

book provides a reasonably up-to-date overview and could well be a useful acquisition for scientists wishing to broaden their perspective in the molecular biology of cancer.

JOHN M. COFFIN

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Some Other Books of Interest

Darwin's Finches. DAVID LACK. Introduction and notes by Laurene M. Ratcliffe and Peter T. Boag. Cambridge University Press, New York, 1983. liv, 208 pp., illus., + plates. \$39.50; paper, \$13.95. Reprint, 1961 edition.

In their introduction to this augmented reprint Ratcliffe and Boag write that "few books have had as great an impact on evolutionary ecology as David Lack's *Darwin's Finches*," which, they state, "has remained a classic for . . . its extremely accurate descriptions of geospizine ecology and behaviour . . . and for its original, cogent formulation of the adaptive radiation model." The book, which draws on field studies conducted by the author during an expedition to the Galápagos in 1938–39, first appeared in 1947 and was reissued in 1961. To the present edition Ratcliffe and Boag, themselves biologists whose research has been concerned with the Galápagos finches, have added, in addition to the introduction describing the origins and impact of the work as a whole, a section of chapter-by-chapter notes indicating the present state of knowledge concerning various matters dealt with by Lack or placing his observations in the context of his other work. Material from the Lack archives at Oxford has been used in preparing the notes, and a list of some 150 "modern references" has been provided.—K.L.

Vulture Biology and Management. SANFORD R. WILBUR and JEROME A. JACKSON, Eds. University of California Press, Berkeley, 1984. xxii, 550 pp., illus. \$35. Based on a conference, Santa Barbara, Calif., March 1979.

Vulture Biology and Management consists of 32 contributions about half of which were presented at an international conference on the subject. The others were solicited by the editors to round out the coverage. Two opening papers on the fossil history (P. Rich) and the systematics (A. Rea) of the vultures are followed

by 20 on the conservational status and the biology of vultures in various parts of the world. The 12 biological papers, which are equally divided between Old and New World vultures, include general discussions of adaptive radiation (D. Houston), competition for food (C. König), and nesting habits and reproductive success (Jackson) in various groups; the remainder are predominantly reports of field studies conducted by their authors. Five papers are then devoted to research and management techniques; two, both reports of studies on North American specimens, to effects of environmental contaminants; and two to the theme "vultures and man" in Old and New World prehistory. The final contribution is a 29-page bibliography supplementing one published by Wilbur in 1978. The book includes subject, author, geographical, and taxonomic indexes.

—K.L.

Higher Mathematics from an Elementary Point of View. H. RADEMACHER. D. Goldfeld, Ed. Notes by G. Crane. Birkhäuser, Boston, 1983. viii, 138 pp., illus. \$29.95.

Hans Rademacher (1892–1969) is known for his work in analytical number theory. Also an expositor of mathematics to general audiences, he was the author, with Otto Toeplitz, of a popular work (1933) that has been translated into English as *The Enjoyment of Mathematics*. The present volume is based on 11 lectures, also for a general audience, given by Rademacher at Stanford University in 1947. The subjects covered are prime numbers, Farey fractions, decimal fractions, the approximation of irrational numbers by rational numbers, the exclusion-inclusion principle, Ford circles, the modular group and modular functions, and linkages. The source of the text is not clearly specified but is presumably notes taken by Crane at the time the lectures were delivered. To seven of the chapters, the editor, Goldfeld, has appended brief (one-paragraph) notes pointing out more recent results on the topics in question or otherwise indicating the context of the discussions. A brief updated bibliography and a subject index are included.—K.L.

Books Received

Acid Deposition. S. Beilke and A. J. Elshout, Eds. Reidel, Boston, 1983 (distributor, Kluwer Boston, Hingham, Mass.). x, 235 pp., illus. \$32.50. From a workshop, Berlin, Sept. 1982.

The Acquisition of Symbolic Skills. Don Rogers and John A. Sloboda, Eds. Plenum, New York, 1983. xii, 623 pp., illus. \$79.50. NATO Conference Series III, vol. 22. From a conference, Keele, England, July 1982.

Advanced Synergetics. Instability Hierarchies of Self-Organizing Systems and Devices. Hermann Haken. Springer-Verlag, New York, 1983. xvi, 356 pp., illus. \$40. Springer Series in Synergetics, vol. 20.

Advances in Child Development and Behavior. Vol. 17. Hayne W. Reese, Ed. Academic Press, New York, 1982. xii, 304 pp. \$32.

Advances in Cognitive-Behavioral Research and Therapy. Vol. 2. Philip C. Kendall, Ed. Academic Press, New York, 1983. xvi, 310 pp. \$34.50.

Advances in Experimental Social Psychology. Vol. 15. Leonard Berkowitz, Ed. Academic Press, New York, 1982. viii, 296 pp. \$29.50.

Advances in Hamiltonian Systems. J. P. Aubin, A. Bensoussan, and I. Ekeland, Eds. Birkhäuser, Boston, 1983. viii, 195 pp. \$19.95. Annals of the CERE-MADE. From a conference, Rome, Feb. 1981.

Advances in Image Pickup and Display. Vol. 6. B. Kazan, Ed. Academic Press, New York, 1983. xiv, 261 pp., illus. \$62.50.

Advances in Librarianship. Vol. 12. Wesley Simonton, Ed. Academic Press, New York, 1982. xviii, 300 pp. \$32.

Advances in the Study of Behavior. Vol. 13. Jay S. Rosenblatt *et al.*, Eds. Academic Press, New York, 1983. xiv, 262 pp., illus. \$29.50.

Aggressive Behavior. Genetic and Neural Approaches. Edward C. Simmel, Martin E. Hahn, and James K. Walters, Eds. Erlbaum, Hillsdale, N.J., 1983. xiv, 201 pp., illus. \$24.95. Based on a symposium, Oxford, Ohio, Sept. 1981.

Animal Disease Control. Regional Programs. Robert P. Hanson and Martha G. Hanson. Iowa State University Press, Ames, 1983. x, 331 pp., illus. Paper, \$22.50.

Annual Review of Phytopathology. Vol. 21. Raymond G. Grogan, George A. Zentmyer, and Ellis B. Cowling, Eds. Annual Reviews, Palo Alto, Calif., 1983. x, 429 pp. \$27.

Annual Review of Sociology. Vol. 9. Ralph H. Turner and James F. Short, Jr., Eds. Annual Reviews, Palo Alto, Calif., 1983. xii, 610 pp. \$27.

Antibiotics Containing the Beta-Lactam Structures. Part 2. A. L. Demain and N. A. Solomon, Eds. Springer-Verlag, New York, 1983. xviii, 479 pp., illus. \$125. Handbook of Experimental Pharmacology, vol. 67/II.

Automation. John Diebold. American Management Associations, New York, 1983. xl, 181 pp. \$14.95. Reprint, 1952 edition.

Automation in Animal Development. A New Theory Derived from the Concept of Cell Sociology. Rosine Chandebois, with Jacob Faber. Karger, Basel, 1983. xii, 204 pp., illus. \$99. Monographs in Developmental Biology, vol. 16.

Avian Biology. Vol. 7. Donald S. Farner, James R. King, and Kenneth C. Parkes, Eds. Academic Press, New York, 1983. xxiv, 542 pp., illus. \$69.50.

Before It's Too Late. A Scientist's Case for Nuclear Energy. Bernard L. Cohen. Plenum, New York, 1983. xviii, 292 pp., illus. \$16.95.

Briggs' Information-Processing Model of the Binary Classification Task. Samuel Mudd. Erlbaum, Hillsdale, N.J., 1983. xii, 136 pp., illus. \$19.95.

Building Controls into Structured Systems. Alan E. Brill. Yourdon Press, New York, 1983. xviii, 149 pp., illus. Paper, \$29.

CBE Style Manual. A Guide for Authors, Editors, and Publishers in the Biological Sciences. 5th ed. Council of Biology Editors, Bethesda, Md., 1983. xx, 324 pp. \$24.

Calculator Programs for the Health Sciences. J. H. Abramson and E. Peritz. Oxford University Press, New York, 1983. xx, 407 pp. \$42.50; paper, \$24.95.

Cancer: Etiology and Prevention. Ray G. Crispin, Ed. Elsevier, New York, 1983. xiv, 463 pp., illus. \$67.50. From a symposium, Chicago, Oct. 1982.

Catalysis in C₁ Chemistry. Wilhelm Keim, Ed. Reidel, Boston, 1983 (distributor, Kluwer Boston, Hingham, Mass.). xii, 312 pp., illus. \$58.50. Catalysis by Metal Complexes, vol. 4. From a course, Aachen, Germany.

Catechol Estrogens. George R. Merriam and Mortimer B. Lipsett, Eds. Raven, New York, 1983. xx, 279 pp., illus. \$44. From a workshop, Bethesda, Md., 1982.

Cerebrovascular Diseases. E. I. Gusev, N. N. Bogolepov, and G. S. Burd. Mir, Moscow, 1982 (U.S. distributor, Imported Publications, Chicago). 192 pp., illus. \$6.95. Translated from the Russian edition (Moscow, 1979) by Michael Burov.

Chemical Graph Theory. Nenad Trinajstić. CRC Press, Boca Raton, Fla., 1983. Two volumes. Vol. 1. xii, 147 pp., illus. \$67.50. Vol. 2. xii, 166 pp., illus. \$69.

Chemicals from Synthesis Gas. Catalytic Reactions of CO and H₂. Roger A. Sheldon. Reidel, Boston, 1983 (distributor, Kluwer Boston, Hingham, Mass.). xx, 216 pp., illus. \$48. Catalysis by Metal Complexes.

The Child's Construction of Social Inequality. Robert L. Leahy, Ed. Academic Press, New York, 1983.

(Continued on page 836)

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- xvi, 350 pp. \$35. Developmental Psychology Series. **Children of Working Parents.** Experiences and Outcomes. Cheryl D. Hayes and Sheila Kamerman, Eds. National Academy Press, Washington, D.C., 1983. xii, 275 pp. Paper, \$16.50.
- Children's Language.** Vol. 4. Keith E. Nelson, Ed. Erlbaum, Hillsdale, N.J., 1983. xvi, 479 pp., illus. \$49.95.
- Chromatography in Organic Microanalysis.** A Laboratory Guide. Raphael Ikan. Academic Press, New York, 1983. 108 pp. \$22.50.
- Climate.** The Key to Understanding Business Cycles, with a Forecast of Trends into the 21st Century. The Raymond H. Wheeler Papers. Michael Zahorchak, Ed. Tide Press, Linden, N.J., 1983. xxii, 256 pp., illus. \$75.
- Clinical and Biological Aspects of Peripheral Nerve Diseases.** Leontino Battistin, George A. Hashim, and Abel Lajtha, Eds. Liss, New York, 1983. xviii, 383 pp., illus. \$48. Neurology and Neurobiology, vol. 4. From a symposium, Padova, Italy, Sept. 1982.
- The Clinician's Guide to Diagnostic Imaging.** Zachary D. Grossman, David A. Ellis, and Stephen C. Brigham. Raven, New York, 1983. xii, 262 pp. Paper, \$14.
- Clusters as Subsystems in Light Nuclei.** V. I. Kukulin *et al.* **Direct Cluster Reactions—Progress Towards a Unified Theory.** D. F. Jackson. Vieweg, Braunschweig, Germany, 1983 (U.S. distributor, Heyden, Philadelphia). vi, 266 pp., illus. \$55.50. Clustering Phenomena in Nuclei, vol. 3.
- Common Sense in U.S.-Soviet Trade.** Margaret Chapman and Carl Marcy, Eds. 2nd ed. American Committee on East-West Accord, Washington, D.C., 1983. iv, 175 pp., illus. Paper, \$5.
- The Comparative Status of the U.S. Pharmaceutical Industry.** The Influences of Technology in Determining International Industrial Competitive Advantage. National Academy Press, Washington, D.C., 1983. xii, 103 pp. Paper, \$8.95.
- Compartamental Modeling and Tracer Kinetics.** David H. Anderson. Springer-Verlag, New York, 1983. viii, 302 pp., illus. Paper, \$17.50. Lecture Notes in Biomathematics, vol. 50.
- Comprehensive Treatise of Electrochemistry.** Vol. 5. Thermodynamic and Transport Properties of Aqueous and Molten Electrolytes. Brian E. Conway, J. O'M. Bockris, and Ernest Yeager, Eds. Plenum, New York, 1983. xviii, 472 pp., illus. \$59.50.
- Computational Aspects of Complex Analysis.** H. Werner *et al.*, Eds. Reidel, Boston, 1983 (distributor, Kluwer Boston, Hingham, Mass.). viii, 426 pp. \$54. NATO Advanced Study Institutes Series C, vol. 102. From an institute, Braunlage, Harz, Germany, July 1982.
- Computational Methods for Turbulent, Transonic, and Viscous Flows.** J. A. Essers. Hemisphere, Washington, D.C., 1983. viii, 360 pp., illus. \$49.95. A von Karman Institute Book. From a course, March 1981.
- A Contribution to the Nonexistence of Perfect Codes.** M. R. Best. Mathematisch Centrum, Amsterdam, 1983. vi, 101 pp. Paper, Dfl. 13.20.
- Coping with Chronic Disease.** Research and Applications. Thomas G. Burish and Laurence A. Bradley, Eds. Academic Press, New York, 1983. xx, 512 pp. \$42.
- Cross-Cultural Anxiety.** Vol. 2. Charles D. Spielberger and Rogelio Diaz-Guerrero, Eds. Hemisphere, Washington, D.C., 1983. xii, 218 pp. \$34.50. Series in Clinical and Community Psychology.
- Crustacean Phylogeny.** Frederick R. Schram, Ed. Balkema, Rotterdam, 1983 (U.S. distributor, MBS, Salem, N.H.). xii, 372 pp., illus. \$38. Crustacean Issues, 1. Based on a symposium, Dallas, Dec. 1981.
- Culture of Animal Cells.** A Manual of Basic Technique. R. Ian Freshney. Liss, New York, 1983. xiv, 295 pp., illus. \$49.50.
- The Death Penalty.** A Debate. Ernest van den Haag and John P. Conrad. Plenum, New York, 1983. xiv, 305 pp. \$16.95.
- Design Principles in Resource Recovery Engineering.** Norman L. Hecht. Butterworths, Boston, 1983. xiv, 159 pp., illus. \$19.95. An Ann Arbor Science Book.
- Deterministic Top-Down and Bottom-Up Parsing.** Historical Notes and Bibliographies. Anton Nijholt. Mathematisch Centrum, Amsterdam, 1983. x, 119 pp. Paper, Dfl. \$16.50.
- Dietary Fats and Health.** E. G. Perkins and W. J. Visek, Eds. American Oil Chemists' Society, Champaign, Ill., 1983. viii, 978 pp., illus. \$69; to members, \$49. AOCS Monograph 10. From a conference, Chicago, Dec. 1981.
- Elements of Logic and Foundations of Mathematics in Problems.** Wiktor Marek and Janusz Onyszkiewicz. Reidel, Boston, and PWN—Polish Scientific Publishers, Warsaw, 1983 (distributor, Kluwer Boston, Hingham, Mass.). viii, 276 pp. \$39.50. Translated from the Polish edition (Warsaw, 1972).

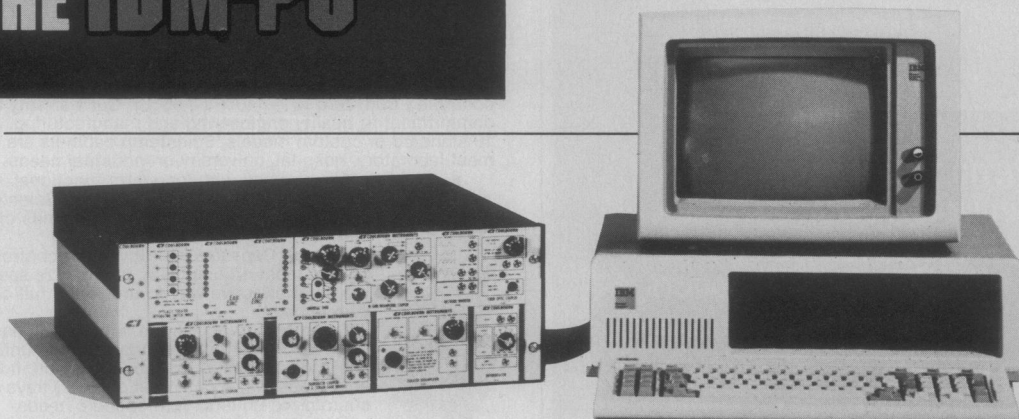
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- Energy in Atomic Physics, 1925–1960.** R. Bruce Lindsay, Ed. Hutchinson Ross, Stroudsburg, Pa., 1983 (distributor, Van Nostrand Reinhold, New York). xiv, 381 pp., illus. \$45. Benchmark Papers in Energy, vol. 10.
- Engineering Approaches for Lake Management.** Vol. 1. Data Analysis and Empirical Modeling. Kenneth H. Reckhow and Steven C. Chapra. Butterworth, Boston, 1983. xviii, 340 pp., illus. \$49.95.
- Engineering Challenges in the 1980s.** Vol. 2. Cambridge Information and Research Services, Royston, Herts, England, 1982 (U.S. distributor, Hemisphere, Washington, D.C.). 104 pp., illus. \$60. From a meeting, York, England, 1981.
- Enhancers and Eukaryotic Gene Expression.** Yakov Gluzman and Thomas Shenk, Eds. Cold Spring Harbor Laboratory, Cold Spring Harbor, N.Y., 1983. x, 218 pp., illus. Paper, \$27. Current Communications in Molecular Biology. From a conference, Cold Spring Harbor, N.Y., Apr. 1983.
- Environment and Solid Wastes.** Characterization, Treatment, and Disposal. Chester W. Francis, Stanley I. Auerbach, and Vivian A. Jacobs, Eds. Butterworth, Boston, 1983. xiv, 498 pp., illus. \$49.95. An Ann Arbor Science Book. From a symposium, Gatlinburg, Tenn., Oct. 1981.
- Environmental Effects of Organic and Inorganic Contaminants of Sewage Sludge.** R. D. Davis, G. Hucker, and P. L'Hermite, Eds. Reidel, Boston, 1983 (distributor, Kluwer Boston, Hingham, Mass.). x, 257 pp., illus. \$36.95. From a workshop, Stevenage, England, May 1982.
- Environmentally Sound Agriculture.** William Lockeretz. Praeger, New York, 1983. xiv, 429 pp. \$37.95. From a conference, Cambridge, Mass., Aug. 1982.
- Essays of an Information Scientist.** Vol. 5, 1981–1982. Eugene Garfield, ISI Press, Philadelphia, 1983. xxiv, 848 pp., illus. \$25.
- Flooding and Implosive Therapy.** Direct Therapeutic Exposure in Clinical Practice. Patrick A. Boudewyns and Robert H. Shipley. Plenum, New York, 1983. xii, 235 pp. \$24.50.
- Friction, Wear, Lubrication.** Tribology Handbook. I.V. Kragelsky, Ed. Mir, Moscow, and Pergamon, New York, 1982. Three volumes. 384 pp., illus.; 280 pp., illus.; and 264 pp., illus. \$120. Translated from the Russian edition (Moscow, 1979) by Felix Palkin and Valerian Palkin.
- Functional Integrals in Quantum Field Theory and Statistical Physics.** Viktor Nikolayevich Popov. Reidel, Boston, 1983 (distributor, Kluwer Boston, Hingham, Mass.). viii, 299 pp. \$65. Mathematical Physics and Applied Mathematics, vol. 8. Translated from the Russian edition by J. Niederle and L. Hlavaty.
- Fundamental Concepts in the Numerical Solution of Differential Equations.** J. F. Botha and G. F. Pinder. Wiley-Interscience, New York, 1983. xiv, 202 pp., illus. \$24.95.
- Garden Trees.** A Guide to the Siting, Selection and Maintenance of Trees in Small and Medium Sized Gardens. Rodney Hilliwell. Research Studies Press (Wiley), New York, 1983. xvi, 95 pp., illus. Paper, \$21.95. Forestry Research Studies Series B, 1.
- The Gene Age.** Genetic Engineering and the Next Industrial Revolution. Edward J. Sylvester and Lynn C. Klotz. Scribner, New York, 1983. xiv, 208 pp. \$14.95.
- Genetic Engineering.** Principles and Methods. Vol. 5. Jane K. Setlow and Alexander Hollaender, Eds. Plenum, New York, 1983. x, 214 pp., illus. \$35.
- The Geographical Distribution of Animal Viral Diseases.** Stewart Odend'hal. Academic Press, New York, 1983. xx, 493 pp., illus. \$49.50. Experimental Virology.
- Girls at Puberty.** Biological and Psychosocial Perspectives. Jeanne Brooks-Gunn and Anne C. Peterson, Eds. Plenum, New York, 1983. xxx, 341 pp., illus. \$32.50. From a conference.
- God and the New Physics.** Paul Davies. Simon and Schuster, New York, 1983. x, 255 pp., illus. \$16.95.
- Grammatical Man.** Information, Entropy, Language, and Life. Jeremy Campbell. Simon and Schuster, New York, 1983. 319 pp. Paper, \$7.95. Reprint, 1982 edition.
- Green's Functions in Quantum Physics.** E. N. Economou. 2nd ed. Springer-Verlag, New York, 1983. xiv, 314 pp., illus. Paper, \$19.50. Springer Series in Solid-State Sciences, vol. 7.
- Guided Affective Imagery with Children and Adolescents.** Hanscarl Leuner, Günther Horn, and Edda Klessmann. William A. Richards, Transl. Ed. Plenum, New York, 1983. xiv, 194 pp., illus. \$25. Emotions, Personality, and Psychotherapy. Trans-

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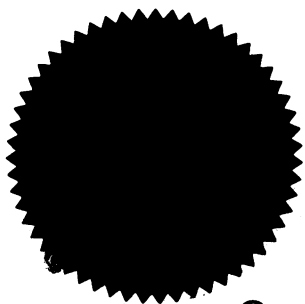


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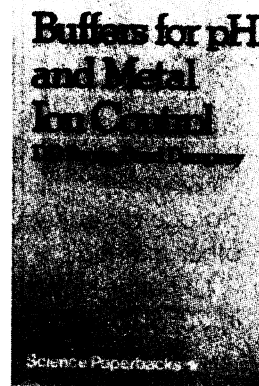
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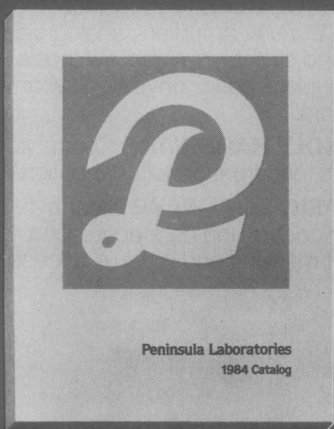
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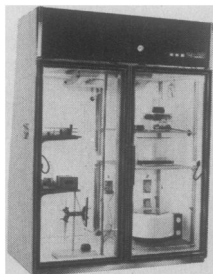
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lated from the German edition (Munich, 1978) by Elizabeth Lachman.

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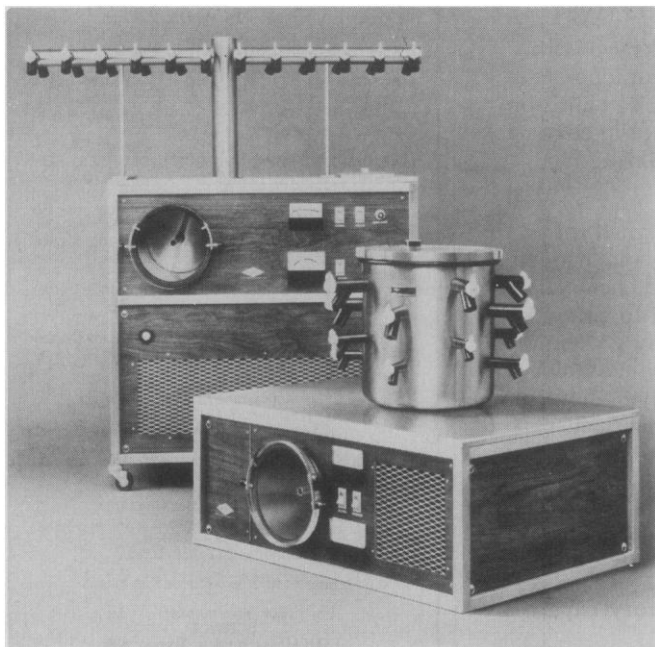
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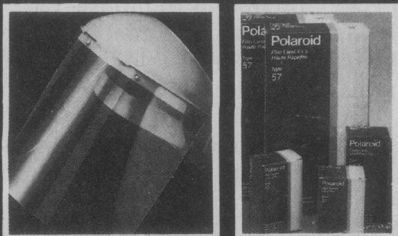
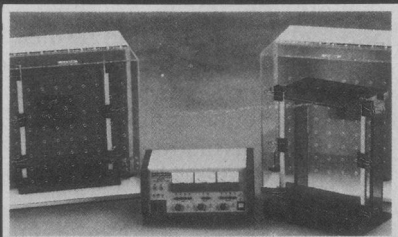
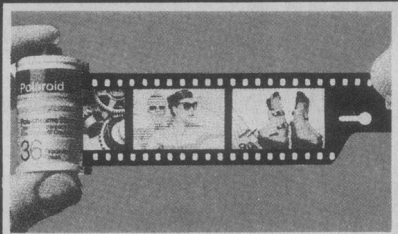
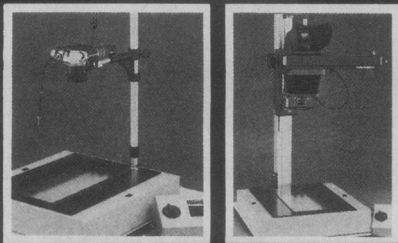
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Molecular Biologist. Ph.D. 1977. University biochemist with extensive research experience in protein purification/characterization and recombinant DNA technology: gene cloning/sequencing/expressions. Dedicated individual. Japanese proficiency. Seeks research position in industry or academia. Vu, 2559 Derbyshire, West Lafayette, Indiana 47906. Office telephone: 317-494-8090; home: 317-463-3933. X

Ph.D. Former NSF and NIH administrator wants to teach vertebrate anatomy. Box 44, SCIENCE. 2/24; 3/2, 9, 16

POSITIONS WANTED

Ph.D. Psychology. University of Lancaster, England. Research interests in construct psychology, personality and psychometrics, genetic factors in personality, dreams and sleep research, and the unconscious and its phenomena. Skilled in multivariate statistics (regression, factor analysis, Bayesian approaches), computer programming (Fortran, Algol, Basic, Nova DG Assembler, IBM 370 Assembler), design of physiological monitoring instrumentation and computer interfaces, and psychological test construction. Published in *British Journal of Psychology*, *Psychometrika*, and *Multivariate Behavioural Research*. Book proposal currently in review by Oxford University Press. Seeks university research post or position in research institute. Excellent references. Box 25, SCIENCE. 2/24; 3/2, 9

As your **President/CEO** I will help form or increase profits/sales of your existing biotechnology/life science/health care company. Box 343, SCIENCE, or telephone: 617-965-6340. 2/24; 3/9, 23

Toxicologist-Ph.D. Experience in bioassay models, pathology, clinical chemistry, hematology, and general toxicology of rodents and dogs. Experience with pharmaceuticals, pesticides, and industrial chemicals. Diplomate, American Board of Toxicology. Box 45, SCIENCE. X

POSITIONS OPEN

ANATOMY FACULTY POSITION

Anatomy. Assistant or associate professor to teach classes in gross anatomy and embryology. Ph.D. required; 15 hours regular load. Salary open. Send applications to: **Academic Dean, Sherman College, Spartanburg, S.C. 29304.**

APPLIED MOLECULAR BIOLOGY

A 2-year master's program emphasizing molecular genetics, hybridoma technology, and recombinant DNA research techniques. This is a hands-on, laboratory-intensive program at University of Maryland, Baltimore County, for those with a bachelor's degree in an appropriate science.

Available to college graduates with degrees in biology, biochemistry, or chemistry.

Fees: standard tuition. Information:

Michael C. O'Neill
Director AMB Program
Department of Biological Sciences
University of Maryland, Baltimore County
Catonsville, Maryland 21228
Telephone: 301-455-2261

ASSISTANT PHYSICIST—Ph.D. in physics-mathematics. Three years of research experience in high-energy physics. Knowledge in electronics, accelerator and beam-line technology, data acquisition, scientific computer programming, mathematical and statistical methods. Knowledge of electronic detection techniques for elementary particles. Will be involved in the construction of the large Collider Detector Facility (CDF), which will be installed in the BO area at a major national laboratory. More specifically, aid in the construction and testing of the shower counter modules for the facility. Participate in the data collection and physics analysis of this experiment. Salary: \$2300 per month; 40 hours per week, 8:30 a.m. to 5 p.m. Send résumé to: **Joan Haight, Illinois Job Service, 910 South Michigan Avenue—Room 400, Chicago, Illinois 60605. REFERENCE Number 3012-H. AN EMPLOYER PAID AD. An Affirmative Action /Equal Opportunity Employer.**

ASSISTANT PROFESSOR IN MICROBIOLOGY

The Department of Bacteriology and Public Health seeks applicants for a tenure-track position at the assistant professor level. Preference will be given to applicants with expertise in the area of microbial pathogenesis with emphasis on host/pathogen interactions. Applicants must have postdoctoral training. The successful candidate is expected to participate in graduate and undergraduate teaching and establish an active research program. Applicants should submit curriculum vitae, statement of research interests and professional objectives, and names of three references to: **Dr. David J. Hinrichs, Chairman of Search Committee, Bacteriology and Public Health, Washington State University, Pullman, Wash. 99164-4340.** Review of applications will begin 1 May 1984. *Washington State University is an Equal Opportunity Employer.*

POSITIONS OPEN

NORTHWESTERN UNIVERSITY ASSISTANT DIRECTOR RESEARCH SERVICES ADMINISTRATION

Primary responsibility will be supervision of the patent and licensing program of the University. Duties will include implementing the program of marketing University technology to industry. Will be involved with the technology from the time of disclosure to this office, through the preparation of suitable marketing material, to presentation to appropriate companies, followed by involvement in licensing negotiations. Continuing liaison with inventors as well as companies will be important aspects of the assistant director's efforts. In addition, the successful applicant will be involved in the maintenance of our computerized marketing files and the computerization of our invention files as well as the preparation of educational materials and programs intended to create a greater patent awareness within the University. Requires a bachelor's degree in a science area and several years of experience in technology transfer. Advanced educational training can be used to substitute for the experience. Must possess strong written and oral communicative skills. Some travel required. Salary: open and negotiable according to qualification. Position is currently available. Application deadline: 15 March 1984. **Research Services Administration, NORTHWESTERN UNIVERSITY, 633 Clark Street, Evanston, Ill. 60201.** *Northwestern University is an Affirmative Action/Equal Opportunity Employer.*

ASSISTANT OR ASSOCIATE PROFESSOR IN THE RESEARCH ASSOCIATE TRACK to assume major responsibility in a cellular electrophysiology laboratory studying arrhythmogenesis and the actions of antiarrhythmic drugs. Experience in voltage clamping, cable analysis, ion-sensitive microelectrodes, and computer programming preferable. Excellent scientific environment. Renewable term appointment with full fringe benefits. Immediate availability. Please send curriculum vitae, representative reprints, and names of three references to: **Morton F. Arnsdorf, M.D., Chief, Section of Cardiology, University of Chicago Hospitals, Box 423, 950 East 59 Street, Chicago, Ill. 60637.**

ASSISTANT PROFESSOR—The Department of Physiology and Biochemistry is seeking an individual with an interest in lipoprotein and atherosclerosis research to join our group. Preference will be given to a person with a background in endocrinology or molecular biology. Those interested should send us curriculum vitae and the names of references. The appointment is of the regular tenure-track variety and is scheduled to begin 1 July 1984, but earlier or later dates are possible. Replies should be addressed to: **Dr. Julian B. Marsh, The Medical College of Pennsylvania, 3300 Henry Avenue, Philadelphia, Pa. 19129.** *Equal Opportunity Employer, M/F.*

The Department of Neurosciences, University of California, San Diego, is seeking qualified candidates for a full-time position in the Clinical Series at the level of **ASSISTANT PROFESSOR.** The vacant position is on the Neurology Service at the Veterans Administration Hospital, San Diego. Salary is dependent upon the candidate's level of previous experience. Qualifications include Board-eligibility or -certification in neurology, California licensure, and demonstration of excellence in teaching and patient care. Expertise in EMG and/or EEG desirable but not essential. In addition, the candidate must have evidence experience in clinical or basic research. All applications received by 31 March 1984 will be considered. Send curriculum vitae, bibliography, and names and addresses of five references to: **Search Secretary, Department of Neurosciences (M008), University of California, San Diego, La Jolla, Calif. 92093.** *The University of California is an Equal Opportunity/Affirmative Action Employer.*

The Department of Neurosciences, University of California, San Diego, is seeking qualified applicants for a position in the **tenure track** at the **ASSISTANT PROFESSOR** level. Salary is dependent upon level of previous experience. Candidates must have an M.D. degree; must be Board-eligible or -certified in neurology; and, must have evidence ability to carry out a strong, independent research program in the general area of neurobiology. All applications received by 31 March 1984 will be considered. Send curriculum vitae, bibliography, and names and addresses of five references to: **Search Secretary, Department of Neurosciences (M008), University of California, San Diego, La Jolla, Calif. 92093.** *The University of California is an Equal Opportunity/Affirmative Action Employer.*

POSITIONS OPEN

The Department of Surgery, **MEDICAL COLLEGE OF OHIO AT TOLEDO**, invites applications from Ph.D.'s and M.D.'s for position of **ASSISTANT PROFESSOR.** Applicants must have the equivalent of 2 years of postdoctoral experience, an interest in basic research related to the stressed patient, and the potential for establishing a vigorous independent research program. The successful candidate is expected to collaborate on current sepsis and trauma work and to complement the interests of the department. Applicants should submit curriculum vitae, bibliography, short statement of future research directions, and three references to: **R. H. Birkhahn, Ph.D., Department of Surgery, Medical College of Ohio, C.S. 10008, Toledo, Ohio 43699,** by 1 April 1984. *Medical College of Ohio is an Equal Opportunity/Affirmative Action Employer.*

ASSISTANT PROFESSOR. Candidates must have research interests and experience in the biological nitrogen fixation field or plant-bacterial interactions and postdoctoral experience. Successful applicant will be expected to develop a dynamic, independent research program, teach in the bacteriology curriculum, and supervise graduate students. Excellent facilities. Tenure track. Annual (12-month) salary. Application deadline: 1 May 1984. Detailed curriculum vitae, including research accomplishments and interests, publications, and three letters of recommendation should be sent directly to: **Dr. J. C. Ensign, Chairman, Search Committee, Department of Bacteriology, 1550 Linden Drive, University of Wisconsin, Madison, Wis. 53706.** *The University of Wisconsin is an Equal Opportunity/Affirmative Action Employer.*

Tenure-track position, **ASSISTANT/ASSOCIATE PROFESSOR,** University of Nevada, Reno. D.V.M. or Ph.D. with postdoctoral experience in virology, immunology, or bacteriology. A strong molecular biology background and publication record is mandatory. Applicants with a record of success in obtaining funding will be given preference. Joint position in expanding program in the College of Agriculture and School of Medicine. Application deadline: 31 March 1984. Submit curriculum vitae to: **R. L. Taylor, D.V.M., Chairman, School of Veterinary Medicine, 5305 Mill Street, Reno, Nevada 89502.** *Affirmative Action/Equal Opportunity Employer.*

ASSISTANT PROFESSOR—TENURE TRACK—ANATOMY—University of Missouri-Kansas City (UMKC) has position available for summer 1984. Requires completion of doctoral degree and postdoctoral experience. Teaching in gross and perhaps neuroanatomy; research area open. Successful candidate will have good chance of early external funding. Curriculum vitae and names of two references to: **Dr. David Moffatt, Professor and Chairman, Department of Anatomy, UMKC School of Medicine, 2411 Holmes, Kansas City, Mo. 64108,** by 1 April 1984. *Equal Opportunity Employer; women and minorities are encouraged to apply.*

BOSTON UNIVERSITY SCHOOL OF MEDICINE. The Department of Anatomy has a vacancy available 1 August 1984 for a faculty member at the **ASSISTANT PROFESSOR** level. Applicants should be able to participate fully in teaching gross anatomy to medical, dental, and graduate students. Special consideration will be given to applicants with active neuroscience research programs. Interested individuals should submit copies of their curriculum vitae, a brief statement of research interests, copies of relevant publications, and the names of three references to: **Dr. Alan Peters, Chairman and Waterhouse Professor, Department of Anatomy, Boston University School of Medicine, 80 East Concord Street, Boston, Mass. 02118.** *An Affirmative Action/Equal Opportunity Employer.*

BACTERIAL GENETICIST. The Department of Plant Pathology, University of Florida, has a tenure-track opening at the assistant professor level for a bacterial geneticist. The appointee will direct a research program on the molecular genetics of bacterial plant pathogens and contribute to the department's graduate teaching program. We are particularly interested in an individual who will use innovative approaches to answer fundamental questions about pathogenesis and resistance at the molecular level. A Ph.D. degree in biochemistry, microbiology, molecular biology, plant pathology, or a related field is required, and postdoctoral experience in the manipulation of extrachromosomal elements is desirable. Applicants should send curriculum vitae, transcripts, and three letters of reference by 20 March 1984 to: **Dr. Steven G. Pueppke, Department of Plant Pathology, University of Florida, Gainesville, Fla. 32611.**

POSITIONS OPEN

ASSISTANT PROFESSOR OF BIOLOGY. A full-time, permanent position is available for September 1984. Doctorate required. Candidates must be able to teach a variety of undergraduate biology courses. Preference will be given to candidates also qualified to teach introductory chemistry and nutrition courses to liberal arts and nursing students. Deadline for applications is 10 April 1984. Send curriculum vitae to: **Dr. William C. Dunning, Chairman, Division of Science and Mathematics, Bellevue College, Bellevue, Neb. 68005.**

The Program in Social Ecology of the University of California at Irvine seeks candidates for a tenure-track **ASSISTANT PROFESSORSHIP** in the area of **human ecology and demography**. Applicants should hold or expect a Ph.D. in a relevant area of the social or natural sciences. Research interest should focus in selective migration, changing age structure, changing urban structure, or of labor force participation by women, adolescents, minorities, or the elderly.

The Program in Social Ecology is a multidisciplinary academic unit that offers the B.A., M.A., and Ph.D. The 25 full-time faculty include sociologists, psychologists, urban planners, public health specialists, and lawyers. The campus is located 60 miles south of Los Angeles and 5 miles from the Pacific Ocean.

Candidates should submit a brief letter and curriculum vitae, and request that three letters of reference be submitted immediately to: **Professor Joseph F. DiMento, Director, Program in Social Ecology, University of California, Irvine, California 92717.** Closing date for applications is 31 March 1984. *The University of California is an Equal Opportunity/Affirmative Action Employer.*

UNIVERSITY OF ARIZONA ASSISTANT/ASSOCIATE PROFESSOR Microbiologist/Immunologist

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

ASSISTANT/ASSOCIATE PROFESSOR OF MICROBIOLOGY. Tenure-track position available 1 July 1984. Candidates must have at least 2 years of postdoctoral experience. The appointee will be expected to develop an independent research program with a strong molecular orientation in virology, genetics, or cell physiology and to participate in teaching medical, dental, and graduate students. Send curriculum vitae, names of three references, and a general statement of projected research by 15 March 1984 to: **Dr. L. William Clem, Department of Microbiology, University of Mississippi Medical Center, Jackson, Miss. 39216-4505.** *Equal Opportunity Employer, M/F/H/V.*

SAN ANTONIO, TEXAS—Associate Dean for Research and Advanced Education. The University of Texas Health Science Center at San Antonio Dental School. Academician and scientist to fill position in an innovative and expanding dental school. Responsibilities include organization and supervision of an active school wide research program and coordination and administration of dental school postdoctoral programs. The position also offers an opportunity to develop independent research activities. D.D.S. or D.M.D. and advanced degree preferred. Send curriculum vitae to: **Dr. Richard Carr, Dental Dean's Office, 7703 Floyd Curl Drive, San Antonio, Texas 78284.** *The University of Texas Health Science Center is an Equal Opportunity/Affirmative Action Employer.*

POSITIONS OPEN

ASSISTANT/ASSOCIATE PROFESSOR (Microbiology)

Applications are invited for an assistant/associate professor of biology in the area of microbiology. The successful applicant will be required to teach undergraduate courses in introductory microbiology and virology, and to initiate a strong research programme in his/her area of expertise. Preference will be given to applicants with a demonstrated ability in undergraduate teaching. Information about the Biology Department and prospects in teaching and research in microbiology may be obtained by writing to the head of department.

Applications, which should include full curriculum vitae, list of publications, and the names of three referees, close on 30 April 1984.

**Dr. G. R. South, Head
Department of Biology**

**Memorial University of Newfoundland
St. John's, Newfoundland, Canada A1B 3X9**

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

MEMORIAL UNIVERSITY OF NEWFOUNDLAND DEPARTMENT OF PSYCHOLOGY

Applications are invited for three tenure-track positions at the assistant professor level. These positions, which are subject to the availability of funds, will become vacant 1 September 1984. Candidates are being sought who have expertise and ongoing research in the following areas:

- 1) Learning/psychopharmacology,
- 2) Group processes/organizational psychology, and
- 3) Cognition.

We are seeking candidates with a Ph.D., evidence of an independent research program, and teaching experience. Teaching duties for all positions will involve both undergraduate and graduate courses.

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

Applications, including the names of three referees and reprints or preprints of recent publications, should be sent to: **Dr. J. E. Strawbridge, Head, Department of Psychology, Memorial University of Newfoundland, St. John's, Newfoundland, Canada A1B 3X9.**

ASSISTANT PROFESSOR REPRODUCTIVE PHYSIOLOGY

A new tenure-track position is available in a department committed to developing research excellence in reproductive biology. Research interests of the applicant should be compatible with the department's ongoing programs in reproductive biology of mammals. The successful candidate must develop a research program with potential for extramural funding, develop a graduate level course in area of specialty, and supervise M.S. and Ph.D. students in biological and biomedical sciences. Appointee will have primary teaching responsibility in an undergraduate course in human genetics and may participate in an introductory biology course. Reduction of teaching is possible if grant funding is obtained. Postdoctoral experience is essential. Salary will be commensurate with qualifications and experience; effective date is August 1984. Send résumé, copies of transcripts, and three letters of recommendation by 30 March 1984 to: **Dr. Gary Killian, Box 10, Department of Biological Sciences, Kent State University, Kent, Ohio 44242.** *Affirmative Action/Equal Opportunity Employer.*

BIOLOGICAL NMR. The Department of Chemistry, Purdue University, invites applications for a professorial appointment in the Biochemistry Division. The academic rank is open, but applicants must have an outstanding record in the area of biochemical applications of NMR, including quality publications and significant research funding. Teaching responsibilities will include a course in biological NMR. The successful applicant may act as director of the Purdue University Biological Magnetic Resonance Laboratory, which currently includes Nicolet 470- and 200-MHz spectrometers. Completed applications, including full curriculum vitae, a brief statement about projected research interests, and the names of three referees, should be sent by 1 June to: **Professor H. L. Pardue, Head, Department of Chemistry, Purdue University, West Lafayette, Ind. 47907.** *Purdue University is an Equal Opportunity/Affirmative Action Employer.*

POSITIONS OPEN

The Pulmonary Division of the Albert Einstein Medical Center—Northern Division is seeking a **Ph.D.** with a background in **BIOCHEMISTRY**. Current interests include: bronchoalveolar lavage studies in patients with interstitial lung disorders, pneumonia, ARDS, and cancer. Will collaborate in projects on emphysema.

If interested please contact:

**Michael L. Lippmann, M.D.
Head, Pulmonary Division
Albert Einstein Medical Center
Northern Division
York and Tabor Roads
Philadelphia, Pa. 19141**

BIOCHEMIST: The Department of Biochemistry, at the Faculty of Medicine, invites applications for a full-time faculty position to commence by summer 1984. Appointment is at the assistant professor level. Preference will be given to candidates with programmatic expertise in molecular and/or cellular biology with particular reference to mammalian systems; but outstanding candidates in other biochemistry specialties will be given full consideration. Postdoctoral training and potential for an independent career as an experimental scientist are prerequisites. An interest in developing expertise and a desire to become an effective educator are desirable qualities.

The position is open to both women and men. In accordance with Canadian Immigration requirements, priority will be given to Canadian citizens and permanent residents of Canada. For full consideration, send a concise description of projected research goals and interests, a list of a minimum of four individuals for letters of reference, curriculum vitae, and any additional information to:

**Dr. J. N. Kanfer
Department of Biochemistry
Faculty of Medicine
University of Manitoba
770 Bannatyne Avenue
Winnipeg, Manitoba, Canada R3E 0W3**

BIOLOGIST

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

For applicant procedures, contact:

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

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

WESTFIELD STATE COLLEGE

BIOLOGY—Anticipated—Tenure track to teach undergraduate courses in microbiology, immunology, and introductory biology. Beginning September 1984. Ph.D. and teaching experience. Salary commensurate with experience and qualifications. Deadline: 15 March 1984. Send résumé, three letters of recommendation, and transcripts to: **Personnel Office, Westfield State College, Westfield, Mass. 01086.** *Affirmative Action/Equal Opportunity Employer.*

POSITIONS IN BIOLOGY. The University of Puerto Rico in Mayaguez invites applications for five tenure-track positions. The successful candidates will teach at the undergraduate and master's levels and establish research programs. A Ph.D. and the abilities to teach in Spanish or to learn to do so immediately are essential. The openings are in vertebrate physiology, industrial microbiology, molecular genetics, plant physiological ecology, and vertebrates systematics. Forward curriculum vitae and the names of three references to: **Fernando Cofresi, Director, Department of Biology, University of Puerto Rico, Mayaguez, P.R. 00708.**

UNIVERSITY OF STOCKHOLM

Department of Zoology

ETHOLOGIST

Applications are invited for a position as "eo docent" (roughly equivalent to US assistant professor). The position is primarily intended for a person with several years of post-doctoral research experience.

The position is advertised for a period of three years, but is usually renewed for another three year period. Starting salary L 18 (Swedish crowns 113.556 per annum = roughly 9.798 £ or 14.070 US\$).

The position is a research and teaching position, and requires a minimum of 75 hours of lecturing per annum and supervision of graduate student research, some administrative duties, and a vigorous research programme. Applicants are selected primarily on the basis of their scientific publications, but teaching experience is also required.

Current research at the division of ethology comprises projects on: mate selection, communication, social and reproductive behaviour in birds, fishes and mammals, control and decision making in animal fighting behaviour.

For further information contact: Professor T. Radesäter, Department of Zoology, University of Stockholm, S-106 91 Stockholm, Sweden (Telephone 00946-8340860 ext 322).

Applications including curriculum vitae plus one copy of published, accepted papers, a short summary of the applicant's research and teaching experience, names and addresses of three referees and any other papers the applicant wishes to submit should be addressed to The Board of Stockholm University, Fredrik Bloms Hus, University of Stockholm, S-106 91 Stockholm, Sweden, and received no later than March 31, 1984. Quote reference number 79/84.

RESEARCH SCIENTIST DRUG DELIVERY SYSTEMS

A challenging and rewarding career opportunity in Drug Delivery System Research at Pennwalt.

The knowledge and creativity of scientists in several disciplines is being brought together to yield new, effective drug delivery systems in the tradition of our Pennkinetic sustained release technology. To discover new systems for various routes of drug administration, Pennwalt has an opportunity for a Research Scientist at the Corporate Research Center near Valley Forge, Pennsylvania.

You should have an effective combination of education in biological sciences, such as physiology, anatomy, biochemistry or molecular biology with experience in polymer fabrication, drug formulation, or drug delivery systems research. A creative discovery-oriented scientist with a Ph.D. degree and at least 2 to 5 years of postdoctoral academic or industrial research experience is desired.

Send resume, in confidence, to:
Personnel Director.

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Public Service Commission
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publique du Canada

Research Scientist, Mathematician/Statistician

Pacific Biological Station
Fisheries and Oceans
Nanaimo, British Columbia

We require a scientist who has demonstrated a capacity to undertake basic and applied research projects designed to give experience to address a variety of fisheries science problems. You will conduct independent research as well as assist and work with other scientists in the design, analyses and interpretation of research studies investigating both the dynamics of populations and stock assessment procedures.

You require a doctoral degree in mathematics, physics or statistics from a recognized university, or a lesser degree with research experience and scientific productivity equivalent to a doctorate. In addition, experience in conducting research into methodology development and application as evidenced by primary publications is desirable. Knowledge of English is essential.

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

Forward your résumé and/or application form, quoting reference number

84-NCRSO-DFO-RES-6 to:

Joan Girling (613) 593-5331

Public Service Commission of Canada

Ottawa, Ontario K1A 0M7

Closing date: 30 March 1984

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

The Public Service of Canada is
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Canada

Microbiology

Excellent career opportunities are available in the Infectious and Neoplastic Disease Research Section, Medical Research Division of American Cyanamid Company.

Microbial Ecologist or Microbial Physiologist

Ph.D. in Microbial Ecology or Microbial Physiology with minimum of five years' experience and demonstrated skills in soil microbiology, isolation of microorganisms and microbial physiology. Computer experience desirable.

Responsibilities will involve research, development and implementation of novel enrichment and fermentation procedures for microorganisms used in our screening programs.

Molecular Biologists

MS in a Life Science with demonstrated skills in recombinant DNA methodology, gene isolation and vector manipulation.

Responsibilities will involve development of gene cloning techniques in antibiotic-producing microorganisms.

American Cyanamid offers competitive salaries, excellent benefits, and a stimulating scientific environment. Please send resume, including salary requirements, in confidence to: Mrs. K. McDevitt, Professional Employment Coordinator



American Cyanamid Company

Medical Research Division

Lederle Laboratories

Pearl River, NY 10965

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PLANT BIOCHEMISTRY

American Cyanamid Company, a leading manufacturer of agricultural chemicals, invites applications for a Ph.D. level position in the area of plant growth regulators.

- Eligibility:** Ph.D. or equivalent in plant biochemistry or in plant physiology with an emphasis in biochemistry. The applicant should have a broad background in plant science with a specialty in hormone analysis, development biochemistry, or metabolism. Industrial or post-doctoral experience is desirable.
- Research:** The successful applicant will be responsible for establishing biological/biochemical systems for identifying new Plant growth regulants with agricultural utility, and to investigate the modes of action and mechanisms of action of these regulators in crop species. The researcher will be expected to work both independently and interactively with agronomists, biologist and organic chemists.

Research will be conducted in laboratories at the Cyanamid Agricultural Research Center, Princeton, New Jersey. Interested persons should send a resume, list of publications or technical skills, and names of three references to: **Employment Office**



American Cyanamid Co.
P.O. Box 400
Princeton, New Jersey 08540

An Equal Opportunity Employer, M/F/H
No agencies, please.

Research In Metabolic Diseases

The Du Pont Company is expanding its life science research at their renowned Experimental Station in Wilmington, Delaware. There are three positions available in Metabolic Diseases Research:

☐ DERMATOPHARMACOLOGIST—PHD

To develop animal and cellular models of skin diseases, e.g. psoriasis and delayed-type hypersensitivity. A background in the cellular aspects of inflammation would be useful.

☐ PULMONARY PHARMACOLOGIST—PHD

To develop animal and tissue models of asthma. Experience in evaluating pulmonary function of small animals would be useful.

☐ PHARMACOLOGIST/PATHOLOGIST—PHD OR DVM

To develop animal models of acute and chronic inflammation. Experience in anti-inflammatory drug development and arachidonic acid metabolism would be helpful.

Du Pont provides excellent compensation and benefits plus outstanding research facilities. Qualified candidates should send their curriculum vitae together with transcripts to: **Dr. S. T. Toy, Room X40365, Du Pont Co., Wilmington, DE 19898.**



An Equal Opportunity Employer M/F

POSITIONS OPEN

The Department of Neurosurgery of the University of California, San Francisco (UCSF), is searching for an experienced **Ph.D. BIOLOGIST** to serve as an assistant professor-in-residence, step I or II (salary and level to be commensurate with training and experience), in the Brain Tumor Research Center with teaching and research commitments. Candidates must have training and experience in biochemistry, pharmacology, and cell biology with, in particular, recent hands-on and acknowledged expertise in tumor and hematopoietic stem cell analysis techniques. Knowledge of neuropathology and neurooncology is advantageous. The successful candidate will be required to participate in teaching at the University level to graduate and postdoctoral fellows and to actively engage in laboratory efforts involved with the study of brain tumor biology and the effects of chemotherapy.

The beginning date of employment will be 1 July 1984. Applications for the position will be accepted through 15 May 1984. Salary rate will be negotiated with the successful candidate. Persons interested in applying should forward complete curriculum vitae and bibliography with the names of three references to: **Mark L. Rosenblum, M.D., Department of Neurosurgery, 786M, University of California, San Francisco, California 94143.**

UCSF is an Equal Opportunity/Affirmative Action Employer. Women and minorities are encouraged to apply.

BIOLOGY, INSTRUCTOR OR ASSISTANT PROFESSOR. Ph.D. preferred. One-year, non-tenure-track position with possible 1-year renewal of contract beginning 20 August 1984. Course responsibilities include nonmajors' biology, aquatic biology, and wildlife biology. Knowledge of anatomy and physiology, computers, or medical bacteriology desirable. Dedication to high-quality teaching required. Send curriculum vitae, all transcripts, and three letters of recommendation by 16 March 1984 to: **Dr. Melvin Denner, Chairman, Division of Science and Mathematics, Indiana State University Evansville, 8600 University Boulevard, Evansville, Indiana 47712. Indiana State University Evansville is an Affirmative Action/Equal Opportunity Employer.**

BIOLOGY POSITION. Assistant professor opening in Biology Department, Gannon University, beginning August 1984. Teach introductory level courses in general and human biology, man-environment; assist in freshman biology laboratories. Ph.D. in zoology preferred, with background in environmental biology and desire to develop course in wildlife management. Require strong interest in undergraduate teaching, with credentials demonstrating such. Some but limited research opportunities. Tenure track. Application deadline: 10 March 1984. Send curriculum vitae and names and addresses of three references to: **Kenneth W. Andersen, Ph.D., Chairman, Biology Department, Gannon University, Erie, Pa. 16541. Equal Opportunity/Affirmative Action Employer.**

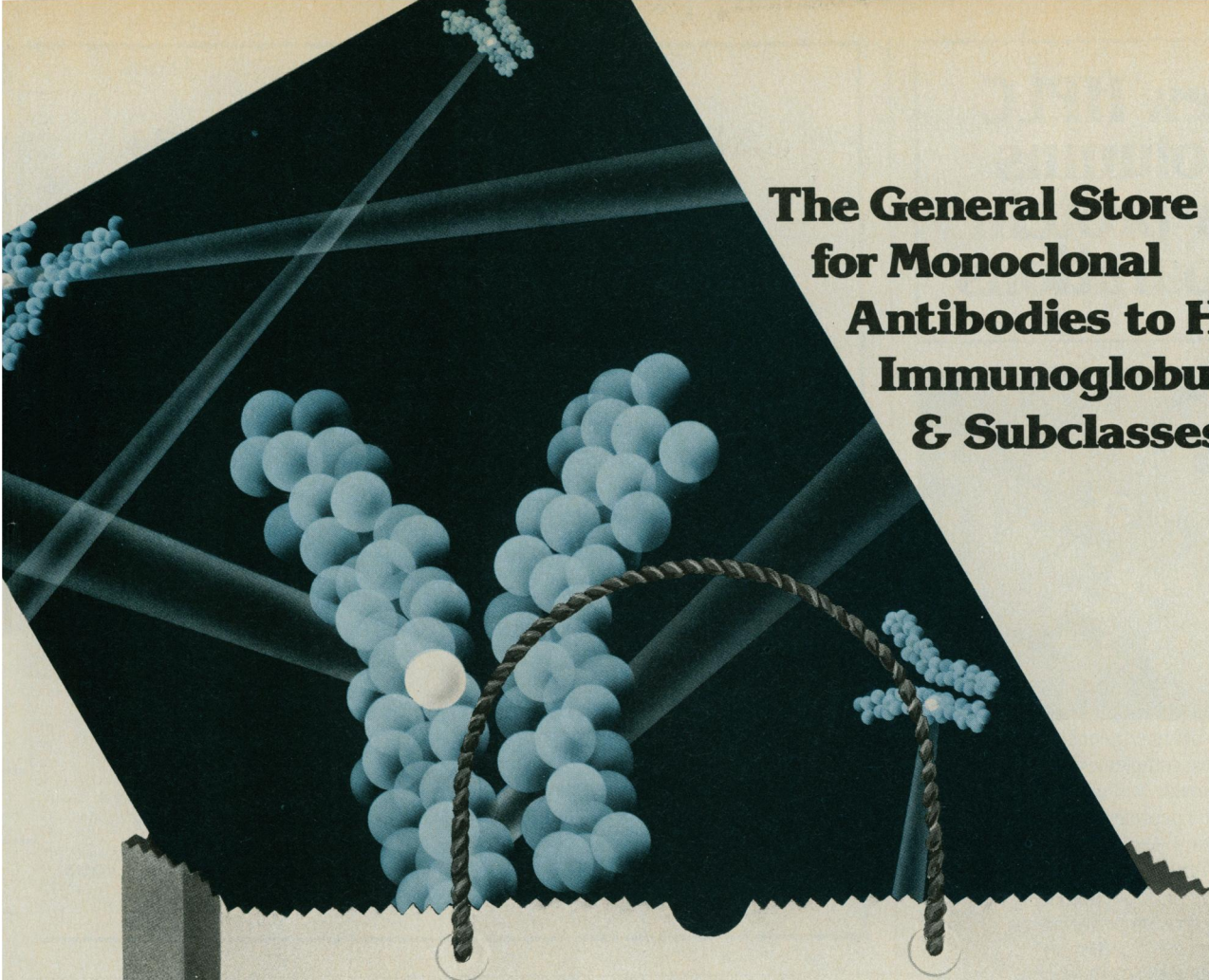
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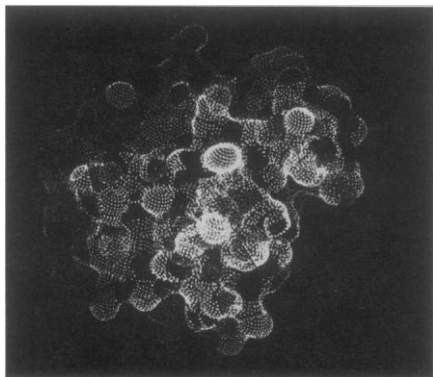
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IgG ₁ (Fab)	63-080	IgG ₁	1x10 ³	SL-16
IgG ₁ (Fc)	63-060	IgG ₁	8x10 ²	SG-11
IgG ₂ (Fc)	63-061	IgG ₁	1x10 ⁴	GOM-1
IgG ₂	63-081	IgG ₁	1x10 ⁴	FH-22
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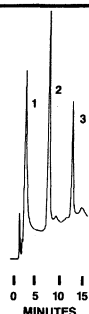
Sample: Protein Standard

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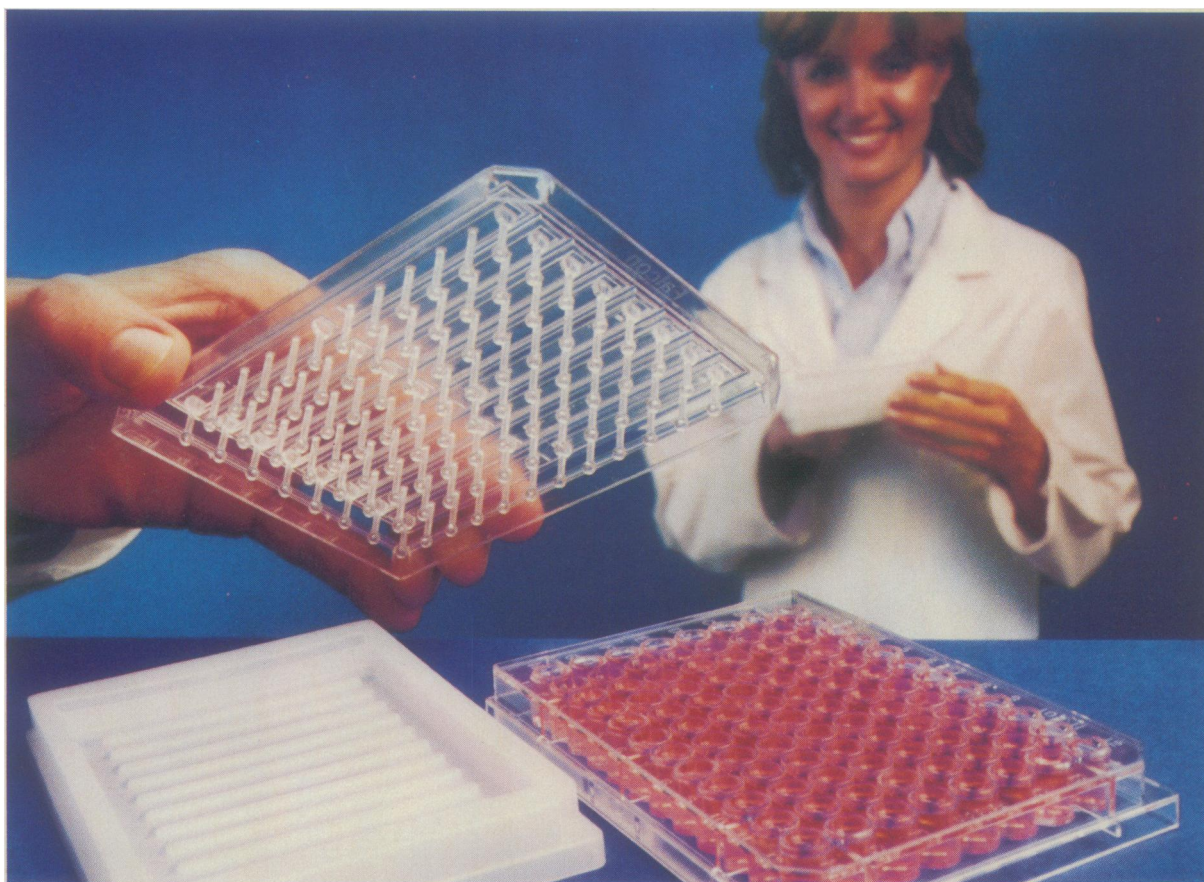


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POSITIONS OPEN

CHAIRPERSON AND PROFESSOR

The Department of Zoology of Iowa State University is accepting applications and nominations for a chairperson. The department currently has a permanent faculty of 26 and is strongly research oriented. Principle areas of staff research are cell and molecular biology, developmental biology, endocrinology, neurobiology, physiology, and parasitology. Applicant should have the Ph.D. or equivalent, have an established record of achievement in experimental zoology, and be able to provide leadership in research and teaching. Send résumé, including names of four references, to: **James R. Redmond, Department of Zoology, Iowa State University, Ames, Iowa 50011.** Review of applications will begin 26 March 1984. *Iowa State University is an Equal Opportunity/Affirmative Action Employer.*

CHAIRPERSON—BIOCHEMISTRY. The Albert Einstein College of Medicine of Yeshiva University seeks a chairperson for the Department of Biochemistry. Individuals with a commitment to research and a strong research record are invited to apply. The selected chairperson will become a tenured professor and space and resources will be available to maintain and expand a high quality department. Interested candidates are requested to send curriculum vitae by 1 May 1984 to: **E. R. Stanley, Ph.D., Associate Professor of Microbiology and Immunology, Chairman of Search Committee for Biochemistry, ALBERT EINSTEIN COLLEGE OF MEDICINE, 1300 Morris Park Avenue, Bronx, New York 10461.** *An Equal Opportunity Employer.*

MORRIS COLLEGE, a private and predominately black, 4-year liberal arts college in Sumter, South Carolina, is seeking a person to teach general chemistry, organic chemistry, and physical science effective August 1984. Ph.D. preferred; master's degree acceptable. Salary and rank commensurate with qualifications and experience. Submit letter of application, personal résumé, letters of recommendation, and academic transcripts to: **The Personnel Officer, Morris College, Sumter, S.C. 29150.** *An Equal Opportunity/Affirmative Action Employer.*

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DEVELOPMENTAL BIOLOGIST—A tenure-track position is to be filled at the assistant or associate professor level for September 1984. Duties include teaching an undergraduate course in embryology, one other cell or development course per year, and maintaining a vigorous research program including supervision of graduate students. All areas of developmental biology will be considered, including developmental genetics, pattern formation, and developmental neurobiology. Applicants with postdoctoral experience should send their curriculum vitae and a list of at least three referees to: **Dr. Joseph Kunkel, Chairman, Developmental Biology Search Committee, Zoology Department, University of Massachusetts, Amherst, Mass. 01003.** Deadline for receipt of application is 7 March 1984. *An Equal Opportunity/Affirmative Action Employer.*

RESEARCH SCIENTIST to study evoked potentials. Investigator will collaborate with a team of research scientists studying the effects of prenatal alcohol exposure in humans and animals. Support staff will be available. Collaboration with related disciplines at nearby clinical centers is available and will be encouraged. A minimum of 2 years of postdoctoral experience is required. Salary commensurate with qualifications and experience. Send complete curriculum vitae and the names and addresses of three references to: **Audrey Topinko, Personnel Office, Research Institute on Alcoholism, 1021 Main Street, Buffalo, N.Y. 14203.** Application deadline: 31 March 1984. Position starting date: 1 July 1984. *The Research Institute on Alcoholism is an Equal Opportunity/Affirmative Action Employer.*

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Chairman, Search Committee, B-158
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School of Medicine
4200 East Ninth Avenue
Denver, Colo. 80262

CHAIRPERSON DEPARTMENT OF BIOLOGICAL SCIENCES ILLINOIS STATE UNIVERSITY

Applications and nominations are invited for the position of chairperson, Department of Biological Sciences, Illinois State University. We are seeking a chair who will provide scholarly and administrative leadership for a large, diverse department (30 full-time faculty) offering bachelor's, master's, and Ph.D. degrees. Candidates must present evidence of leadership ability and a distinguished record in teaching and research. The position will be open 1 July and applications will be accepted up to 23 March 1984. Applicants should submit complete curriculum vitae and names of four references who may be contacted. All correspondence should be directed to: **Secretary, Search Committee, Department of Chemistry, Illinois State University, Normal, Illinois 61761.** *An Equal Opportunity/Affirmative Action Employer*

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

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429 Johnson Pavilion
36th and Hamilton Walk
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Please send curriculum vitae and the names of three references to:

William J. Schull, Ph.D., Director
Center for Demographic and Population Genetics
Graduate School of Biomedical Sciences
The University of Texas Health Sciences Center
P.O. Box 20334
Houston, Texas 77225

POSITIONS OPEN

DIRECTOR OF RESEARCH

The Department of Otolaryngology-Head and Neck Surgery at the University of Washington School of Medicine is seeking applicants for a tenure-track Director of Research. Applicants should have strong basic science or clinical research training and a record of productivity and achievement in the field of otolaryngology. Applicant will be responsible for an active resident research program and coordination of other research efforts within the department. Salary and faculty rank will depend upon training and experience. Position available immediately. Interested persons should send curriculum vitae, names of references, a letter describing their research program and long-term goals, and relevant reprints to: **Charles W. Cummings, M.D., Professor and Chairman, Department of Otolaryngology-Head and Neck Surgery/RL-30, University of Washington School of Medicine, Seattle, Washington 98195.**

ENVIRONMENTAL PATHOLOGY/TOXICOLOGY. Pre- and postdoctoral positions available July 1984. Research emphasis is on cellular and molecular effects (mutagenesis, teratogenesis, biotransformation) of toxic chemicals (especially trace metals, aromatic hydrocarbons, pesticides). Deadline: 1 April. Inquiries: **N. Karle Mottet, M.D., Program Director, Professor of Pathology and Environmental Health, SM-30, University of Washington, Seattle, Wash. 98195.** *Affirmative Action/Equal Opportunity Employer.*

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FACULTY POSITION IN GENETICS AND MOLECULAR BIOLOGY—The Department of Biology, Boston University, invites applications for a faculty position in molecular biology at the assistant professor/junior associate professor level to begin September 1984. Candidate must have postdoctoral experience, a strong research record, and be capable of developing or continuing a vigorous research program with extramural funding. Teaching responsibilities include genetics at the undergraduate level and a graduate course in the applicant's specialty. Send curriculum vitae, summary of research interests, and three letters of reference before 21 March 1984 to: **Chairman, Search Committee, Department of Biology, Boston University, 2 Cummington Street, Boston, Mass. 02215.**

GEOCHEMIST

Argonne National Laboratory, Environmental Research Division, has a position open for a Ph.D. or equivalent geochemist with expertise and experience in radioactive and hazardous waste management, including predicting waste constituent form and potential for transport through geologic media. Position requires good knowledge in geology, including geochemistry, geomorphology and properties of soil. Familiarity with federal and state regulations pertaining to radioactive and hazardous waste management is desirable. Successful applicant will work with a multidisciplinary team in preparation of environmental impact statements and other technical assessments for waste management activities. Future research opportunities are anticipated.

We offer comprehensive benefits and an excellent salary commensurate with your background. For prompt consideration, send your résumé and qualifications to: **Rosalie L. Bottino, Box D-ERD-19752-55, Argonne National Laboratory, 9700 South Cass Avenue, Argonne, Ill. 60439.** *An Affirmative Action/Equal Opportunity Employer.*

Biochemistry/ Microbiology

The Department of Immunology and Infectious Diseases at Pfizer Central Research is seeking an individual with a Ph.D., and at least two years post-doctoral training, who is experienced in the molecular biology of bacterial infectious disease pathogenesis. The successful candidate will be part of a multidisciplinary project team involved in the development of contemporary approaches to control infectious diseases. Potential areas of research include host-microbe interactions at mucous membrane surfaces, identification and characterization of membrane receptors on eucaryotic and procaryotic cells, development of novel antibiotics or bacterial iron metabolism. Although participation in the ongoing projects is expected, the candidate will be encouraged to develop new areas of research compatible with established objectives.

This position offers an excellent opportunity for professional recognition and career growth. Publication of important findings will be encouraged. We also offer a competitive compensation, benefit and relocation package and the opportunity to live in an attractive Connecticut shore community. Please send resume and brief description of research interest to: Jerry K. Larson, Ph.D., Manager of Employment, Pfizer Central Research, Eastern Point Road, Groton, CT 06340



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Experience in fermentation development including scale-up, process design and optimization or in recovery and purification. PhD (or equiv.) (Refer to Job #P-17).
- **FERMENTATION DEVELOPMENT**
Will carry out laboratory and pilot plant fermentation development. MS (or equivalent) with experience in microbial, physiology and metabolism. (Refer to Job #P-18).
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MS or equivalent technical experience. Will conduct fermentations and maintain fermentation equipment. (Refer to Job #P-19).
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BS/MS/PhD with training and experience in protein purification and process scale-up. Familiarity with fermentation techniques desirable. (Refer to Job #P-20/21).

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POSITIONS OPEN

FACULTY POSITION

Department of Obstetrics and Gynecology
University of Texas Health Science Center
at San Antonio

In keeping with our interest in reproductive biology and our wish to apply the techniques of cell biology to problems of reproductive biology, we are seeking a **developmental biologist** with expertise in **recombinant DNA methodology** to fill a full-time faculty position (tenure track). Salary and rank are open to negotiation. This individual should have a doctoral degree and have developed an independent area of research, preferably with grant support, and be willing to interact and collaborate closely with existing faculty members carrying out research on control systems of preimplantation stages of pregnancy. Formal teaching experience is an asset but not essential. The Department of Obstetrics and Gynecology and the NIH-supported Center for Research in Reproductive Biology offers excellent research facilities and a highly interdisciplinary environment.

Nominations and applications should be sent to: **Dr. M. J. K. Harper, Chairman, Search Committee at the Department of Obstetrics and Gynecology, University of Texas Health Science Center, 7703 Floyd Curl Drive, San Antonio, Texas 78284 (telephone: 512-691-6677),** and should include up-to-date curriculum vitae and three names of references who will not be contacted unless the individual is short listed for this position.

The University of Texas Health Science Center at San Antonio is an Equal Opportunity/Affirmative Action Employer.

HISTOLOGY, NEUROANATOMY, AND PATHOLOGY LABORATORY INSTRUCTORS

Three full-time laboratory instructors with responsibility for laboratory instruction in at least two of the above areas. Requirements: master's or Ph.D. degree and demonstrated teaching ability. Candidates should send detailed curriculum vitae, transcripts, and three letters of reference by 15 March 1984 to: **Sister John Karen Frei, O.P., Ph.D., Director of the Division of Biological and Biomedical Science, Barry University, Miami Shores, Florida 33161.**

POSITIONS OPEN

FACULTY POSITION IN PHARMACOLOGY UNIVERSITY OF WASHINGTON

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

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

Affirmative Action/Equal Opportunity Employer

IMMUNOLOGIST

Ph.D. immunologist to direct in vitro RIA laboratory and participate in active monoclonal antibody research program. Written inquiry, to include curriculum vitae, to: **W. H. Beierwaltes, Director, Nuclear Medicine Division, Box 021, Room W5614, University of Michigan Hospitals, Ann Arbor, Mich. 48109.** A nondiscriminatory, Affirmative Action Employer.

IMMUNOLOGIST. The Biology Department, Central Michigan University (CMU), invites applications for a tenure-track assistant professorship to begin 20 August 1984. A strong commitment to undergraduate education and the capability to develop a research program are essential. Teaching responsibilities will include immunology, mammalian physiology, and hematology. A Ph.D. and training in both immunology and animal physiology are required. A résumé, transcripts, and three reference letters should be submitted to: **The Personnel Committee, Department of Biology, Central Michigan University, Mt. Pleasant, Mich. 48859,** by 30 March 1984. *CMU is an Affirmative Action/Equal Opportunity Institution.*

POSITIONS OPEN

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

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

MOLECULAR GENETICS. The University of Illinois announces the current availability of two tenured or tenure-track positions at the assistant or associate professor level in the Department of Veterinary Pathobiology. Qualified individuals are expected to have a Ph.D. or equivalent, and clear evidence of research capability in one of the areas of eukaryotic, viral, or bacterial molecular genetics with an interest and commitment to problems of importance in veterinary medicine. In addition to developing an active, independent, and collaborative research program, duties will include teaching veterinary and graduate students in an area of microbiology and guiding graduate student research. Salary is competitive and negotiable based on experience and qualifications. Individuals applying prior to 15 March 1984 will be given preference. Send résumé and three letters of reference to:

**Dr. Wayne A. Tompkins
Department of Veterinary Pathobiology
College of Veterinary Medicine
University of Illinois
2001 South Lincoln Avenue
Urbana, Ill. 61801
Telephone: 217-333-7825**

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

Post Doctoral Scientist Developmental Toxicologist

SmithKline Beckman, a leader in pharmaceutical research and technology, is seeking a Post Doctoral Scientist to join an interdisciplinary research program in an environment designed to foster creative, innovative research and to promote personal and professional growth.

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

Our post doctoral appointments are of 1 year duration and with mutual agreement, renewable for a 2nd year. The successful candidate will join a multidisciplinary team whose goal is to evaluate the mechanism of action of embryotoxic/teratogenic agents. This includes pharmacokinetic, hormonal, and molecular investigations carried out in **vitro** and in the intact animal.

Candidates are required to have a Ph.D. in the biological sciences (Developmental Biology/Endocrinology/Pharmacology) with 0-2 years of postdoctoral experience.

Preference will be given to candidates having a strong background in cellular/molecular investigations of developing systems and relevant publications in major scientific journals.

We offer excellent compensation and benefits and an attractive relocation policy. For confidential consideration, send your C.V. and names of 3 references to: Mr. Walter B. Flagg, **SMITHKLINE BECKMAN CORPORATION, P.O. Box 7929, 1550 Spring Garden Street, Philadelphia, PA 19101.** We are an equal opportunity employer, M/F/H/V.

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MANAGING EDITOR

The National Academy of Sciences, National Academy of Engineering and Institute of Medicine are considering publication of a new quarterly journal, **'Issues in Science and Technology'** and we are seeking a Managing Editor who will have oversight responsibility for the journal, its budget, production, and staff, including rewriting articles and negotiating with authors. Candidates for this position should have an M.S. or equivalent in Science or Engineering and at least 5 years of experience in journalism or editing with substantive management responsibility, preferably on a nationally recognized publication. Demonstrated familiarity with science policy issues desirable. Please submit resume and minimum salary requirement to:

**Dr. Allan Hammond, Editor
Issues in Science and Technology
Executive Office
National Academy of Sciences
2101 Constitution Avenue, N.W.
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PREDOCTORAL FELLOWSHIPS IN BIOMEDICAL SCIENCES UNIVERSITY OF KENTUCKY MEDICAL CENTER

GRADUATE FELLOWSHIPS with competitive stipends are available in programs and departments listed below to qualified applicants beginning Fall, 1984. Strong background in science and a sincere interest in an academic/research career are required. The individual graduate programs are related through coursework offerings and collaborative research projects. Many faculty members and research programs interact with research programs in Biology, Clinical Medicine, and Agriculture and with the Sanders-Brown Center on Aging and the Kentucky Tobacco and Health Research Institute on campus. All graduate programs are administered through the Graduate School of the University of Kentucky. For more specific information and application materials write to the Director of Graduate Studies of the graduate program of interest.

PROGRAMS AND DIRECTORS OF GRADUATE STUDY

ANATOMY—Major research areas include biology of aging; developmental biology; electro-biology; neurobiology including cortical development and plasticity, brain stem peptides, peripheral nervous system, neuroendocrinology; reproductive biology; respiratory biology. Techniques available—autoradiography, electron microscopy, fluorescence microscopy, histochemistry, immunohistochemistry, morphometrics, radioimmunoassay, stereotaxic surgery, tissue culture. **H. H. Traurig (606) 233-5185**

BIOCHEMISTRY—Departmental research interests in (a) nucleic acids and molecular biology; protein synthesis, DNA enzymes, messenger RNA, DNA, plant and fungal viruses, physical chemistry of DNA, somatic cell genetics, purine metabolism and transformation of plant cells; (b) cell surfaces: inositol-containing phospholipids, glycolipids, glycoprotein biosynthesis, cell surfaces of parasites; and (c) enzymes and proteins: calmodulin and calcium-dependent regulatory systems, transition state enzyme inhibitors, enzyme kinetics, emphysema-related proteins. Fellowships range from \$6,500-\$8,500/yr. **R. E. Rhoads (606) 233-5286**

MEDICAL MICROBIOLOGY AND IMMUNOLOGY—Research programs include immunology (immunobiology, immunogenetics, cellular immunology and neuroimmunology), molecular genetics of viruses, bacteria and mammalian cells, cancer (DNA and RNA tumor viruses, tumor immunology and tumor membrane biology) and bacterial pathogenesis. **M. R. Steiner (606) 233-5462**

PHARMACOLOGY—Faculty research interests are (a) neuropsychopharmacology of benzodiazepines, opioids, nicotine and hallucinogens with emphasis on their receptors and the relationship to problems of dependence, (b) toxicology with emphasis on drug metabolism and chemical carcinogenesis, (c) drug receptors and membrane carriers, (d) cardiovascular and respiratory pharmacology. **J. W. Flesher (606) 233-5125**

PHYSIOLOGY AND BIOPHYSICS—Research opportunities within a broad spectrum of traditional and innovative research areas: cardiovascular, endocrine, reproductive, renal, respiratory physiology, and neurophysiology; the physiology of aging; studies on the integration of living systems; and physiological correlates of behavior. The department collaborates with other disciplines to satisfy the special research interest of the student and provides the state-of-the-art research technology. **D. C. Randall (606) 233-6041**

TOXICOLOGY—Multidisciplinary program offering M.S. and Ph.D. degrees in toxicology. After completing a basic core Curriculum, students may specialize in one or more of 20 subdisciplines such as: behavioral, biochemical, and genetic toxicology; equine, mammalian, and reproductive toxicology; aquatic environmental and pesticide toxicology; immunotoxicology and neurotoxicology. **W. Birge (606) 233-6305, 202 Medical Center, Annex #5**

Students are eligible for out-of-state tuition waiver. Applications should be submitted before June 1, 1984. Direct inquiries to the Director of Graduate Studies, (Department of Interest), University of Kentucky, Lexington, KY 40536.

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Biochemist/Cell Biologist Antiprotozoal Research in Animal Health

Pfizer Central Research has an immediate opening for a Ph.D. Biochemist/Cell Biologist with one to two years postdoctoral training. This position will focus on developing cell culture methods for *in vitro* cultivation and isolation of obligately intracellular coccidial protozoa (*Eimeria* spp.). The physiology and metabolism of these organisms will also be studied to identify new targets for chemotherapy. Other responsibilities include determining the mechanism of action of new drugs and management of ongoing test systems.

This position offers an excellent opportunity for professional recognition and career growth. Publication of important findings will be encouraged. We also offer competitive compensation, benefit package and the opportunity to live in an attractive Connecticut shore community. Please send resume and description of research accomplishments to: Jerry K. Larson, Ph.D., Manager of Employment, Pfizer Central Research, Eastern Point Road, Groton, Connecticut 06340.



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Scientists : Drug Delivery Systems

CIBA-GEIGY's Pharmaceuticals Division enjoys a worldwide reputation for products developed by its Drug Delivery Systems Unit. This objective-driven Unit successfully integrates physiology, pharmacology, analytical chemistry and polymer chemistry to produce the most innovative advances in drug delivery systems available. Due to the rapid expansion of our Drug Delivery Systems Unit, we have several opportunities for Scientists or Sr. Scientists with the interest and experience to contribute to this new and dynamic field.

SR SCIENTIST

To conduct materials research and development in the application of materials, particularly polymers, to controlled drug delivery systems. PhD in Chemistry, Polymer Chemistry, Materials Science, Engineering or equivalent; and a minimum of 1-2 years post-doctoral experience or 1-4 years industrial research experience, preferably in the health care field are prerequisites.

SR SCIENTIST

To conduct and supervise research in controlled drug delivery systems with particular emphasis on transdermal systems. PhD in Chemistry, Pharmaceuticals or related discipline such as biological or pharmacological science or equivalent; and a minimum 1-5 years industrial or post-doctoral experience including proven expertise in skin permeability theory and experimental methods required.

SR SCIENTIST

To conduct methods development and support analysis of biological fluids for drugs and their metabolites using cold and radio-isotope analytical methods. PhD in Analytical Chemistry, Pharmaceuticals, Medicinal Chemistry or equivalent; and minimum of 1-3 years bio-analysis experience are required.

SCIENTISTS — Several positions available

To conduct laboratory studies associated with development of drug delivery systems including setting up and conducting experiments in diffusion and other mass transport phenomena. Responsibilities include analysis of drug components in-vitro and in biological fluids. BS/MS in Chemistry, Biology, or related discipline or equivalent; and 1-5 years industrial research experience essential. Experience with analytical instrumentation, physical testing equipment, laboratory diffusion methods required; experimental animal handling desired.

We offer competitive salaries and an excellent benefits package in an area of the industry that will enhance your personal and professional growth. These positions are at CIBA-GEIGY's corporate headquarters located in Westchester County, just 20 miles north of New York City. For consideration, forward resume including salary history in confidence to S. Santora, CIBA-GEIGY Corporation, 444 Saw Mill River Road, Ardsley, New York 10502. An Equal Opportunity Employer m/f/h/v.

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DIRECTOR OF RESEARCH

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

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

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

The position offers:

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- competitive salary and benefits
- assistance with relocation



Please send your resume and salary history to:

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

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Qualifications must include PhD in Microbiology. Must possess initiative, strong communication skills and interest in marketing.

In addition to an independent work environment where personal and professional growth are a way of life, we offer an outstanding compensation/benefits package and a relocation program geared to today's market.

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POSITIONS OPEN

GENETICIST. CHILDREN'S HOSPITAL MEDICAL CENTER. Medical Genetics Unit, under the direction of **SANFORD SHERMAN, M.D.**, is seeking a physician with a major interest in research to develop a molecular genetics laboratory in its Research Facility. The position will allow for independent research in the candidate's area of interest. Clinical activity will be at a limited level unless otherwise desired. Children's Hospital has affiliations with the University of California at San Francisco Medical Center and members of the research staff collaborate on both the Berkeley and San Francisco campuses. Excellent opportunity to plan and develop a program. Requires a M.D., plus significant research background and publications exposure. Submit curriculum vitae, bibliography, and a brief statement of research goals to: **Children's Hospital Medical Center, Personnel Department, 51st and Grove Streets, Oakland, Calif. 94609. An Equal Opportunity Employer.**

IMMUNOBIOLOGIST/CELLULAR IMMUNOLOGIST

The Department of Biology, Texas A&M University, invites applications for a faculty position in the area of cellular immunology. Preference will be given to candidates with research interests in one or more of the following disciplines: MHC gene organization and control, MHC restriction, T cell clones or hybrids, B cell growth and differentiation, and/or cell mediated effector mechanisms. Candidates must have a Ph.D., postdoctoral experience, and the ability to establish and maintain an independent research program. Responsibilities will include the teaching of undergraduate and/or graduate courses in immunology and the direction of graduate students. The appointment will be for 9 months with academic rank and salary commensurate with experience and will begin 1 September 1984. Candidates should submit complete curriculum vitae and the names of three references to: **Dr. Walter M. Kemp, Acting Head, Department of Biology, Texas A&M University, College Station, Texas 77843.** Applications will be accepted until 15 March 1984 or until a suitable candidate is found.

Texas A&M University is an Equal Opportunity/Affirmative Action Employer. Candidates from recognized minority groups are especially encouraged to apply.

MAGNETIC RESONANCE SPECIALIST

The Department of Chemistry of Washington University is searching for a Ph.D.-level scientist to manage its magnetic resonance facilities, the core instrument of which will be a 500-MHz spectrometer to be delivered in summer/fall of 1984. Responsibilities and salary will be competitive and will depend upon the experience and qualifications of the applicant.

The ideal candidate should have extensive "hands-on" experience in magnetic resonance, preferably solution-state high-resolution proton and carbon NMR, as well as familiarity with spectrometer design, operation, and maintenance. In addition to administrative aspects, this position will offer an excellent opportunity for the pursuit of both collaborative and individual research with state-of-the-art instrumentation. In addition to the 500-MHz spectrometer, relevant departmental instrumentation includes Bruker WH 360 and CPX 200 NMR spectrometers, an IBM ESR spectrometer, FT IR and laser Raman spectrometers, and a VAX 11/780 computer. The department has pending a proposal for a 300-MHz spectrometer which will be administered as part of the NMR Facility. Interested candidates should send a complete résumé and have three letters of recommendation forwarded to: **Professor William D. Phillips, Chairman, Department of Chemistry, Campus Box 1134, Washington University, St. Louis, Missouri 63130.** Washington University is an Equal Opportunity/Affirmative Action Employer.

MICROBIOLOGY/GENETICS ASSISTANT PROFESSOR

The University of Portland seeks a Ph.D. microbiologist with training in microbial genetics and immunology to teach existing undergraduate courses in microbiology, genetics, and immunology and to develop laboratory courses in genetics and immunology. Send letter of application, curriculum vitae, evidence of teaching excellence, transcripts, and three letters of recommendation to: **Dr. Karl Wetzel, Chairman, Physical and Life Sciences, University of Portland, 5000 North Willamette Boulevard, Portland, Ore. 97203.** Application deadline is 15 March. An Affirmative Action/Equal Opportunity Employer.

POLYMER CHEMIST/ BIOTECHNOLOGY

Creative Ph.D. Polymer Chemist needed to synthesize, characterize and develop new polymers for unique biotechnology applications.

Strong organic and polymer chemistry background essential. Some knowledge of biochemistry and cell biology would be helpful.

Genetic Systems is a leader in the field of biotechnology. Using monoclonal antibodies, the Company is developing products for the diagnosis and treatment of human diseases.

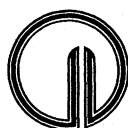
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DIRECTOR



NORTH CAROLINA BIOTECHNOLOGY CENTER

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

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

CHIEF, BIOSTATISTICS BRANCH

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

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

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

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

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

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

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

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

The National Institutes of Health is an Equal Opportunity Employer.

COLLEGE OF OCEANOGRAPHY OREGON STATE UNIVERSITY

Two Faculty Positions

SEDIMENT GEOCHEMIST OR SEDIMENTOLOGIST—12-month, tenure-track position as an Assistant or Associate Professor in the College of Oceanography. Ph.D. in earth science, marine geology, or marine geochemistry and strong potential or demonstrated ability to conduct grant-funded research required. The appointee will be expected to teach advanced courses in his or her specialty, supervise graduate student research, and develop a strong research program in marine sediments in at least one of the following areas: (1) mineralogy, (2) uranium series/radiochemistry, (3) stable isotope studies as applied to diagenesis, or (4) inorganic geochemistry. Send resume and names of three references by April 15, 1984 to address below.

MARINE GEOLOGIST (MICROPALAEONTOLOGY AND STABLE ISOTOPES)—12-month, tenure-track position as an Assistant or Associate Professor in the College of Oceanography. Ph.D. in earth science, marine geology, or oceanography and have a strong potential or demonstrated ability to conduct grant-funded research required. The appointee will be expected to teach advanced courses in his or her specialty, supervise graduate student research, and conduct a strong research program in marine geology and stable isotopes with emphasis on paleoceanography and paleoclimatology. Send resume and names of three references by April 15, 1984 to:

G. ROSS HEATH, DEAN
COLLEGE OF OCEANOGRAPHY
OREGON STATE UNIVERSITY
CORVALLIS, OREGON 97331 U.S.A.

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EDITORS

ISSUES IN SCIENCE AND TECHNOLOGY

The National Academy of Sciences, National Academy of Engineering and Institute of Medicine are considering publication of a new quarterly journal, 'Issues in Science and Technology' and we are seeking candidates for the following key staff positions:

MANAGING EDITOR—The incumbent will have oversight responsibility for the journal, its budget, production, and staff. Qualifications include a MS or equivalent in Science or Engineering and at least 5 years of experience in journalism, preferably on a national publication, including substantive management responsibility. Familiarity with science policy issues desirable.

ASSOCIATE EDITOR—Primary duties of this position include editing and rewriting articles and preparation of other material for the journal. Applicants should have a BS or equivalent in Science or Engineering and at least 5 years of experience in journalism or editing. Some knowledge of science policy issues desirable.

COPY EDITOR—Primary duties will include editing journal material for clarity and style. Applicants should have BA/BS or equivalent and 3 or more years of editing experience, preferably on a nationally recognized publication.

Candidates should submit resume and salary requirements immediately to:

Dr. Allan Hammond, Editor
ISSUES IN SCIENCE AND TECHNOLOGY
Executive Office
National Academy of Sciences
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POSITIONS OPEN

IMMUNOLOGY FACULTY POSITION

A tenure-track position commensurate with the applicant's qualifications is open in the Department of Microbiology, the University of Texas Medical Branch, Galveston, Texas. We seek an outstanding individual to conduct research in immunobiology. Applicants should have postdoctoral experience and evidence of excellent research ability. Preference will be given to those applicants using molecular genetic approaches in areas such as antibody production, expression/recognition of cell-surface determinants, or immunoregulatory molecules. The successful applicant will enjoy substantial support, adequate facilities, a competitive salary, a strong research environment, and the opportunity to interact with a number of other immunobiologists.

Submit curriculum vitae, a summary of research interests, and names and telephone numbers of three references to:

Dr. Gary R. Klimpel, Chairperson
Search Committee
Department of Microbiology
The University of Texas
Medical Branch
Galveston, Texas 77550
*An Equal Opportunity/Affirmative
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INTRODUCTORY BIOLOGY LABORATORY COORDINATOR. Nontenure-track, renewable, 12-month appointment beginning 18 June 1984. Responsible for the operation of three introductory biology course laboratories, including some teaching. M.S. and laboratory teaching experience required. Applicants with academic or research background in botany, zoology, or ecology and with postsecondary level teaching experience preferred. Salary: \$14,000. Send complete curriculum vitae, statement of experience applicable to position, official copies of all college/university academic transcripts, and three letters of reference to:

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

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

UNUSUAL OPPORTUNITY FOR AN M.S. PSYCHOBIOLOGIST AT BRISTOL-MYERS

OPPORTUNITY

You'll design and carry out experiments using animal models to predict efficacy and side effect liability of potential new drugs. You'll be part of the Worldwide CNS drug discovery and development group, providing significant opportunity to interact with other neuroscientists. Requires a Master's degree in psychobiology with strong research and experimental design background.

INNOVATION

Bristol-Myers, worldwide leader in research and development, has a strong heritage of accomplishments and a strong future. Our uninterrupted growth is the direct result of our innovation. Our operating style encourages personal creativity and contribution and we're thoroughly professional.

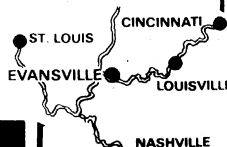
LOCATION

This unit of Bristol-Myers is located at Mead Johnson in Evansville, Indiana, a community which couples the advantages of southern economy with the changing beauty of four-season living. This unit will relocate to Connecticut in approximately two years.

To investigate these reasons for joining Bristol-Myers Research is to discover a wealth of others: Excellent salaries, superb benefits, including paid relocation, and real growth, both personal and professional. Discover us! When it comes to your career, no one can offer more!

Send resume in confidence to: Employment Department 6L02, Bristol-Myers Research Recruitment, Mead Johnson & Company, Evansville, IN 47721

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



AFRICAN MICROBIOLOGISTS, parasitologists, immunologists, histopathologists, experts in photomicroscopy, librarians and communications managers are needed by international laboratory in Kenya. African nationals with M.S. or Ph.D. interested in these positions are invited to submit résumés for placement and relocation assistance to: Intergovernmental Committee for Migration, 1346 Connecticut Avenue, NW, Washington, D.C. 20036.

MOLECULAR BIOLOGY CELLULAR IMMUNOLOGY

The Alton Ochsner Medical Foundation and the Ochsner Clinic seek candidates to direct two major laboratory initiatives in the areas of **molecular biology** and **cellular immunology**. These staff positions require persons with an M.D. or Ph.D. background and with expertise in one or another of these two areas of fundamental research. Adequate space and generous start-up funds will be provided to each laboratory. Any interested applicants should forward a letter of interest, curriculum vitae, and bibliography to: Richard N. Re, M.D., Chairman, Search Committee, Alton Ochsner Medical Foundation, 1516 Jefferson Highway, New Orleans, Louisiana 70121. *The Foundation and Clinic are Equal Opportunity/Affirmative Action Employers.*

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

HINDUSTAN CIBA-GEIGY LIMITED

requires a

PHARMACOLOGIST

for its Research Centre in
Goregaon, Bombay, India

Applications are invited from candidates of Indian nationality, aged about 35 years, and holding an M.D. or Ph.D. in pharmacology, who are capable of independently planning and conducting basic and applied pharmacological research into the central nervous system, with special emphasis on electrophysiological aspects, and the cardiovascular system. The successful candidate will be expected to furnish comprehensive preclinical data on the pharmacological activity profiles of potential new drugs.

At least five years' previous experience in research is essential, and preference will be given to applicants who have received their post-doctoral training in the U.S. or Europe.

Applications, accompanied with curriculum vitae and a full list of publications, should be sent in strict confidence to:

The Personnel Department
HINDUSTAN CIBA-GEIGY LIMITED
14, J. Tata Road
Bombay 400 020, India.

HINDUSTAN CIBA-GEIGY LIMITED

SCIENTIFIC / MEDICAL TRANSLATOR GERMAN-ENGLISH

BOEHRINGER INGELHEIM Ltd., one of America's rapidly growing pharmaceutical companies, has a full-time position available for a Scientific/Medical Translator in the Medical Writing Unit, requiring:

- **Excellent command of both German and English.**
- **Minimum of 3 years' experience in translating medical, pharmacological or biochemical material on a professional basis.**
- **Degree or equivalent in one of the life sciences and ideally pharmaceutical industry experience.**

Selected candidate will be dealing with subject matter that is diverse and at a high level of technical/scientific complexity. To qualify for this position you will be expected to submit a specific translation sample of the company's choosing.

We offer a highly competitive starting salary and generous benefits package (relocation assistance if necessary). For immediate consideration, send resume with salary history in confidence to: Dept. BG-17, BOEHRINGER INGELHEIM Ltd., 90 East Ridge, P.O. Box 368, Ridgefield, Connecticut 06877



Boehringer Ingelheim

An Equal Opportunity Employer M/F

MICROBIAL BIOCHEMIST/ PHYSIOLOGIST

A challenging career opportunity is available for a Microbial Biochemist/Physiologist in the biotechnical group at the Celanese Chemical Company Technical Center located in Corpus Christi, Texas.

The successful applicant will join a team of dedicated scientists engaged in developing biotechnology-based processes for the production of a variety of chemicals.

The position requirements are as follows:

- **PhD in Biochemistry or Microbiology**
- **Postdoctoral experience in the area of microbial metabolism or biochemistry**
- **Experience with the genetic manipulation of microorganisms is also desirable.**

This position requires participation in ongoing research programs as well as innovative thinking leading to new programs.

Interested candidates should forward a résumé with salary history in confidence to:

Personnel Supervisor
Celanese Chemical Company
Technical Center
P.O. Box 9077
Corpus Christi, Texas 78469

equal opportunity employer m/f



CELANESE

CHEMICAL COMPANY, INC.

Staff Researcher

Syntex, an international health-care corporation, will have a position open for a Staff Researcher on July 1, 1984, in the Department of Bioassay, Institute of Biological Sciences. The department is responsible for assays of antiinflammatory, antiallergic, antithrombotic and antifertility agents.

Candidates for this entry-level position will have a recent PhD in the biological sciences, with training in physiology, immunology, and biochemistry, and experience in animal models of disease. Emphasis will be on

developing models of chronic and tissue destructive inflammation and the assay of potential therapeutic agents. Candidates should possess good oral, written and organizational skills and the potential for increasing supervisory responsibility within the department.

Syntex offers competitive salaries and a comprehensive benefits package. Please send resume, including salary requirements to Syntex Corporation, Professional Employment, Dept. LK, 3401 Hillview Avenue, Palo Alto, CA 94303. We are an equal opportunity employer.



SYNTEX

POSITIONS OPEN

San Francisco—The Department of Stomatology (Dental Medicine and Surgery), School of Dentistry, University of California San Francisco, is seeking both a **MICROBIOLOGIST** and a **VIROLOGIST** at the assistant or associate professor level. Qualifications include Ph.D. and/or D.D.S./M.D. degrees or their equivalent. Interest and expertise in either viral carcinogenesis/viral genetics or bacterial pathogens of the oral cavity desirable. Duties to include teaching in predoctoral and graduate programs, and the establishment of a successful research program. Salary commensurate with qualifications and experience. *The University of California is an Equal Opportunity/Affirmative Action Employer. Minorities and women are encouraged to apply.* Send nominations and application to: **Dr. John S. Greenspan, Professor and Chair, Division of Oral Biology, Room 604 HSW, University of California, San Francisco, Calif. 94143**, by 1 April 1984.

MOLECULAR GENETICIST/BIOCHEMIST. Assistant professor to fill a full-time, term-contract position in biology beginning September 1984. Experience in genetic research and teaching required; active research expected. Send curriculum vitae, transcripts, three letters of reference, and personal letter stating teaching expertise and research accomplishments to: **Annette Bower, Chair, Biological Sciences, Mount St. Mary's College, 12001 Chalon Road, Los Angeles, Calif. 90049.** Interviews: spring 1984.

NEUROIMMUNOLOGIST

Assistant or associate professorship in a Department of Pathology exists at a leading New York City medical school for a person to work on localization of immunologic factors in nervous tissue, of relevance to multiple sclerosis. M.D. or Ph.D. with immunologic training preferred. Salary negotiable. Send curriculum vitae to: **Box 37, SCIENCE. An Equal Opportunity Employer.**

M.S./B.S. Neurophysiologist

The Du Pont Company, Wilmington, Delaware, has an immediate opening in neuropharmacology within its expanding life sciences research effort in the Biomedical Products Department.

The successful candidate should possess a master's or bachelor's degree and have a background in neurobiology, along with experience in electro-physiological techniques (EEG, evoked potentials, and single cell recording) and animal surgical skills. Knowledge in areas of pharmacology, animal behavior, computer programming, and histology would be helpful.

The Du Pont Company provides excellent compensation benefits, and outstanding research facilities. Interested candidates should send their résumés together with transcripts and references to: **Dr. Stephen T. Toy, Employee Relations Department, Room X40364, Du Pont Company, Wilmington, Del. 19898.**

Du Pont

An Equal Opportunity Employer, M/F

NEUROPHYSIOLOGIST. Group of neurosurgeons at the University of Alberta, Canada, wish to have a Ph.D. with state-of-the-art skills and good publications record associate with them in new laboratories and operating room. Excellent facilities. Must be interested in applying basic research to clinical problems such as epilepsy and pain. **Dr. Bryce Weir, 11-102 Clinical Sciences Building, University of Alberta, Edmonton, Alberta, Canada T6G 2G3.**

UNIVERSITY OF TORONTO PHARMACOLOGIST

Assistant or associate professor (tenure-stream position). Ph.D. with several years of postdoctoral experience in pharmacology. Demonstrated excellence in teaching and research in pharmacology. Other factors being equal, cardiovascular pharmacologist preferred. Salary commensurate with qualifications and experience. Effective date of appointment: 1 July 1984. Apply to: **Chairman, Department of Pharmacology, Medical Sciences Building, University of Toronto, Toronto, Ontario, Canada M5S 1A8.** Closing date for receipt of applications: 30 April 1984.

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

POSITIONS OPEN

PHYSIOLOGICAL ANIMAL ECOLOGIST

Applications are invited for a ladder position in physiological animal ecology at University of California, Los Angeles (UCLA). The appointment may be at any level. This will be a joint appointment between the Department of Biology and the Laboratory of Biomedical and Environmental Sciences (LBES). We seek an experienced individual with demonstrated expertise in aspects of energy, water, and nutrient balance of desert vertebrates to work within a large group focusing on desert ecology. Teaching responsibilities will include participation in an undergraduate course in animal physiology and/or introductory Biology and graduate seminars. Applications are due by 31 March 1984 and should include curriculum vitae, bibliography, copies of recent publications, a description of research and teaching goals, and the names and addresses of four people from whom we may request letters of evaluation. Send to:

**Physiological Ecologist Search Committee
Department of Biology
University of California
Los Angeles, California 90024**

PHYSIOLOGIST BIOCHEMIST ANATOMIST

The American University of the Caribbean, School of Medicine, located in Montserrat, British West Indies, seeks to fill positions in the Departments of Physiology, Biochemistry, and Anatomy. Main responsibility is to provide 10 to 15 hours per week of instruction to first year medical students. Salary is competitive and commensurate with qualifications and experience. Forward résumés to: **Selection Committee, Medical Education Information Office, 100 Northwest 37 Avenue, Miami, Fla. 33125.**

POSTDOCTORAL ASSOCIATE IN IMMUNOLOGY at the Plum Island Animal Disease Center, Greenport, N.Y. Antigenic and immunogenic analysis of foot-and-mouth disease viruses; contributing to a multidisciplinary effort in veterinary medicine (molecular biology, protein chemistry, immunology) studying the virus and its constituent peptides. Will produce and characterize anti-FMDV monoclonal antibodies and their epitopes. Requirements: D.V.M. and/or Ph.D. with research experience in immunology. Experience with viruses desirable. Term of employment: one year, renewable for a second year. Salary commensurate with training and experience. Contact: **Dr. J. J. Callis, Director (DM), USDA, ARS, Plum Island Animal Disease Center, P.O. Box 848, Greenport, N.Y. 11944.** *Cornell University is an Affirmative Action/Equal Opportunity Employer.*

POSTDOCTORAL ASSOCIATE IN IMMUNOLOGY at the Plum Island Animal Disease Center, Greenport, N.Y. Developing methodology for enhancing magnitude and duration of immune response of cattle and swine to vaccination against foot-and-mouth disease. Will be responsible for the evaluation of the effect of immunopotentiating substances on the response of animals to FMDV immunogens including selection and development of immunopotentiators. Requirements: D.V.M. and/or Ph.D. with research experience in immunology. Experience with viruses desirable. Term of employment: one year, renewable for a second year. Salary commensurate with training and experience. Contact: **Dr. J. J. Callis, Director (McK), USDA, ARS, Plum Island Animal Disease Center, P.O. Box 848, Greenport, N.Y. 11944.** *Cornell University is an Affirmative Action/Equal Opportunity Employer.*

A position is available under a multidisciplinary postdoctoral training grant for a **POSTDOCTORAL FELLOW** to work on the interaction between retinoids and steroid sex hormones in the regulation of normal and abnormal male accessory sex organ growth and differentiation. Work will involve primarily the analysis of cellular binding proteins, cellular retinoid levels, and protein kinase activities and secondarily could involve monoclonal antibodies and immunocytochemistry. *An Equal Opportunity/Affirmative Action Employer.* Send curriculum vitae and the names of three references to: **Dr. M. Mawhinney, Department of Pharmacology, West Virginia University Medical Center, Morgantown, W.Va. 26506.**

POSITIONS OPEN

PHYSIOLOGY FACULTY POSITION. Tenure track; Ph.D. required. Teaching experience preferred. Responsibilities include research, teaching undergraduates, and academic advising. Write to: **Chairman, Division of Science and Mathematics, The College at Lincoln Center, Fordham University, 113 West 60 Street, New York, N.Y. 10023.** Closing date: 15 March 1984.

POSTDOCTORAL FELLOW IN PHARMACOLOGY

Postdoctoral fellow position available immediately in cellular neurobiology to study regulation of organelle (for example, transmitter vesicle) synthesis and axonal transport in identified invertebrate neurons. Experience in gel electrophoresis and background in biochemistry and/or cell biology helpful, but not essential. Send curriculum vitae and names of three references to: **Dr. Daniel J. Goldberg, Department of Pharmacology, Columbia University, 630 West 168 Street, New York, N.Y. 10032.** *Columbia University is an Affirmative Action/Equal Opportunity Employer.*

POSTDOCTORAL FELLOW/RESEARCH ASSOCIATE position is available immediately for recent Ph.D. with experience in *in vitro* measures of cellular or humoral immunity. Research project will involve immunoregulatory effects of a novel new form of human leukocyte interferon found in patients with SLE and AIDS. Salary is \$17,000 per year. Send curriculum vitae and the names of three references to: **Dr. Olivia T. Preble, c/o Civilian Personnel, Uniformed Services University of The Health Sciences, 4301 Jones Bridge Road, Bethesda, Maryland 20814.** *An Equal Opportunity/Affirmative Action Employer.*

POSTDOCTORAL FELLOW—ENDOCRINOLOGY. Autoimmune endocrine disease group requires fellow with experience in basic immunology/cell biology to work in areas of *in vitro* antibody control, monoclonal antibody production, and antigen purification. Opportunity for independent work and career development. Two-year position available summer 1984. Send curriculum vitae to: **Dr. T. F. Davies, Division of Endocrinology, THE MOUNT SINAI SCHOOL OF MEDICINE, One Gustave L. Levy Place, New York, N.Y. 10029.** *An Equal Opportunity Employer.*

POSTDOCTORAL FELLOW—Position available immediately for Ph.D. biochemist or molecular biologist to join a group of scientists in investigations of molecular mechanisms underlying osteoporosis and other metabolic bone diseases. Experience with protein purification, HPLC, and recombinant DNA would be helpful. Salary: \$19,000 per year with excellent benefits. Send curriculum vitae along with three references to: **Human Resources Office, Helen Hayes Hospital, Route 9W, West Haverstraw, N.Y. 10993.** *Equal Opportunity/Affirmative Action Employer.*

TWO POSTDOCTORAL POSITIONS open for recent Ph.D.'s. One in **ATMOSPHERIC CHEMISTRY** studying processes affecting rain chemistry in remote areas and the other in **GEOCHEMISTRY** studying influence of weathering and ion exchange on stream composition. Send curriculum vitae and references to: **Dr. James N. Galloway, Department of Environmental Sciences, Clark Hall, University of Virginia, Charlottesville, Virginia 22903.** *The University of Virginia is an Equal Opportunity/Affirmative Action Employer.*

POSTDOCTORAL POSITION available immediately to study molecular and biological aspects of human cancer antigens. Ph.D. with background in molecular biology, biochemistry, and some training in immunochemistry is desirable. Send curriculum vitae and name of two references to: **Dr. Ching-li Lee, Department of Diagnostic Immunology Research and Biochemistry, Roswell Park Memorial Institute, 666 Elm Street, Buffalo, New York 14263.** *An Equal Opportunity Employer, M/F.*

POSTDOCTORAL POSITION available immediately in cell biology/neurobiology to study the *in vitro* formation of Alzheimer and scrapie disease abnormal fibrous proteins (for example, amyloid and paired helical filaments). Experience in CNS tissue culture bulk isolation of viable cells, cell fusion, cell sorting desired. Send inquiries to:

**Personnel Office
Attention: George S. Merz
New York State Institute for Basic Research
1050 Forest Hill Road
Staten Island, N.Y. 10314**

IMMUNOLOGY R & D

IMREG, INC., a publicly held biotechnology company engaged in development of immunoregulators for human application is expanding its scientific staff, and has openings for scientists with the following qualifications:

(1) Ph.D. level scientists with postdoctoral training and experience in cellular immunology, peptide biochemistry, and recombinant DNA technology.

(2) Research Associates with M.S. degrees or B.S. degrees in all of the above areas.

(3) M.D. clinical scientist with interest and experience in laboratory or clinical immunology to assist in design and coordination of clinical trials of the Company's immunomodulators.

These are intellectually challenging positions at the advancing edge of the rapidly developing area of human lymphokines.

We offer competitive salaries appropriately scaled for training, experience and record of productivity in research, and an attractive fringe benefit package including an incentive stock option plan. We are located in an attractive, fully-equipped setting in one of America's most interesting cities. The Company maintains linkages to the local and national academic immunologic community. Send curriculum vitae and names of three references in confidence to **John L. Carlton, Vice-President of Operations and Finance, IMREG, INC., P.O. Box 56643, New Orleans, LA 70156.**

Scientist Antifungal Agents Discovery

SmithKline Beckman, a leader in pharmaceutical research, is seeking an outstanding scientist to participate in our Microbial Biochemistry programs in an environment designed to foster creative, innovative research and to promote personal and professional growth.

The successful candidate will:

- identify and evaluate biochemical targets against clinically important pathogenic fungi.
- design and execute studies on the identification of agents with antifungal activities.
- collaborate with medicinal chemists and microbiologists in the establishment of novel drug design and targeted screening programs for selective anti-infective agents.

Candidates are required to have:

- a PhD in Biochemistry or Microbiology with two or more years of relevant post doctoral experience.
- experience in studying isolated enzyme reactions or the mechanism of action of inhibitors.
- the ability to work within a multidisciplinary program team and the capability to communicate ideas and experimental results.

Preference will be given to those who also have a working knowledge of fungal physiology and genetics.

SmithKline Beckman offers an excellent benefits and compensation program including an attractive relocation package. For confidential consideration, send your C.V. and names of three references to: Mr. Walter B. Flagg, SmithKline Beckman Corporation, 1552 Spring Garden Street, Philadelphia, PA 19101. We are an equal opportunity employer. M F H V.

SK&F

A SmithKline Beckman Company

AUTOMATED MANUFACTURING AND PRECISION ENGINEER

The Office of Naval Research is seeking a highly qualified individual to plan and manage a contract research program in automated manufacturing and precision engineering. The research sponsored is conducted principally at universities and industrial laboratories. This is a Civil Service position at the GM-13 (\$36,152 - \$46,997), GM-14 (\$42,722 - \$55,538) or GM-15 (\$50,252 - \$65,327) level, depending on individual qualifications.

The responsibilities of the incumbent will include formulating, implementing and monitoring a research program in manufacturing engineering, particularly in the areas of control of manufacturing data and equipment, integration of computation and manufacturing processes, and achievement of precision tolerance by computer methods. The incumbent will define new research opportunities, communicate ONR interest to the technical community, evaluate research proposals, manage available resources, and represent the program to Navy management. An inherent job satisfaction in the position is obtained through the opportunity to have a creative and significant impact on the quality of research conducted at the national level.

Applicants must have a Ph.D. or equivalent in engineering or a related field and at least 3 years of progressively responsible professional experience. Demonstrated research

experience is strongly preferred. At least one year of experience must be comparable in difficulty and responsibility to the next lower level in the Federal Service. Equivalent combinations of professional experience and graduate education may be acceptable.

Interested persons should submit a Standard Form 171, Personal Qualifications Statement (available at Federal Job Information Centers or from the address below) to:

OFFICE OF NAVAL RESEARCH
Civilian Personnel Division, Code 791SC
Attn: Announcement #84-04 (S)
800 North Quincy Street • Arlington, VA 22217

Applications will be accepted through 30 March 1984 and must be received by that date. Applicants are requested to complete the appropriate supplemental forms. For further information and supplemental forms, please call (202) 696-4705.

An Equal Opportunity Employer • U.S. Citizenship Required

BIostatistician

The United States Agency for International Development (USAID) seeks an individual to work as a biostatistician with the USAID Mission in Khartoum, Sudan under a two-year personal services contract beginning May-July 1984. The position requires a Ph.D., Dr.P.H., Sc.D. or degree candidate in biostatistics and epidemiology, two-three years experience in the international health field in developing countries, and work experience in the control of water-borne diseases, especially schistosomiasis. Experience in mathematical modelling of infectious diseases as well as programming in basic computer language is important. Duties include: (1) advising government of Sudan scientists in the design of research; (2) assisting in the analysis of data on schistosomiasis research and on various intervention measures presently underway in a 55,000 acre study zone in the Gezira Irrigated Farm Scheme located 120 miles from Khartoum; (3) managing an HP 87-XM computer and peripherals (8"x5 1/4") disc drives, printer and plotter and (4) training key punch operators and providing on-the-job supervision for other data management personnel.

Salary is negotiable based on salary history, qualifications and experience. Individual and dependents, if any, will be provided in-kind with housing and basic household furniture, a 25 post differential and other allowances and benefits customarily provided by USAID to personal services contractors.

Individuals must be a U.S. citizen or permanent resident and be able to pass a security clearance. Individual and any accompanying dependents must pass a medical clearance.

To apply send a resume and three references to USAID Health Office, American Embassy, Khartoum, Sudan, APO New York 09668. Applications should be received prior to 31 March, 1984.

Allelix^{INC}

POST-DOCTORAL RESEARCH POSITIONS IN MOLECULAR BIOLOGY

Allelix Inc., Canada's first major biotechnology company, has a number of post-doctoral positions available within the Molecular Biology Division. Applications are particularly invited from young scientists with experience in yeast molecular biology/genetics who will be available in the near future, but molecular biologists of all backgrounds are encouraged to apply, as emphasis will be placed on scientific ability rather than field of experience.

Allelix provides the opportunity to learn from and interact with experienced staff scientists in addition to the immediate project leader, in a well-equipped modern laboratory with strong links to local universities. Salaries and benefits are at fully competitive levels.

Interested candidates are asked to send complete résumés, including three references and quoting file number 0061, to:

Dr. R. W. Davies
Allelix Inc.
6850 Goreway Drive
Mississauga, Ontario
Canada, L4V 1P1

POSITIONS OPEN

POSTDOCTORAL POSITION FOR REPRODUCTIVE ENDOCRINOLOGIST to study hypothalamic-pituitary and placental regulation of ovarian steroidogenesis. Experience with radioreceptor and immunoassays, column chromatography, and organ culture is required. HPLC experience is desirable. This position is available from 1 April 1984 through 30 November 1986. Applicants should submit curriculum vitae, description of research experience, and the names and addresses of three references to: **Dr. M. S. Barkley, Department of Animal Physiology, University of California, Davis, Calif. 95616.** Closing date for receipt of applications is 15 March 1984.

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

POSTDOCTORAL POSITIONS available immediately. Applicants must have a background in molecular biology/protein chemistry to investigate structure/function of oncogenes, growth factors, and transforming proteins. Send curriculum vitae and two references to: **Dr. Thomas F. Deuel, Division of Hematology, Washington University School of Medicine, 216 South Kingshighway, St. Louis, Mo. 63110.**

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

POSTDOCTORAL POSITION available for a molecular biologist. The research interest of the laboratory is in the hormonal control of glycogen metabolism and of protein phosphorylation. The position is for someone with experience in molecular biology to apply recombinant DNA techniques to studies of hormonally controlled enzymes. Please send curriculum vitae and have two letters of reference sent to: **Peter J. Roach, Department of Biochemistry, Indiana University School of Medicine, 635 Barnhill Drive, Indianapolis, Ind. 46223 (telephone: 317-264-2931).** *An Equal Opportunity/Affirmative Action Employer, M/F.*

POSTDOCTORAL POSITION in virology and membrane biochemistry. Mechanisms involved in replication of influenza and related viruses are being studied. Of particular interest are interactions on the cytoplasmic surface of the plasma membrane of infected cells. Biophysical and molecular biological techniques are being used to study proteins in isolated membranes and in liposomes. Send résumé and names of three references to: **Dr. Douglas S. Lyles, Department of Microbiology, Bowman Gray School of Medicine, Winston-Salem, N.C. 27103.**

POSTDOCTORAL POSITION available to investigate hormonal regulation of normal and abnormal embryonic development. Studies include examination of interactions among prostaglandins, catecholamines, cAMP and extracellular matrix in the formation of cleft palate. Large group of active teratologists available for collaboration. Send curriculum vitae to: **Dr. Robert M. Greene, Department of Anatomy, Thomas Jefferson University, Philadelphia, Pa. 19107.**

POSTDOCTORAL POSITION IN IMMUNOLOGY/ENDOCRINOLOGY

To participate in multidisciplinary approach to the immunobiology of pancreatic islets, directed toward immunopathogenetic mechanisms in diabetes mellitus and islet transplantation. Applicants should have a Ph.D. in cell biology, immunology, or a related field, or an M.D. with appropriate research experience. Previously developed expertise in monoclonal antibody production is required. Position is available immediately; NIH stipend plus supplement.

Send curriculum vitae and three letters of recommendation to: **Daniel H. Mintz, M.D., Department of Medicine (R134), University of Miami School of Medicine, P.O. Box 016960, Miami, Florida 33101.**

POSTDOCTORAL POSITIONS available July 1984, initially for 2 years, flexible starting date. The areas of research include structure and metabolism of plasma lipoproteins and lipid transfer proteins and the cell biology of atherosclerosis. Background in biochemistry, cell biology, or molecular biology desirable. Send curriculum vitae and references to: **Dr. Alan Tall, Department of Medicine, Columbia University, 630 West 168 Street, New York, N.Y. 10032.**

POSITIONS OPEN

POSTDOCTORAL POSITION. Position open spring or summer 1984. To study the algebraic form of synaptic modification equation (long-term associative potentiation/depression) for use in neural models of cognition. Methods include extracellular physiology of intact hippocampus and hippocampal explant. Salary consistent with expertise (\$14,000 to \$18,000). Submit curriculum vitae and three references to: **Dr. William B. Levy, Department of Neurosurgery, Box 420, University of Virginia School of Medicine, Charlottesville, Va. 22908.** *An Affirmative Action/Equal Opportunity Employer.*

POSTDOCTORAL POSITION

Immediate opening for Ph.D. in the physical sciences to participate in an HHS-supported training program. The program seeks to train highly qualified scientists in medical applications of ionizing radiation through formal courses, participation in seminars, and involvement in research. Research projects include development of x-ray and gamma-ray imaging devices, development of shortlived radiopharmaceuticals, applications of computer science, and in vivo studies of tracer kinetics. A requirement for appointment is either U.S. citizenship or permanent U.S. visa. Address correspondence to: **Dr. Gordon L. Brownell, Director of the Physics Research Laboratory, Massachusetts General Hospital, Fruit Street, Boston, Mass. 02114.**

POSTDOCTORAL POSITION. Available immediately, to study gene expression and recombination in mammalian cells using a bovine papilloma virus vector. Involves gene cloning, cell transformation, and somatic cell genetics. Experience in nucleic acid biochemistry desirable. Send curriculum vitae and names of references to: **Dr. William T. McAllister, Department of Microbiology, UNIVERSITY OF MEDICINE AND DENTISTRY OF NEW JERSEY—Rutgers Medical School, P.O. Box 101, Piscataway, New Jersey 08854.** *An Equal Opportunity/Affirmative Action Employer.*

POSTDOCTORAL POSITION available after 1 May 1984 to develop and investigate the use of monoclonal antibodies in studying neuropeptide synthesis and/or receptor interaction. Experience in hybridoma techniques essential. Send curriculum vitae and three references to: **Ivor Jackson, M.D., Director of Division of Endocrinology, Department of Medicine, Rhode Island Hospital, Providence, R.I. 02902.**

POSTDOCTORAL POSITION IN BASIC PATHOBIOLOGY available 1 July 1984. Initial appointment is for 1 to 2 years with opportunities for renewal for a subsequent year. Emphasis will be on research training in cell differentiation related to pathobiology. Applicants having an M.D. and/or Ph.D. degrees will be considered. In the case of those with a Ph.D., trainees focusing on disease mechanisms will be favored. **Applicants must have made arrangements with an intended research sponsor at The University of Chicago.** Applicants should send curriculum vitae, biographical sketch, a statement of career objectives and of the anticipated value of training to be undertaken, transcripts of graduate and undergraduate course work, three letters of recommendation including one from the intended research sponsor, and an outline of proposed research to: **Dr. G. S. Getz, The University of Chicago, Department of Pathology—Box 414, 5841 South Maryland Avenue, Chicago, Ill. 60637.** Deadline for receipt of applications: 16 March 1984.

POSTDOCTORAL POSITION available immediately for M.D. or Ph.D. in an ongoing study of the mechanisms of proteolysis. Applicant should have a background in biochemistry with some experience in cell culture and lysosomal physiology. Send curriculum vitae and names of references to: **Jess G. Thoene, M.D., Director, Section of Metabolic Disease, Department of Pediatrics, University of Michigan, School of Medicine, Ann Arbor, Mich. 48109.** *The University of Michigan is a nondiscriminatory, Affirmative Action Employer.*

POSTDOCTORAL RESEARCH ASSOCIATE

Immediate opening in the laboratory of Dr. Eliahu Caspi to work on biosynthesis of polyprenoids and hormones. Please submit résumé and three letters of reference to: **Dr. Eliahu Caspi, c/o PERSONNEL OFFICE, Worcester Foundation for Experimental Biology, 222 Maple Avenue, Shrewsbury, Massachusetts 01545.**

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

BIOCHEMISTRY IMMUNOLOGY MICROBIOLOGY

Seragen Diagnostics, Inc., an Indianapolis based, high-technology manufacturer of instruments and reagents is expanding its Research and Development Department. Immediate openings exist in the areas of:

- Biochemistry
- Immunology
- Microbiology

The successful candidate should have a Ph.D. or an MS with 3-5 years industrial experience in one or more of the above disciplines. In addition, the successful candidate should be self-motivated, and goal oriented with good people skills. Seragen Diagnostics offers competitive salary (commensurate with experience) and benefit programs. For prompt, confidential consideration, please send resume and salary history to:

Personnel Manager
Seragen Diagnostics, Inc.
P.O. Box 1210
Indianapolis, IN 46206



Equal Opportunity Employer

BIOCHEMISTRY

Biotechnology firm is seeking a few outstanding research scientists.

B.S./M.S./Ph.D.

IMMUNOCHEMISTS. Successful candidates will have a proven track record of industrial development of homogenous enzyme immunoassay test kits. Ph.D. Salary range of \$35-50K.

MOLECULAR BIOLOGISTS. Successful candidates will have proven expertise in nucleic acid replication, enzymology, and recombinant DNA technology. Ph.D. Salary range of \$32-50K.

Microgenics offers a scientific challenge and equity participation with competitive salaries and fringe benefits. For immediate consideration, forward your resume in strict confidence to:

MICROGENICS CORPORATION
2341 Stanwell Dr. • Concord, CA 94520



MICROGENICS

CIBA-GEIGY in Basel Switzerland Intensifies Its Commitment to Biotechnology

Join us at our new research facility

The Biotechnology Department of CIBA-GEIGY Basel, has just completed construction of its new research facility. Our expanding research activities in Biotechnology require the creation of several positions for highly qualified PhD's with research experience in microbial genetics, rDNA technology, cell biology or protein chemistry. The duration of assignments will be 1-3 years. Qualified candidates will have background in eukaryotic cell transformation, cDNA cloning, heterologous gene expression in prokaryotes, lower eukaryotes and mammalian cells, phage genetics, immunoprecipitation/peptide mapping, or posttranslational modification and secretion.

Progress Through Innovation

CIBA-GEIGY

By joining this active research team, selected candidates will also benefit from an excellent infrastructure and collaboration with the various research institutions in Basel, e.g. the Blozentrum, the Friedrich Miescher-Institute and the Basel Institute of Immunology.

We offer competitive starting salaries and a comprehensive benefits package along with the opportunity to take part in stimulating research activities on challenging projects. For consideration, please forward curriculum vitae, description of research background and interests and at least two references to Dr. U. Spatli, CIBA-GEIGY Ltd., Personnel Department, Postfach, CH-4002 Basel, Switzerland. An Equal Opportunity Employer m/f/h/v.

POSITIONS OPEN

POSTDOCTORAL POSITION available for 2 years beginning 1 September 1984 for an individual with an interest in studying the neuroendocrine regulation of pulsatile luteinizing hormone release. Current research areas involve the roles of ovarian steroids, neurotransmitters, and CNS regions in this process. Please send curriculum vitae, summary of research experience, and names and addresses of three references to: **Dr. Robert Gallo, University of Connecticut, Box U-154, Storrs, Conn. 06268. Affirmative Action/Equal Opportunity Employer.** Search 3A212.

POSTDOCTORAL RESEARCH ASSOCIATE

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

POSTDOCTORAL RESEARCH ASSOCIATE. A position is available immediately to study nodule development in legumes. Experience in molecular biology, especially eukaryotic systems, desirable. Starting salary: \$18,000, renewable for second year. Send résumé and three references to: **Dr. Ann M. Hirsch, Department of Biological Sciences, Wellesley College, Wellesley, Mass. 02181.**

PROFESSOR—MOLECULAR BIOLOGY

The University of Colorado School of Medicine is committed to the reestablishment of a strong Interdepartmental Program in Molecular Biology, and is in the process of adding to existing strengths in this field. In that regard a position has been created for a **senior molecular biologist** with expertise in cellular and/or developmental biology. The individual selected would be expected to conduct a vigorous research program and to further the Interdepartmental Program in Molecular Biology through participation in the instruction of graduate students. Applications/nominations will be received until the position is filled and should be addressed to:

**Search Committee—Molecular Biology
Box B-121
University of Colorado Health Sciences Center
4200 East Ninth Avenue
Denver, Colorado 80262**

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

PROTEIN CHEMIST

Kallestad Laboratories is a leading manufacturer of medical diagnostic test kits located in suburban Minneapolis. We are currently seeking a highly qualified protein chemist to manage the production and development of our protein reagents. This individual will also provide long range direction in the protein chemistry of immunoassay development as well as managing day to day maintenance of existing products and product improvements. Applicants must have a Ph.D. in a natural science, 6-plus years of protein chemistry experience including 3-plus years of industrial experience. Applicants must also have extensive industrial experience in supervising small groups in protein chemistry or kit development. We offer competitive salary and benefits and pleasant working conditions. If you have the above qualifications and are interested in a new career opportunity, please send curriculum vitae in confidence to: **Ronald Gay, Kallestad Laboratories, Inc., 1000 Lake Hazeltine Drive, Chaska, Minn. 55318. An Equal Opportunity/Affirmative Action Employer, M/F/H.**

UNIVERSITY OF NEW HAVEN INSTITUTE OF COMPUTER STUDIES

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

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

An Affirmative Action/Equal Opportunity Employer

POSITIONS OPEN

POSTDOCTORAL RESEARCH ASSOCIATES, Immobilized Enzyme Cofactor Electrodes. Two openings are anticipated for early summer 1984 starting dates. One position requires synthetic organic chemistry-biochemistry background for synthesis of solid state, immobilized, flavin cofactor analogs. Second position requires bioelectrochemistry background for enzymatic and electrochemical characterization of flavin cofactor enzyme electrodes. Candidates must have Ph.D. by starting date. Experience with protein chemistry desirable. There are related projects with immobilized drugs in same laboratory. Send curriculum vitae, list of publications, and names of three references to: **Dr. Lemuel B. Wingard, Jr., Department of Pharmacology, School of Medicine, University of Pittsburgh, Pittsburgh, Pa. 15261, by 15 April 1984. Equal Opportunity/Affirmative Action Employer.**

RESEARCH ASSOCIATE. Position available for individual with experience in molecular biology. The candidate should have a Ph.D. in molecular biology or related fields, with at least 2 years of postgraduate training. Focus of research will be on molecular biology of globin gene switching. Applicants should send curriculum vitae, reprints, and names of references to: **Dr. G. Stamatoyanopoulos, Division of Medical Genetics, University of Washington, Seattle, Wash. 98195. An Equal Opportunity/Affirmative Action Employer.**

RESEARCH ASSOCIATE/POSTDOCTORAL POSITION: Neurobiology of Aging and Plasticity. Multidisciplinary studies on basic mechanisms of brain plasticity and aging, including intracellular recording and EM analyses. Salary negotiable and competitive. Send curriculum vitae to: **P. W. Landfield, Department of Physiology and Pharmacology, Bowman Gray School of Medicine, Wake Forest University, Winston-Salem, N.C. 27103. Telephone: 919-748-4422. An Affirmative Action/Equal Opportunity Employer.**

RESEARCH POSITIONS

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

RESEARCH SCIENTIST (Behavioral Pharmacologist or Behavioral Toxicologist)

Systems Research Laboratories, Inc. (SRL), is seeking a research scientist to join a team in conducting research on the effects of hazardous environments (radiation or chemicals) on animal performance. The position requires a Ph.D. in one of the following areas: psychology, physiology, pharmacology, or toxicology. Experience in behavioral toxicology or behavioral pharmacology preferred. This research position is located in San Antonio, Texas. If you would like to be a member of this research program, send your résumé in confidence to:

**T. P. Ryan
Scientific and Engineering Recruiting
Department RSM
Systems Research Laboratories, Inc.
2800 Indian Ripple Road
Dayton, Ohio 45440**

Ph.D./M.D. VIROLOGIST

The Division of Viral Diseases, Centers for Disease Control (CDC), Atlanta, invites applications for a staff position to head the enterovirus laboratory. Applicants should have at least 3 years of postdoctoral training with a strong background and research experience in virology (preferably with picornaviruses). The responsibilities of the position include development of an active research program in the rapid diagnosis, characterization, immunology, and molecular biology of enterovirus and supervision of the reference diagnostic laboratory. *CDC is an Equal Opportunity Employer.* Salary will be commensurate with training and experience. Applicants should send curriculum vitae, brief summary of research interest and experience, and names of three references to: **Louise M. Griggs, Personal Management, Centers for Disease Control, Atlanta, Ga. 30333.**

POSITIONS OPEN

RESEARCH ASSOCIATE

A Ph.D. **neuropharmacologist** to join an active research program aimed at exploring the neurochemical basis of specific neurologic and/or psychiatric disorders. A strong interest and postdoctoral experience in the area of neuropeptides in synaptic transmission is preferred. The individual will be given the opportunity to design and conduct neurochemical studies within the framework of the on-going neurotransmitter research program. Salary is competitive at the research assistant professor level. Available 1 July 1984. Send curriculum vitae and the names of three references to: **Phyllis Nash, Chair, Faculty Selection Committee, Department of Behavioral Medicine and Psychiatry, West Virginia University Medical Center, Morgantown, West Virginia 26506. Deadline date for submission of application is 1 May 1984. Equal Opportunity Employer.**

RESEARCH ASSOCIATES BIOLOGY AND BIOCHEMISTRY

The College of Biological Sciences, University of Minnesota, has a limited number of non-faculty openings for scientists who have completed the Ph.D. and some postdoctoral training and who wish to continue independent research careers. While such research associates may work in collaboration with faculty, they will be expected to obtain independent funding, including stipend, prior to appointment. Appointments must be renewed annually but may be continued indefinitely, depending on funding, facilities, and evaluation of contribution.

Participating units are the Departments of Biochemistry, Botany, Ecology and Behavioral Biology, Genetics and Cell Biology, Microbiology, the Bell Museum of Natural History, and the Gray Freshwater Biological Institute. Availability of positions in each unit will depend on space, facilities, research interests, and success in obtaining external funding.

Apply to: **The Research Associate Program, College of Biological Sciences, University of Minnesota, 109 Zoology Building, 318 Church Street, SE, Minneapolis, Minn. 55455.** Provide curriculum vitae and list of publications, a one- to two-page statement of research plans, a list of facilities and equipment required, and three letters of recommendation. Indicate the unit or faculty member with which affiliation is desired.

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

A **RESEARCH INVESTIGATOR** position available 2 April 1984 in a university physiology department to assist in a research project on the role of peptides in mammalian brain. Research involves characterization of peptide receptors by chemical and immunological techniques and investigation of biological activity in culture. A Ph.D. degree in physiology with evidence of productivity through publications and expertise in brain cell culture techniques, peptide binding assays, density shift ultracentrifugation, and immunocytochemistry methodology are required. Salary is \$15,410 per year based on 40 hours per week and overtime as required. Send résumé and three letters of recommendation to: **Iowa Department of Job Service, 1810 Lower Muscatine Road, Iowa City, Iowa 52244. Reference number: J01344729.**

Equal Opportunity/Affirmative Action Employer

SENIOR RESEARCH ASSOCIATE: Position requires Ph.D. in physics with 3 years of postdoctoral training in experimental elementary particle physics and experience in the described area of research, including expertise with detectors as used in elementary particle physics experimentation, competence in the techniques of real time data collection with mini computers, computational skills with large computer facilities. The job involves initially contributing to the design of a precision experiment. Elements to be designed include a large drift-chamber with relevant electronics and a many element lead glass array. After the required equipment is constructed, the job will involve the testing and installation at the laboratory. The duties will then be the management of the extensive data-taking phase of the experiment (which will likely be spread over 1 to 2 years) including the supervision of students and postdoctoral personnel. Duties also include the subsequent analysis of the data collected. Finally, the duties include consideration of and calculations for new experimental initiatives. The position is a full-time, 40-hour week (9 a.m. to 5 p.m.), at \$25,000 per annum. Please direct response with résumé to: **Shirley Chalem, Illinois Job Service, 910 South Michigan Avenue, Room 400, Chicago, Ill. 60605; attention: Reference Number 2998-S. An employer-paid ad.**

Senior Specialist in Science and Technology and
Chief, Science Policy Research Division

THE LIBRARY OF CONGRESS
Congressional Research Service

GS-17 \$66,000

QUALIFICATIONS: Three years of specialized experience, one year of which must have been at the GS-15 level in the Federal service or at a comparable level of difficulty outside the Federal service, are required. The experience must clearly demonstrate broad knowledge of the field of science and technology and expert knowledge of one or more subfields such as public policy/economic analysis, biological or physical sciences, engineering, or operations research, as well as the ability to plan, organize, direct and manage a complex research and policy analysis program.

APPLICATION PROCEDURES: Applicants must call the Library of Congress Employment Office at (202) 287-5627 to request a copy of Vacancy Announcement #40059 and a Personal Qualifications Statement (SF-171). Applicants must have a copy of the Vacancy Announcement to apply for the position. Resumes are not accepted in lieu of the Personal Qualifications Statement.

Civil Service Status Not Required
Equal Opportunity Employer

**MYRON A. BANTRELL POSTDOCTORAL FELLOWSHIPS
FOR SCIENTIFIC AND ENGINEERING RESEARCH**

The California Institute of Technology, Massachusetts Institute of Technology, and The Weizmann Institute of Science (Israel) will award a number of Bantrell Fellowships for postdoctoral study for the academic year 1984-85, beginning September 1, 1984.

The Fellowship will be granted for one year and will be extended for an additional year upon recommendation of the host institution. In recognition of outstanding academic achievements, the Fellowship may be extended, to those Fellows who have been abroad, for a third year of study in the Fellow's home country (Israeli citizens shall be eligible for such a third year fellowship only at The Weizmann Institute), thus enabling the Fellow to select a position in research or industry.

According to the local practice at the host institution, this Fellowship may include a generous stipend for the Fellow, a travel allowance (one round trip for the Fellow) to the host institution, travel to scientific conferences, and health and life insurance. The program is restricted to citizens of Israel and the United States. U.S. citizens must be less than 30 years of age, and preference will be given to Israeli citizens.

The Bantrell Fellowship Program has been established to offer scientists the best possible opportunity to develop their talents. Fellowships will be granted in the following fields:

California Institute of Technology: Biology, Chemical Catalysis, Earthquake Seismology, Microscience of Materials (Applied Physics), and Theoretical Physics, Astrophysics, and Optical Astronomy.

Massachusetts Institute of Technology: Computer Logic, Energy Conversion, Mechanics of Fluids, Molecular Biology of Higher Organisms, Neurosciences, and Surface Science.

The Weizmann Institute of Science: Chemistry, Life Sciences, Physics, and the Study and Development of National Resources of Israel.

Application and materials in support of any nomination should include a curriculum vitae, bibliography of publications, preprints of manuscripts not yet published, a letter of nomination from the dean or chair in the candidate's university, and two letters of recommendation from faculty who are familiar with the candidate's research. Notification will be mailed by June 30, 1984.

Applications should be sent to the appropriate institution and should arrive by April 1, 1984. Mail to:

Provost's Office
California Institute of Technology
Pasadena, California 91125

Kenneth A. Smith
Associate Provost and Vice President for Research
Massachusetts Institute of Technology
Cambridge, Massachusetts 02139

Professor Shmuel Shaltiel
Dean, Feinberg Graduate School
The Weizmann Institute of Science
Rehovot, Israel 76100

DEPARTMENT OF HEALTH AND HUMAN SERVICES
PUBLIC HEALTH SERVICE
FOOD AND DRUG ADMINISTRATION
BUREAU OF FOODS

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RESEARCH MANAGEMENT POSITION
FINFISH AND SHELLFISH SAFETY RESEARCH PROGRAM

The Food and Drug Administration is seeking a Research Biologist, Microbiologist or Chemist, GM-15, to head its Fishery Research Branch at Dauphin Island, Alabama. The Research Manager will provide marine sciences expertise to expand and direct the research program in finfish and shellfish food safety. Research conducted addresses the public health implications of contaminated or adulterated fishery products in order to provide a continuous delivery of a safe and wholesome food supply.

A Ph.D. in Microbiology, Bacteriology, Chemistry or closely related discipline with emphasis on the marine sciences is required. Candidates must be nationally and internationally recognized by the scientific community.

This is a career Federal Civil Service position. Salary (\$50,352 to \$56,952) is based on qualifications. A current curriculum vitae and bibliography are to be sent to Dr. Fred R. Shank, Deputy Associate Director for Nutrition and Food Sciences (HFF-201), Bureau of Foods, 200 C Street, SW, Washington, DC 20204.

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RESEARCH MANAGEMENT POSITION
NUTRITION RESEARCH PROGRAM

The Food and Drug Administration is seeking a Medical Officer or Research Nutritionist, Chemist or Biologist to head its Experimental Nutrition Branch in Washington, DC. The Research Manager will provide expertise and leadership in carrying out a multi-disciplinary biological research program with primary emphasis on the nutritional sciences. Research conducted supports the Agency's policies and regulatory approaches to maintaining and improving the nutritional quality of the national food supply. The successful candidate will have the opportunity to conduct independent as well as collaborative research.

An M.D. or Ph.D. in Nutrition, Chemistry or Biology or closely related biomedical or biomedical/physical science with close emphasis on nutritional sciences is required. Candidates must be nationally or internationally recognized by the scientific community.

This is a Federal Civil Service position. Salary (\$42,722 to \$56,952) is based on qualifications. Physicians may be eligible for a Physicians' Comparability Allowance up to \$7,000 per year. A current curriculum vitae and bibliography are to be sent to Dr. John E. Vanderveen, Director, Division of Nutrition (HFF-260), Bureau of Foods, 200 C Street, SW, Washington, DC 20204.

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THE FOOD AND DRUG ADMINISTRATION IS AN EQUAL
OPPORTUNITY EMPLOYER.

Applications for both of the above positions must be postmarked no later than March 31, 1984.

POSITIONS OPEN

RESEARCH SCIENTIST/INSTRUCTOR. To investigate the relationship between structure and function of DNA polymerase I using genetic and biochemical techniques, and to participate in teaching biochemistry to medical students. Candidates must have a Ph.D. in biochemistry or chemistry and at least 5 years of postdoctoral experience. The position requires proven experience in the techniques of nucleic acid and protein biochemistry including recombinant DNA techniques, DNA sequencing, nucleotide chemistry, and protein purification. Applicants must have extensive knowledge of bacterial genetics, practical experience with modern genetic techniques, and competence in computer analysis of nucleic acid sequences. Experience in teaching biochemistry is required. Send résumé and names of three references to: **Dr. N. Grindley, Yale University School of Medicine, Department of Molecular Biophysics and Biochemistry, 333 Cedar Street, New Haven, Conn. 06510.** An Equal Opportunity/Affirmative Action Employer.

SCIENTIFIC DIRECTOR LIPOPROTEIN RESEARCH LABORATORY

Recent Ph.D. in **BIOPHYSICS** or **BIOMATHEMATICS** with computer fluency sought to develop computer-based basic and applied research laboratory for plasma lipoproteins. State-of-the-art lipoprotein isolation and analysis and computer facilities in place. Starting salary: \$19,000 as research fellow, with possibility of faculty position after 2 years. Send curriculum vitae and two references to: **Jere P. Segrest, M.D., Ph.D., Director, Atherosclerosis Research Program, Department of Pathology, University of Alabama in Birmingham Medical Center, Birmingham, Alabama 35294.** Affirmative Action/Equal Opportunity Employer.

SENIOR SCIENTIST/DIRECTOR. NPI, a plant research and products company established in 1973, invites applications for a senior research/management position in our expanded laboratory divisions. Research experience in plant genetics of physiological cell biology is essential. Interest in the application of cellular and molecular biology approaches to plant improvement is desired. Duties will include management of accelerated plant research programs in phytochemistry, nutrition, cellular and molecular biology. Pursuit of personal research objectives will be highly encouraged.

NPI offers a strong corporate history in product development and commitment to long-term plant research objectives. Compensation and benefit packages are commensurate with experience. Applicants should send their curriculum vitae, current publication list, and statement of interests to: **Vice-President Corporate Planning, NPI, University Research Park, 417 Wakara Way, Salt Lake City, Utah 84108.**

VETERINARY RADIOLOGIST. Beginning 1 July 1984, the Section of Radiology, Department of Surgery of the Tufts University School of Veterinary Medicine is seeking a Board-certified or Board-eligible veterinary radiologist at the assistant professor level to join two Board-certified radiologists in already existing diagnostic radiology and nuclear medicine programs. Primary responsibilities will be in large animal diagnostic radiology and development of an ultrasound program, although involvement in all areas of radiology including newer imaging techniques is expected. Duties will be approximately 75 percent service and teaching, and 25 percent research. Significant research opportunities exist at Harvard, Tufts, the University of Massachusetts, and Boston University Medical Schools and the Massachusetts Institute of Technology. Candidates should send an autobiographical letter of application, curriculum vitae, and three references to: **Dr. Lawrence Kleine, Head, Section of Radiology, Chairman, Radiology Search Committee, Department of Surgery, Tufts University School of Veterinary Medicine, Angell Memorial Animal Hospital, 350 South Huntington Avenue, Boston, Massachusetts 02130.**

Tufts University is an Equal Opportunity/Affirmative Action Employer.

VIROLOGIST/ENTOMOLOGIST. A tenure-track assistant-associate professorship available at Florida Medical Entomology Laboratory, IFAS, University of Florida. Salary and rank commensurate with qualifications. Ph.D. and extensive training in entomology and virology required. Applicants should send a complete résumé, publications list, and at least three letters of recommendation to: **Dr. J. R. Linley, Search Committee Chairman, Florida Medical Entomology Laboratory, 200 9th St., SE, Vero Beach, Fla. 32962,** by 30 March 1984.

POSITIONS OPEN

VIROLOGIST

Bioassay Systems Corporation is an exciting biotechnology company with an energetic research and development program in medical diagnostics. We are seeking a qualified candidate with a Ph.D. in virology or related science and experience in infectious or sexually transmitted diseases. Industry experience in diagnostic product development. Please send résumé to:

**Mark Bear, Ph.D.,
Director Cell Culture Services
Bioassay Systems Corporation
Woburn, Mass. 01801**

SYMPOSIA

TUMOR PROMOTION AND ENHANCEMENT IN THE ETIOLOGY OF HUMAN AND EXPERIMENTAL RESPIRATORY TRACT CARCINOGENESIS

A symposium will be held 17 to 20 June 1984 at the Williamsburg Hilton and National Conference Center in Williamsburg, Virginia. It is being sponsored by the Carcinogenesis and Metabolism Branch, Genetic Toxicology Division, Health Effects Research Laboratory, U.S. Environmental Protection Agency, Research Triangle Park, N.C.

An international group of invited speakers will address the following areas: (i) human epidemiologic evidence for tumor enhancement or promotion in the lung; (ii) experimental evidence for tumor enhancement and promotion in the respiratory tract; and (iii) detection of tumor promoters and enhancers relevant to the lung but studied in other experimental systems. Poster abstracts related to these areas are being solicited from all interested individuals. Abstracts must be submitted by 15 March 1984.

For further details, abstract format, and registration forms, contact: **Dan Tisch, Symposium Coordinator, Northrop Services, Inc., P.O. Box 12313, Research Triangle Park, N.C. 27709.** Telephone: 919-549-0652.

The Johns Hopkins Center for Alternatives to Animal Testing is sponsoring its 3rd Annual Symposium—**A Progress Report from the Center—Alternative Methods in Toxicology.** The symposium will be held in Baltimore on 23 and 24 October 1984. We encourage the submission of posters presentations. To be placed on the mailing list or for instruction for posters, please contact:

**Barbara J. Williams
Secretary to the Director
The Center for Alternatives to Animal Testing
The Johns Hopkins School of
Hygiene & Public Health
615 North Wolfe Street
Baltimore, Maryland 21205**

PROGRAM

THE TOXICOLOGY PROGRAM of the University of Michigan invites applications from highly qualified students interested in pursuing a **graduate degree in toxicology.** The program offers research opportunities in carcinogenesis, xenobiotic metabolism, pathology, biochemical accommodation, neurotoxicology, reproductive toxicology and risk assessment, with primary emphasis on mechanisms. The program has excellent facilities and enjoys strong interaction with other basic science departments. Student stipends and tuition support for qualified students are available. Contact: **Isadore A. Bernstein, Program Director, Department of Environmental and Industrial Health, The University of Michigan, Ann Arbor, Mich. 48109-2029.** Telephone: 313-764-5410.

ASSISTANTSHIPS

GRADUATE RESEARCH ASSISTANTSHIPS for Ph.D.-level students are available to work in the areas of molecular biology, gene expression and characterization, and/or somatic cell genetics of plants. Stipends range from \$8,000 to \$12,000 annually. Available through a cooperative degree program between Los Alamos National Laboratory—Life Sciences Division and New Mexico State University—Plant Genetic Engineering Laboratory. Send résumé or contact: **Dr. Gregory C. Phillips, Interim Director, Plant Genetic Engineering Laboratory, Box 3GL, New Mexico State University, Las Cruces, N.M. 88003.** An Equal Opportunity/Affirmative Action Employer.

COURSES

SCANNING AND TRANSMISSION ELECTRON MICROSCOPY: A series of practical courses will be offered during June. They are designed to introduce the participants to the theory and practical aspects of electron microscopy. Specimen preparation, operation of electron microscopes, x-ray microanalysis, and photographic techniques will be stressed. TEM: 4 to 15 June; SEM: 18 to 22 June; combined: 4 to 22 June. Contact: **Fred Lightfoot, The George Washington University, 2300 I Street, NW, Washington, D.C. 20037.** Telephone 202-676-2881 or 676-3511.

FELLOWSHIPS

POSTDOCTORAL FELLOWSHIPS IN MOLECULAR GENETICS

The University of Rochester Cancer Center invites applications for 2-year fellowships to begin in 1984. Projects include studies investigating the role of oncogene products and hormones in the regulation of cell growth, chromosomal replication and the expression of specific genes. Experiments involve molecular cloning, DNA sequence analysis, hybridization, blotting analyses, electron microscopy, generation of monoclonal antibodies and immunoaffinity purification methods. Send résumé and three letters of recommendation to: **Edgar C. Henshaw, M.D., Director, Cancer Center Fellowship Program, University of Rochester, Box 704, 601 Elmwood Avenue, Rochester, N.Y. 14642.**

POSTDOCTORAL FELLOWSHIPS

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

The University of Pennsylvania, Philadelphia, will offer National Cancer Institute-sponsored **RESEARCH TRAINING FELLOWSHIPS** in nutrition and cancer starting July 1984. The program emphasizes a core didactic experience modified to suit the previous training of each fellow, accompanied by a broad exposure to research methodology in both clinical and laboratory situations. Two years of specialty training beyond the M.D. or Ph.D. degree is required. Applicants must be citizens or have been lawfully admitted to the United States for permanent residence. Applications are accepted at any time during the calendar year. For a 1 July appointment, applications must be received by 15 May. Appointments are made for one year and may be renewed for one additional year. Appointments will run from 1 July to 30 June of the subsequent year. For information, write: **James L. Mullen, M.D., Program Director, Hospital of the University of Pennsylvania, 3400 Spruce Street, Philadelphia, Pa. 19104.**

POSTDOCTORAL FELLOWSHIP IN NEUROCHEMISTRY is available to study the functional response to neurotransmitter receptors and the molecular mechanisms of neurotransmitter-receptor interactions and the consequent transmembrane processes. Various projects include the study of channel opening and desensitization of receptors including acetylcholine receptor and glutamate receptor. The work involves measurements of transmembrane ion flux and ligand binding with preparations of membrane vesicles containing the receptor using rapid kinetic techniques (quench flow and stopped flow). The position offers experience in research on membrane phenomena at the subcellular level. Send curriculum vitae to: **Dr. Derek J. Cash, Neurochemistry Unit, Missouri Institute of Psychiatry, Department of Biochemistry, University of Missouri—Columbia School of Medicine, 5400 Arsenal Street, M.S. 148, St. Louis, Mo. 63139-1494.** Equal Opportunity/Affirmative Action Employer.

POSTDOCTORAL FELLOWSHIP is available in basic immunogenetics or in reproductive immunology and genetics. Send curriculum vitae with inquiry to:

**Dr. Thomas J. Gill III
Department of Pathology
University of Pittsburgh
School of Medicine
Pittsburgh, Pa. 15261**

Staff Fellow (Ph.D.)
Salary Range—\$17,000 to \$34,269
(Having less than 3 years professional
Research Experience)

Senior Staff Fellow (Ph.D.)
Salary Range—\$20,688 to \$38,422
(3-7 years Research Experience)

**NATIONAL INSTITUTES OF HEALTH
NATIONAL INSTITUTE OF ENVIRONMENTAL HEALTH SCIENCES
LABORATORY OF MOLECULAR BIOPHYSICS**

The Free Radical Metabolite Workgroup is seeking an individual to participate in an electron spin resonance investigation of the free radical metabolism of toxic chemicals and drugs by hepatocytes, polymorphonuclear leukocytes, or macrophages. A background in cell biology or microbiology and an interest in spectroscopy are required. The candidate must have a record of demonstrated research productivity and the ability to carry out independent as well as collaborative research. The initial appointment is for two years, with additional extension possible for talented researcher. Salary commensurate with candidate's qualifications and experience. Send curriculum vitae, bibliography and three recommendation letters to:

**Mr. Bruce Wiggins, Code: HN-V2K
NIEHS Personnel Office
P.O. Box 12233 (MD 1-01), Research Triangle Park, NC 27709
(919 541-3317)**

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

Assistant Scientists & Associate Scientists

**Explore a position today with
the industry of the future**

CIBA-GEIGY's Agricultural Division has exciting opportunities at its new international unit for applied research in Biotechnology at Research Triangle Park in Raleigh, North Carolina.

We currently have positions available for Assistant and Associate Scientists with a BS/MS degree in Plant Pathology, Microbiology, Biochemistry or Chemistry and at least 2 years' experience in one of the following areas of research: soil microbiology, plant pathology, monoclonal antibodies, DNA sequencing, recombinant DNA or site directed mutagenesis.

CIBA-GEIGY offers excellent salaries and the full complement of benefits you would expect from the seventh largest specialty chemical company in the world. If interested, please forward resume and salary requirements, in confidence, to: Dr. Mary-Dell Chilton, CIBA-GEIGY Biotechnology, 3025 Cornwallis Road, PO Box 12257, Research Triangle Park, North Carolina 27709. An Equal Opportunity Employer m/f/h/v.

CIBA-GEIGY

Progress Through Innovation

University of Massachusetts Medical School Interdepartmental Program in Environmental Health Sciences Two Senior Tenure Track Positions Available

**SPONSORING DEPARTMENTS:
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& Pharmacology**

PREFERRED AREAS OF GENERAL RESEARCH INTEREST
include Mutagenesis/Carcinogenesis, and Inhalation/Pulmonary or Reproductive Toxicology.

The University of Massachusetts Medical School seeks to recruit two Senior faculty members to join several of its faculty in developing the above interdepartmental program. Appointments may begin in the fall of the 1984-85 academic year. The requirements of each participating department are described further below. Multidepartmental, joint appointments will be considered, and applications and inquiries from established teams of investigators working in one or more of the above areas are encouraged. Each faculty member will be expected to pursue an independent research program and to participate, in the context of an interdepartmental program, in service, medical education, and/or the education of graduate students in an institutional Ph.D. Program in Medical Sciences. General inquiries or letters of application (including a curriculum vitae and a list of three references) should be sent before 31 March 1984 to:

**Neal C. Brown, Professor & Chairman
Department of Pharmacology, University of Massachusetts
Medical School, 55 Lake Avenue North,
Worcester, MA 01605; (617) 856-2151.**

POSITION REQUIREMENTS

FAMILY & COMMUNITY MEDICINE POSITION

Associate Professor or Professor with M.D. and/or Ph.D. and an established research program in one of the areas cited above. **Preferred Research Interests** include the study of the relationship of environmental/occupational exposure to effects on human health. Other duties would include the performance of health/exposure assessment of environmental/occupational hazards and participation in the formulation of related public policy.

**For further specific information contact Dr. Barry Levy,
Department of Family and Community Medicine, UMMC,
Worcester, MA 01605. (617) 856-2151.**

PATHOLOGY-PHARMACOLOGY POSITION

Associate Professor or Professor with M.D. and/or Ph.D. and an established program in one of the areas cited above.

Preferred Research Interests, regardless of the appointee's departmental affiliation and the specific areas of interest, his/her research should incorporate the use of analytical chemistry and related techniques. The specific research interests should fall within the context of the areas cited above and be relevant to the broad discipline of environmental-toxicologic pathology or pharmacotoxicology - including the pharmacokinetics and metabolism and mutagenic/carcinogenic effects of drugs and environmental chemicals.

**For further specific information contact as appropriate -
Dr. Neal Brown (Pharmacology, see above) or Dr. Guido Majno,
Chairman, Department of Pathology, UMMC,
Worcester, MA 01605; (617) 856-2115.**

University of Massachusetts Medical Center

55 Lake Avenue North Worcester, MA 01605

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