OK 73069, (405) 364-0264**.

# THE INTERNATIONAL CENTRE OF INSECT PHYSIOLOGY AND ECOLOGY

Nairobi, Kenya

## VACANCY

### **MICROBIOLOGIST - POST- DOCTORAL RESEARCH FELLOW (REF:SCI/82/2)**

Applications are invited from suitably qualified candidates for the position of a Microbiologist at the International Centre of Insect Physiology and Ecology (ICIPE), in Nairobi, Kenya. The ICIPE is a Centre of advanced research in insect science and pest management, and is also engaged in high-level training of talented young insect scientists and senior technologists from Africa and other developing countries. It has about 50 senior scientists and other professional staff to undertake a sharply focussed programme of research and training, supported by a variety of donor agencies.

#### **Qualifications:**

Ph. D. in microbiology and relevant research experience in identification of microbes, microbial, physiological and metabolic studies and microbial genetics. Experience in microbial bio-chemistry will be an advantage. A candidate with broad experience will be considered for a higher position.

#### **Responsibilities:**

The successful candidate will join a small team of research scientists working on ligno-cellulose digestion by micro-organisms and termite

symbionts with the objective of devising satisfactory microbial pre-treatment techniques for vegetable biomass for fermentation to biogas or ethanol. He will primarily be responsible for the identification and culturing of protozoa, bacteria or fungi implicated in ligno-cellulose digestion, as well as carry out genetic and metabolic experiments to identify mutants with improved digestion capabilities.

#### **Salary:**

Negotiable and include attractive benefits to the right candidate.

Applications giving detailed information on general education, professional qualifications and experience, marital status, age present terms of employment (including salary and benefits), names and addresses of four referees (including one personal referee), and photocopies of relevant diplomas and certificates (which will not be returned) should be addressed to:

*The Administrative Manager  
ICIPE Research Centre  
P.O. Box 30772  
Nairobi*

to reach him **not later than 3 weeks  
after publication**



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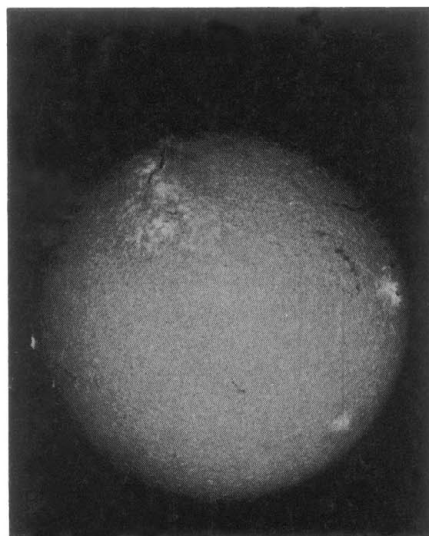
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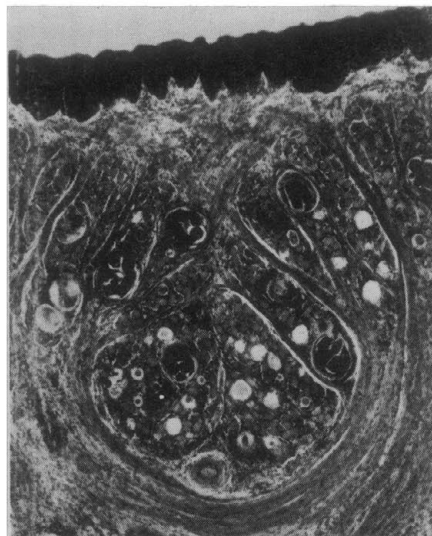
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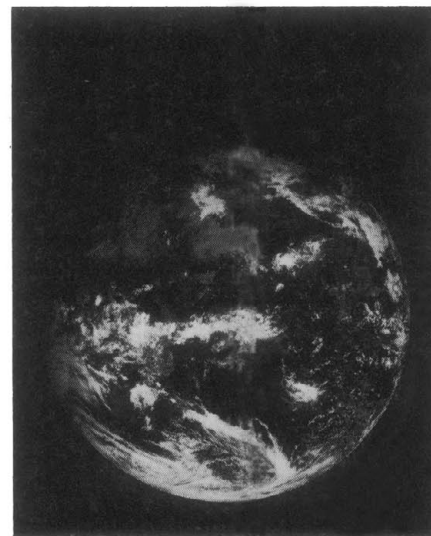
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Hydrogen-alpha photograph of solar flares. Sacramento Peak Observatory, Sunspot, N.M.



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Meteorological imagery from geostationary satellite. VIZIR laser-beam recording by Société Européenne de Propulsion (France).

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