

Warneck does not dwell on acid rain problems but provides the fundamentals needed to deal with them, including explanations of the uptake of gases by droplets and the solution-phase kinetics of S(IV) oxidation to sulfate.

The final two chapters are novel. The treatment in chapter 11 of the geochemistry of carbon dioxide is thorough, covering the atmosphere, the layers of the ocean, sediments, carbon-bearing minerals, and the biosphere. Although Warneck does not deal much with the radiation balance aspects of the greenhouse effect, he provides all of the chemical background on the carbon cycle. The final chapter, "The evolution of the atmosphere," contrasts conditions on Earth with those on Venus and Mars, showing why different final stages evolved.

This is a wonderful textbook for senior and graduate courses on atmospheric chemistry, although it contains too much material for a semester course. Problem sets would have been useful.

This is also a valuable reference book that few atmospheric chemists will want to be without. It contains information from research and review papers that has not been collected in one place before. For example, the treatment of each important trace gas typically contains data on source strengths, vertical concentration profiles, and the important sink mechanisms. The appendixes contain data on the "standard" atmosphere, vapor pressures of water and ice, solar fluxes versus wavelength, and rate constants. The book is well documented, with 85 pages of references.

In summary, this is indeed the long-awaited update of Junge's book. Its appearance is timely in view of the recent greatly enhanced interest in global problems such as the greenhouse effect and stratospheric ozone.

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Reprints of Books Previously Reviewed

The Great Devonian Controversy. The Shaping of Scientific Knowledge among Gentlemanly Specialists. Martin J. S. Rudwick. University of Chicago Press, Chicago, 1988. Paper, \$19.95. Reviewed 230, 432 (1985).

Inward Bound. Of Matter and Forces in the Physical World. Abraham Pais. Clarendon (Oxford University Press), New York, 1988. Paper, \$17.95. Reviewed 234, 619 (1986).

Selling Science. How the Press Covers Science and Technology. Dorothy Nelkin. Freeman, New York, 1988. Paper, \$9.95. Reviewed 236, 973 (1987).

The Signs of Language. Edward S. Klima and Ursula Bellugi with 10 others. Harvard University Press, Cambridge, MA, 1988. Paper, \$12.95. Reviewed 205, 1253 (1979).

Books Received

Additive Groups of Rings. Vol. 2. S. Feiglstock. Longman Scientific, Harlow, U.K., and Wiley, New York, 1988. xvi, 100 pp. Paper, \$39.95. Pitman Research Notes in Mathematics, vol. 169.

Advances in Neuroblastoma Research 2. Audrey E. Evans *et al.*, Eds. Liss, New York, 1988. xxviii, 748 pp., illus. \$130. Progress in Clinical and Biological Research, vol. 271. From a symposium, Philadelphia, PA, May 1987.

Advances in Non-Linear Spectroscopy. R. J. H. Clark and R. E. Hester, Eds. Wiley, New York, 1988. xx, 363 pp., illus. \$159. Advances in Spectroscopy, vol. 15.

Advances in Periglacial Geomorphology. M. J. Clark, Ed. Wiley-Interscience, New York, 1988. xxiv, 481 pp., illus. \$125. Based on a conference, Paris, France, Aug. 1984.

The Aging Population in the Twenty-First Century. Statistics for Health Policy. Dorothy M. Gilford, Ed. National Academy Press, Washington, DC 1988. xvi, 323 pp. Paper, \$19.95.

Air Pollution and Acid Rain. The Biological Impact. Alan Wellburn. Longman Scientific, Harlow, U.K., and Wiley, New York, 1988. xvi, 274 pp., illus. \$48.95.

Air Pollution, the Automobile, and Public Health. Ann Y. Watson, Richard R. Bates, and Donald Kennedy, Eds. National Academy Press, Washington, DC, 1988. x, 692 pp., illus. \$60.

Alcoholism and Women, Genetics, and Fetal Development. William J. Haugen Light. Thomas, Springfield, IL, 1988. xx, 170 pp., illus. \$27.50.

Algorithm Design. A Recursion Transformation Framework. Marvin C. Paull. Wiley-Interscience, New York, 1988. xvi, 490 pp., illus. \$44.95.

Automated Theorem-Proving in Non-Classical Logics. Paul B. Thistlewaite, Michael A. McRobbie, and Robert K. Meyer. Pitman, London, and Wiley, New York, 1988. vi, 154 pp. Paper, \$19.95. Research Notes in Theoretical Computer Science.

The Basics of Technical Communicating. B. Edward Cain. American Chemical Society, Washington, DC, 1988. xiv, 198 pp., illus. \$29.95; paper, \$19.95. ACS Professional Reference Book.

Beilinson's Conjectures on Special Values of L-Functions. M. Rapoport, N. Schappacher, and P. Schneider, Eds. Academic Press, San Diego, CA, 1988. xxiv, 373 pp. \$37.50. Perspectives in Mathematics, vol. 4. Based on a workshop, Oberwolfach, F.R.G., April 1986.

Biological Applications of Raman Spectroscopy. Vol. 3, Resonance Raman Spectra of Heme and Metalloproteins. Thomas G. Spiro, Eds. Wiley-Interscience, New York, 1988. x, 565 pp., illus. \$85.

Biological Determinants of Reinforcement. Michael L. Commons *et al.*, Eds. Erlbaum, Hillsdale, NJ, 1988. xxiv, 280 pp., illus. \$45. Quantitative Analyses of Behavior, vol. 7. Based on a symposium, Cambridge, MA, June 1984.

The Biology of Hearing and Deafness. Robert V. Harrison. Thomas, Springfield, IL, 1988. x, 432 pp., illus. \$67.50.

Biomass Energy. From Harvesting to Storage. G. L. Ferrero, G. Grassi, and H. E. Williams, Eds. Elsevier, New York, 1988. xii, 327 pp., illus. \$61.25. From a workshop, Rome, Italy, Nov. 1986.

Biomass for Energy and Industry. G. Grassi *et al.*, Eds. Elsevier Applied Science, New York, 1988. xxviii, 1391 pp., illus. \$171. From a conference, Orleans, France, May 1987.

Birds of the Middle East and North Africa. A Companion Guide. P. A. D. Hollom *et al.* Buteo Books, Vermillion, SD, 1988. 280 pp., illus., + plates. \$32.50.

The Birth of History and Philosophy of Science. Kepler's *A Defence of Tycho against Ursus* with Essays on Its Provenance and Significance. N. Jardine. Cambridge University Press, New York, 1988. x, 301 pp., illus. Paper, \$16.95. Reprint, 1984 edition.

Chemical Physics of Intercalation. A. P. Legrand and S. Flandrois, Eds. Plenum, New York, 1987. xii, 517 pp., illus. \$95. NATO Advanced Science Institutes Series B, vol. 172. From an institute, Castera Verduzan, France, June 1987.

Choice and Morality in Anthropological Perspective. Essays in Honor of Derek Freeman. G. N. Appell and T. N. Madan, Eds. State University of New York Press, Albany, NY, 1988. xvi, 248 pp. \$34.50.

Chromium in the Natural and Human Environments. Jerome O. Nriagu and Evert Nieboer, Eds. Wiley-Interscience, New York, 1988. xvi, 571 pp., illus. \$95. Advances in Environmental Science and Technology, vol. 20.

Circuits, Signals, and Devices. Michael Julian.

Longman Scientific, Harlow, U.K., and Wiley, New York, 1988. xii, 515 pp., illus. Paper, \$37.95.

Climate Shocks. Natural and Anthropogenic. K. Ya. Kondratyev. Wiley-Interscience, New York, 1988. xx, 296 pp., illus. \$52.50. Wiley Series in Climate and the Biosphere. Translated from the Russian by A. P. Kostrova.

The Collapse of Ancient States and Civilizations. Norman Yoffee and George L. Cowgill, Eds. University of Arizona Press, Tucson, 1988. xii, 333 pp., illus. \$35. Based on a seminar, Santa Fe, NM, March 1982.

Colloidal Systems and Interfaces. Sydney Ross and Ian Douglas Morrison. Wiley-Interscience, New York, 1988. xviii, 422 pp., illus. \$49.95.

Combinatorial Configurations. Design, Codes, Graphs. Vladimir D. Tonchev. Longman Scientific, Harlow, U.K., and Wiley, New York, 1988. xii, 189 pp., illus. \$77.95. Pitman Monographs and Surveys in Pure and Applied Mathematics, vol. 40. Translated from the Bulgarian edition (Sofia, 1984) by Robert A. Melder.

Comets to Cosmology. A. Lawrence, Ed. Springer-Verlag, New York, 1988. x, 415 pp., illus. \$44.20. Lecture Notes in Physics, vol. 297. From a conference, London, July 1987.

Digital Signal Processing. A System Design Approach. David J. DeFatta, Joseph G. Lucas, and William S. Hodgkiss. Wiley, New York, 1988. xxiv, 661 pp., illus. \$61.67.

A Dream of Maya. Augustus and Alice Le Plongeon in Nineteenth-Century Yucatan. Lawrence Gustave Desmond and Phyllis Mauch Messenger. University of New Mexico Press, Albuquerque, 1988. xxii, 147 pp., illus. Paper, \$19.95.

The Economy of the Earth. Philosophy, Law, and the Environment. Mark Sagoff. Cambridge University Press, New York, 1988. x, 271 pp., \$29.95. Cambridge Studies in Philosophy and Public Policy.

The Eighth Day. Social Evolution as the Self-Organization of Energy. Richard Newbold Adams. University of Texas Press, Austin, 1988. xx, 292 pp., illus. \$35; paper, \$12.95.

Electron Liquid Theory of Normal Metals. V. P. Silin, Ed. Nova Science, Commack, NY, 1988. viii, 241 pp., illus. \$89. Proceedings of the Lebedev Physics Institute of the Academy of Sciences of the USSR, vol. 174, supplemental vol. 2. Translated from the Russian edition (Moscow, 1985) by Kevin S. Hendzel.

The Encyclopedia of Field and General Geology. Charles W. Finkl, Jr., Ed. Van Nostrand Reinhold, New York, 1988. xviii, 911 pp., illus. \$89.95. Encyclopedia of Earth Sciences, vol. 14.

Endorphins, Opiates and Behavioural Processes. R. J. Rodgers and S. J. Cooper, Eds. Wiley-Interscience, New York, 1988. x, 361 pp. \$92.

Fishery Development. William F. Royce. Academic Press, San Diego, CA, 1987. xii, 248 pp. \$24.95.

Foundations of Statistical Mechanics. Walter T. Grandy, Jr. Reidel, Dordrecht, 1988 (U.S. distributor, Norwell, MA). Vol. 1, Equilibrium Theory. xvi, 380 pp., illus. \$79. Vol. 2, Nonequilibrium Phenomena. xii, 307 pp., illus. \$79. Fundamental Theories of Physics.

Frontiers in Particle Theory. Yi-shi Duan, G. Domokos, and S. Kovesi-Domokos, Eds. World Scientific, Teaneck, NJ, 1988. xiv, 324 pp., illus. \$46. From a workshop, Lanzhou, China, June 1987.

Fully Abstract Models of Programming Languages. Allen Stoughton. Pitman, London, and Wiley, New York, 1988. vi, 123 pp., illus. Paper, \$19.95. Research Notes in Theoretical Computer Science.

Galactic and Extragalactic Radio Astronomy. G. L. Verschuur and K. I. Kellermann, Eds. 2nd ed. Springer-Verlag, New York, 1988. xxii, 694 pp., illus. \$79.95. Astronomy and Astrophysics Library.

Game Theory and National Security. Steven J. Brams and D. Marc Kilgour. Blackwell, New York, 1988. xiv, 199 pp., illus. \$49.95; paper, \$19.95.

Gemstones. Michael O'Donoghue. Chapman and Hall (Routledge), New York, 1988. xiv, 372 pp., illus. \$55.

Gliar Cell Receptors. Harold K. Kimelberg, Ed. Raven, New York, 1988. xiv, 274 pp., illus. \$79.

The Great Temple of the Aztecs. Treasures of Tenochtitlan. Eduardo Matos Moctezuma. Thames and Hudson, New York, 1988. 192 pp., illus. \$29.95. New Aspects of Antiquity. Translated from the Spanish by Doris Heyden.

Handbook of Plants with Pest-Control Properties. Michael Grainge and Saleem Ahmed. Wiley-Interscience, New York, 1988. xx, 470 pp. \$44.95.

Hematopoiesis. Long-Term Effects of Chemotherapy and Radiation. Nydia G. Testa and Robert Peter Gale, Eds. Dekker, New York, 1988. xviii, 413 pp., illus.

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Products & Materials

Chromatography Software

CALS PeakPro is a software package that acquires and analyzes chromatographic data from both gas and liquid chromatographs. Menus, help keys, and fill-in-the-blank commands are available to the novice user; experienced users can enter commands in line mode. During data acquisition, the data can be plotted in real time, or the user can expand and compare stored chromatograms. Stored chromatograms can also be reanalyzed in batch mode with automatic method recalibration. Stored data can be sorted and retrieved by data file prefix, operator, or date of acquisition. To aid documentation, the program protects methods from unauthorized modification, keeps an event log, and stores a summary of the analytical method with the chromatographic results. CALS PeakPro operates on DEC VAX computers. Beckman/CIS, Laboratory Automation Operations. Circle 544.

Disposable Electroelution Device

The Geneluter is a disposable device that recovers purified nucleic acids from agarose by electroelution. Ninety percent of the nucleic acids can be recovered in as little as 2 to 4 hours. The resulting DNA is salt-free and ready for ligation. Because it is disposable, the Geneluter is appropriate for electroeluting radioactive samples, thus preventing contamination of nondisposable equipment. Invitrogen. Circle 545.

Supercomputers for 3-D Graphics

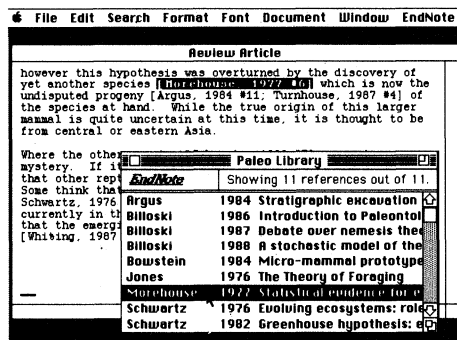
Visual Supercomputers are a family of supercomputers that support simultaneous computation-intensive applications and high-performance three-dimensional (3-D) graphics. The computers allow depiction of complex data as images rather than as lists of numbers. They can process 377 million floating-point operations per second

Newly offered instrumentation, apparatus, and laboratory materials of interest to researchers in all disciplines in academic, industrial, and government organizations are featured in this space. Emphasis is given to purpose, chief characteristics, and availability of products and materials. Endorsement by *Science* or AAAS is not implied. Additional information may be obtained from the manufacturers or suppliers named by circling the appropriate number on the Readers' Service Card and placing it in a mailbox. Postage is free.

(MFLOPS) when executing applications and 640 MFLOPS when drawing. Images can be shaded at 50 million pixels per second, and hidden surfaces can be removed as fast as the system can draw. Multiple users can work simultaneously on the Visual Supercomputers, share common databases and color images, transfer data files, and produce video tapes. Because the computers are modular, they can be individually configured or expanded later. Alliant Computer Systems. Circle 546.

Bibliography Software

ENDNOTE is a Macintosh desk accessory for storing references and creating bibliographies. Writers can access the database without leaving their word processing programs. The user can paste citations from the database into the paper automatically. Later, the program scans the finished paper for in-



text citations, reformats the references according to the desired journal style, and adds a reference list at the end. The database can be searched by author, date, or keyword. The database can store 32,000 references and supports Greek letters, italics, subscripts, and superscripts. ENDNOTE is compatible with MacWrite, WriteNow, and Microsoft Word, and it operates on Macintosh 512KE, Plus, SE, or II computers. \$129. Niles & Associates. Circle 547.

Modular Laboratory Automation

SmartCell is a line of hardware and software modules that can be combined with each other or with off-the-shelf laboratory equipment to create automated laboratory instruments. The modules include the Workcell Controller, the Sample Transport System, the Port Expander, the Event Controller, and the Software Library. The Workcell Controller is a DOS-compatible computer that executes instrument control routines and transfers information between

the host computer and the instruments. The Sample Transport System is a track-mounted robotic arm. The Port Expander routes commands from the Workcell Controller to as many as eight instruments with RS-232 ports and then buffers, parses, and transfers data from the instruments back to the Workcell Controller. The Event Controller provides digital sensing and switching capability to the Workcell Controller for controlling instruments with no communications capability. The Software Library contains instrument interface calls for many types of peripherals. \$390 to \$8900, depending on the module. Source for Automation. Circle 557.

NMR Spectrometer

The VXR-600S nuclear magnetic resonance (NMR) spectrometer has a 14.1 T magnet for resolving large molecules. The VXR-600S operates at 600 MHz for protons. Three modules comprise the spectrometer: the radio frequency-acquisition module, the host computer, and the magnet and probes. Probes are available in liquid and solid-state NMR configurations. From \$990,000. Varian Associates, Instrument Group. Circle 549.

Literature

Price List 1988 is a catalog of agarose, *Helix pomatia* enzyme, fibronectin, protein A, serum substitutes, lectins, and instruments and supports for chromatography. IBF Biotechnics. Circle 560.

The *Chemical and Consumables Catalog 1988/89* lists chemicals and accessories for peptide synthesis, protein sequencing, nucleic acid extraction, and amino acid analysis. Applied Biosystems, Foster City Biosystems Division. Circle 561.

High Sensitivity Biological Analysis is an applications note that tells how to quantify prostaglandins by gas chromatography-mass spectroscopy. Kratos Analytical. Circle 562.

Directions is a quarterly newsletter that focuses on scientific computing and software. IMSL. Circle 564.

The *DATAPLATE* brochure describes a line of digital hot plate-stirrers and controllers. PMC Industries. Circle 574.

Analyzing Drugs and Metabolites in Biological Fluids is a 12-page applications brochure that describes the preparation and analysis of drugs and metabolites in biological fluids by robots. Zymark. Circle 568.

Controlled Environmental Rooms is a 12-page brochure about walk-in environmental rooms. Hotpack. Circle 570.

(Continued from page 122)

\$115. Hematology, vol. 8.

Living in the Environment. An Introduction to Environmental Science. G. Tyler Miller, Jr. 5th ed. Wadsworth, Belmont, CA, 1988. xxiv, 603 pp., illus., + appendixes. \$43.25.

Machine Vision. Algorithms, Architectures, and Systems. Herbert Freeman, Ed. Academic Press, San Diego, CA, 1988. x, 315 pp., illus. \$39.95. Perspectives in Computing, vol. 20. From a workshop, New Brunswick, NJ, April 1987.

The Manager Looks at Research Scientists. John W. Koning, Jr. Science Tech, Madison, WI, 1988. xiv, 89 pp. \$14.95.

The Massachusetts Miracle. High Technology and the Economic Revitalization. David Lampe, Ed. MIT Press, Cambridge, MA, 1988. xiv, 367 pp., illus. \$67.95.

Mathematics of Kalman-Bucy Filtering. P. A. Ruymgaart and T. T. Soong. 2nd ed. Springer-Verlag, New York, 1988. xii, 170 pp. Paper, \$35. Springer Series in Information Sciences, vol. 14.

Matrix Differential Calculus with Applications in Statistics and Econometrics. Jan R. Magnus and Heinz Neudecker. Wiley, New York, 1988. xviii, 393 pp. \$51.95. Wiley Series in Probability and Mathematical Statistics.

Measurement, Statistics and Computation. David McCormick and Alan Roach. Published for Analytical Chemistry by Open Learning by Wiley, New York, 1988. xx, 760 pp., illus. Paper, \$42.95.

Membrane Biogenesis. Jos A. F. Op den Kamp, Ed. Springer-Verlag, New York, 1988. viii, 477 pp., illus. \$144.30. NATO Advanced Science Institutes Series H, vol. 16. From an institute, Cargèse, France, Aug.-Sept. 1987.

Methane from Biomass. A Systems Approach. Wayne H. Smith and James R. Frank, Eds. Elsevier Applied Science, New York, 1987. xxvi, 500 pp., illus. \$144.

The Metropolis Era. Mattei Dogan and John D. Kasarda, Eds. Sage, Newbury Park, CA, 1988. Vol. 1, A World of Giant Cities. 394 pp. \$40. Vol. 2, Mega-Cities. 322 pp., illus. \$40.

Numerical Recipes in C. The Art of Scientific Computing. William H. Press *et al.* Cambridge University Press, New York, 1988. xxii, 735 pp., illus. \$44.50.

Optical Effects Associated with Small Particles. P. W. Barber and P. K. Chang, Eds. World Scientific, Teaneck, NJ, 1988. xxii, 336 pp., illus. \$75; paper, \$35. Advanced Series in Applied Physics, vol. 1.

Organic Syntheses. Collective Volume 6. Wayland E. Noland *et al.*, Eds. Wiley, New York, 1988. xx, 1204 pp., illus. \$59.95.

Origin and Distribution of the Elements. G. J. Mathews, Ed. World Scientific, Teaneck, NJ, 1988. xii, 767 pp., illus. \$84. From a symposium New Orleans, LA, Aug.-Sept. 1987.

Oxygen Transfer from Atmosphere to Tissues. Norberto C. Gonzalez and M. Roger Fedde, Eds. Plenum, New York, 1988. xii, 361 pp., illus. \$69.50. Advances in Experimental Medicine and Biology, vol. 227. From a meeting, Kansas City, KS, March 1987.

Parasite Lives. Papers on Parasites, Their Hosts and Their Associations. Mary Cremin, Colin Dobson, and Douglas E. Moorhouse, Eds. University of Queensland Press, Manchester, NH, 1988. x, 229 pp., illus. \$49.50.

Phenol Oxidase (EC 1.14.18.1), A Marker Enzyme for Defense Cells. Hans Schmidt. Fischer, Stuttgart, 1988 (U.S. distributor, VCH, New York). vi, 194 pp., illus. Paper, \$97.50. *Progress in Histochemistry and Cytochemistry* vol. 17, no. 3.

Philosophy of Science. An Overview for Cognitive Science. William Bechtel. Erlbaum, Hillsdale, NJ, 1988. xiv, 136 pp. \$24.95; paper, \$12.50. Tutorial Essays in Cognitive Science.

Surface Plasmons on Smooth and Rough Surfaces and on Gratings. Heinz Raether. Springer-Verlag, New York, 1988. x, 136 pp., illus. \$49.50. Springer Tracts in Modern Physics.

Synchrotron Radiation in Chemistry and Biology. I. E. Mandelkew, Ed. Springer-Verlag, New York, 1988. x, 239 pp., illus. \$79.50. Topics in Current Chemistry, vol. 145.

The Task of Medicine. Dialogue at Wickenburg. Kerr L. White. Kaiser Family Foundation, Menlo Park, CA, 1988. x, 235 pp. Paper.

Visual Histology. David T. Moran and J. Carter Rowley, III. Lea and Febiger, Philadelphia, 1988. xiv, 285 pp., illus. \$22.50.

VLSI Electronics. Vol. 16, Lithography for VLSI. Norman G. Einspruch and R. K. Watts, Eds. Academic Press, San Diego, CA, 1987. xii, 361 pp., illus. \$69.

Personnel Placement

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The Microsurgical Research Laboratories invites applications from a Ph.D. with postdoctoral experience for tenure-track position as assistant professor of surgery. The candidate will run his/her independent research program, direct day-to-day activities of the laboratory, and be committed to collaborative work with two clinician/researchers and a Ph.D. physicist involved in studies of microcirculation, tissue ischemia, and electrical injuries. The researcher will be expected to gain external funding and cross appointment in a basic science department of the Medical Faculty of McGill University. Salary: \$30,000 (under review). Send statement of research interests, curriculum vitae, and three letters of recommendation to: **Carolyn L. Kerrigan, M.D., McGill University, Division of Plastic Surgery, Royal Victoria Hospital, 687 Pine Avenue West, Montreal, Quebec H3A 1A1.** In accordance with Canadian immigration requirements, consideration, in the first instance, will be given to Canadian citizens and permanent residents of Canada. Others are encouraged to apply and will be considered.

ASSISTANT PROFESSOR M. D. ANDERSON CANCER CENTER

A position is available immediately to join a laboratory investigating immunotoxins directed to human tumors. Applicants should have a recent Ph.D. in molecular biology with a strong background in recombinant DNA technology. Experience in immunoglobulin gene molecular biology is preferred. Projects will focus on development of recombinant antibodies and immunotoxins. Send curriculum vitae, thesis abstract, and names and addresses of three references to: **Dr. Jack A. Roth, M.D., Anderson Hospital and Tumor Institute, Box 109, 1515 Holcombe Boulevard, Houston, TX 77030.** An Equal Opportunity/Affirmative Action Employer.

Tenure-track faculty research position at the ASSISTANT PROFESSOR level with primary appointment in the Department of Biochemistry and Molecular Biophysics. Applicants should hold a doctoral degree, have training in molecular biology, and should have a defined research interest in eukaryotic cell growth control and/or modulation of DNA structure and function. The successful candidate will have a central role in the rapidly expanding Cancer Biology Program within the Massey Cancer Center at the Medical College of Virginia. An Equal Opportunity/Affirmative Action Employer. Women and minorities are encouraged to apply. Send curriculum vitae and three references to:

**Rupert Schmidt-Ullrich, M.D.,
Chairman, Search Committee
Medical College of Virginia
Department of Radiation Oncology
MCV Station Box 58
Richmond, VA 23298-0058**

POSITIONS OPEN

ASSISTANT PROFESSOR, tenure-track, with expertise in cellular and molecular biology, beginning fall 1989. Teach upper level molecular genetics course with laboratory, a cell and molecular biology laboratory course, supervise senior research projects, and participate in course for non-majors. Ability to teach biometry is desirable, but other specialties will be considered. Ph.D. is required. Individual must be strong in cellular and molecular biology laboratory methodology. Send résumé, undergraduate and graduate transcripts, description of teaching and research interests, and three letters of recommendation to: **Personnel Director, Saint Vincent College, Latrobe, PA 15650** by 15 November 1988. *Equal Opportunity/Affirmative Action Employer.*

ASSISTANT PROFESSOR, Public Health Nutrition, 12-month service, tenure-track. Requirements: Broad training in nutrition science, research interest in chronic disease in public health context, strong laboratory based skills, postdoctorate research experience and publications. Teaching experience desirable. Beginning date 1 July 1989. Application deadline 1 December 1988. *Affirmative Action/Equal Opportunity Employer.* Send curriculum vitae, selected publications, three reference letters to: **John Anderson, Ph.D., Department of Nutrition, School of Public Health, University of North Carolina, CB#7405, 315 Pittsboro Street, Chapel Hill, NC 27599-7405.**

ASSISTANT PROFESSOR-level position available in epilepsy research laboratories of the Department of Neurology, Columbia University College of Physicians and Surgeons, for studies of effects of brain immaturity on epileptogenesis. Requirements include M.D. or Ph.D., expertise in cellular neurophysiology, and capability for independent grant support. Preference given to candidates with experience in developmental neurobiology and prior research related to epilepsy. Inquiries and curriculum vitae to: **Dr. Timothy A. Pedley, The Neurological Institute, 710 West 168th Street, New York, NY 10032.** *Columbia University is an Equal Opportunity Employer.*

HARVARD MEDICAL SCHOOL DEPARTMENT OF GENETICS

The Department of Genetics at Harvard Medical School invites qualified Ph.D. or M.D. scientists to submit applications for an appointment at the ASSISTANT PROFESSOR level. The appointment offers significant scholarly, educational and scientific resources in addition to the opportunity to instruct graduate and medical students with strong interests and promise in genetics research. Candidates with demonstrated interests in imaginative approaches to understanding the genetics of eukaryotic systems are particularly encouraged to apply. Applicants should submit (prior to 1 December 1988) curriculum vitae, reprints, statement of research interests (less than 500 words), and names of three references to: **Dr. Philip Leder, Chairman, Department of Genetics, Harvard Medical School, 25 Shattuck Street, Boston, MA 02115.**

Harvard University is an Equal Opportunity/Affirmative Action Employer. Qualified women and minority group members are encouraged to apply.

ASSISTANT PROFESSOR MICROBIAL GENETICIST/ MOLECULAR BIOLOGIST THE UNIVERSITY OF SOUTHERN MISSISSIPPI

The Department of Biological Sciences, University of Southern Mississippi, invites applications for a tenure-track position at the assistant professor level. Applicants may have research interests in any area of microbial genetics or molecular biology of microorganisms. The successful candidate will be expected to develop a vigorous, independent research program. Teaching responsibilities will include microbial genetics, molecular biology, and participation in teaching of general and/or medical genetics. Candidates should submit a statement of research interests, curriculum vitae, and names of three references. Applications must be postmarked by 15 November 1988, and should be sent to:

**Dr. B. L. Middlebrooks
Department of Biological Sciences, SS Box 5153
University of Southern Mississippi
Hattiesburg, MS 39406-5153**

An Affirmative Action/Equal Opportunity Employer

POSITIONS OPEN

ASSISTANT PROFESSOR

The Department of Chemistry, Philadelphia College of Pharmacy and Science, invites applications for a full-time, tenure-track faculty position at the assistant professor level, starting August 1989. We seek a candidate who will establish a vigorous, productive research program and who will excel at teaching in both our undergraduate and graduate programs. Applicants in the areas of biochemistry or molecular biology are preferred, although exceptional candidates from other areas of chemistry will also be considered.

The Philadelphia College of Pharmacy and Science is an independent, co-educational institution with 1,500 undergraduate science majors in eight disciplines, 120 full-time faculty, and 60 graduate students. The Department of Chemistry has 14 faculty members and offers ACS approved undergraduate degrees in chemistry and biochemistry. Graduate programs lead to the M.S. and Ph.D. degrees in medicinal chemistry and pharmacognosy, and may involve interdisciplinary research with the Departments of Biology, Pharmacology and Toxicology, and Pharmaceutics.

Applications should consist of curriculum vitae, a brief statement of teaching experience and interests, and a description of research projects that should also arrange to have undergraduate and graduate transcripts, and three letters of recommendation, sent by 15 November 1988 to:

**Dr. Peter Campbell
Chair, Faculty Search Committee
Philadelphia College of Pharmacy and Science
Woodland Avenue at 43rd Street
Philadelphia, PA 19104
Telephone: 215-596-8839**

Equal Opportunity/Affirmative Action Employer

ASSISTANT PROFESSOR IN BEHAVIORAL NEUROSCIENCE/LEARNING. A regular, tenure-track appointment at the assistant professor level beginning September, 1989. Candidates must be able to establish a strong research program and must have a strong commitment to undergraduate instruction. Supervision of both graduate and undergraduate research will be expected. Teaching responsibilities will include an undergraduate laboratory course in learning as well as both graduate and undergraduate courses in learning theory. *Dartmouth College is an Equal Opportunity Employer with an Affirmative Action plan. Women and members of minority groups are encouraged to apply.* Send a letter of application and curriculum vitae and have at least three letters of recommendation sent by 1 January 1989, to: **Chair, Search Committee, Department of Psychology, Dartmouth College, Hanover, NH 03755.**

ASSISTANT PROFESSOR POSITIONS DUKE UNIVERSITY MEDICAL CENTER SECTION OF CELL GROWTH, REGULATION, AND ONCOGENESIS DUKE COMPREHENSIVE CANCER CENTER

Duke University Comprehensive Cancer Center invites applications for tenure-track positions in a new Section of Cell Growth, Regulation, and Oncogenesis at the level of assistant professor. Investigators working at the molecular level in any area of cancer biology are encouraged to apply, but special consideration will be given to those working in the areas of growth and differentiation factors, signal transduction, molecular basis of oncogene action including recessive oncogenes and multiple drug resistance. Applicants with postdoctoral experience should have demonstrated high potential for imaginative substantial independent research. Successful candidates will also be appointed into a basic science department within the Medical Center.

Applicants should send curriculum vitae, and a brief description of present and proposed research to: **Dr. Robert M. Bell, Head, Section of Cell Growth, Regulation and Oncogenesis, Duke Comprehensive Cancer Center, Box 3814, Durham, NC 27710.** Applicants should arrange for three or more letters of recommendations to be forwarded to the same address.

To be assured of full consideration, application should be received by 5 December 1988.

Duke University is an Equal Opportunity/Affirmative Action Employer.

POSITIONS OPEN

Cornell University. The Department of Chemistry has a tenure-track, **ASSISTANT PROFESSOR** position available. Outstanding candidates in the areas of biophysical, bio- or physical inorganic or organic chemistry will be considered. Postdoctoral experience highly desirable. Applicants should submit curriculum vitae, publication list, summary of predoctoral and postdoctoral research, graduate transcript, and a brief statement of research plans. These materials and three letters of recommendation should be sent by 1 December, 1988 to: **Chairman, Faculty Search Committee, Department of Chemistry, Baker Laboratory, Cornell University, Ithaca, NY 14853-1301.** *Cornell University is an Affirmative Action/Equal Opportunity Employer.*

ASSISTANT PROFESSOR CELLULAR AND MOLECULAR PHARMACOLOGY

Applications and nominations are invited for a tenure-track faculty position at the rank of assistant professor. Applicants should have earned a Ph.D. degree, an M.D. degree, or both, and should have postdoctoral research training. We seek applicants who have the potential to attract support for an independent research program and who have an interest in professional and graduate education. All qualified applicants are urged to apply, particularly those with expertise in drug and chemical biotransformation and bioactivation or in cardiovascular/renal pharmacology. An appointment at the associate professor or professor level will be considered for established investigators. The deadline for applications is 1 December 1988. Applicants should forward curriculum vitae, a list of publications, three letters of recommendation or the names of three referees, and a summary of current and future research interests to: **Pharmacology Search Committee, Department of Pharmacology, School of Medicine and Dentistry, 601 Elmwood Avenue, Rochester, NY 14642.**

The University of Rochester is an Equal Opportunity Employer, and applications from women and from minority groups are encouraged.

ASSISTANT PROFESSOR IN-RESIDENCE

The Division of Surgical Oncology at the University of California, Los Angeles (UCLA) Medical Center is seeking to fill a position at the level of assistant professor in-residence, with a flexible starting date. The focus of this search is for a basic scientist with molecular biology training and research interests in the field of molecular immunology, oncogenes, growth factors, or gene expression.

The Division has seven full-time clinician scientists, five full-time basic scientists and a dozen postdoctoral fellows and graduate students. Start-up support and laboratory space are available for the successful candidate, who will be expected to establish an independent research program.

Persons applying for this position should send their curriculum vitae, a brief overview of present and future research interests, and three letters of reference to: **James S. Economou, M.D., Ph.D., Division of Surgical Oncology, 9-267 Factor Building, UCLA Medical Center, Los Angeles, CA 90024-1782.**

UCLA is an Affirmative Action/Equal Opportunity Employer.

ASSISTANT PROFESSOR OF BIOCHEMISTRY—UNIVERSITY OF WASHINGTON

Applicants for this tenure-track position should have demonstrated the ability to develop a strong and creative research program in modern biochemistry, including cell, developmental, neurobiology, molecular biophysics or biophysical chemistry. Candidates should be interested in and capable of teaching biochemistry at the undergraduate and graduate levels. Submit curriculum vitae, representative papers, a succinct statement of research interests, and have three letters of recommendation sent to:

**Search Committee
Department of Biochemistry
University Washington
Seattle, WA 98195
FAX Number: 206-545-1792**

Application deadline: 15 November 1988.

The University of Washington is committed to Equal Opportunity through Affirmative Action in employment, and we are especially eager to identify women and minority persons with appropriate qualifications.

POSITIONS OPEN

Brown University seeks an **ASSISTANT PROFESSOR OF PSYCHOLOGY**, with a specialization in animal behavior. This is a tenure-track appointment that will begin on 1 July 1989, for an initial term of 3 years. Responsibilities of the position include teaching in psychology at both the undergraduate and graduate levels, directing of undergraduate and graduate research, and developing a strong research program. Scientific accomplishment and promise are more important than specific research interests, which might focus, for example, on information processing, associative theory, ethological analysis, or the ontogeny of behavior, possibly including physiological mechanisms or quantitative models related to any of these. *We strongly encourage applications from women and minority persons, and from candidates who could advise minority students.* Applications should include curriculum vitae, reprints and preprints of scholarly publications, a statement of research and teaching interests, and three letters of recommendation. Submit applications by 1 January 1989 to: **the Search Committee c/o Professor Donald Blough, Department of Psychology, Brown University, Providence, RI 02912.** *Brown University is an Equal Opportunity/Affirmative Action Employer.*

DEPARTMENT OF PHYSIOLOGY AND BIOPHYSICS UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN ASSISTANT PROFESSOR PROTEIN CRYSTALLOGRAPHY

Applications are invited for a tenure-track position in protein crystallography at the assistant professor level starting August, 1989. Applicants are required to have a doctoral degree and postdoctoral experience. The successful candidate is expected to develop a vigorous independent research program and participate in our undergraduate and graduate teaching programs. He/she will join a strong group of molecular biophysicists including two diffractonists as part of the commitment to establish an outstanding program in structural biology. Starting salary will be in the range of \$33,000 to \$36,000, depending on experience. An additional 2-month summer salary may be generated from teaching or research sources. In order to ensure full consideration, applications must be received by 15 November 1988. Interviews may be conducted before 15 November 1988, but all applications received by that date will receive full consideration. Applicants should submit curriculum vitae, a list of publications, a short statement of future research plans, and the names of at least three references to: **Dr. Andrew H.-J. Wang, Chairman, Search Committee, Department of Physiology and Biophysics, 524 Burrill Hall, The University of Illinois at Urbana-Champaign, 407 South Goodwin Avenue, Urbana, IL 61801.** Telephone: 217-244-6637. *The University of Illinois is an Affirmative Action/Equal Opportunity Employer.*

TWO ASSISTANT PROFESSORSHIPS DEPARTMENT OF ANATOMY DALHOUSIE UNIVERSITY HALIFAX, NOVA SCOTIA, CANADA

The Department of Anatomy at Dalhousie University has tenure-track positions for two assistant professors commencing 1 July 1989. Candidates must have a Ph.D., M.D. or D.D.S. and have undertaken postdoctoral training. One position requires an ability to teach Histology and Embryology and the second requires an ability to teach gross anatomy and neuroanatomy. Applications are encouraged from researchers in the following areas: (i) Molecular Biology, (ii) Developmental Neurobiology, (iii) Neuroanatomy, (iv) Neuroendocrinology, (v) Retinal Cell Biology and (vi) Evolutionary Biology. While both positions have guaranteed University funding, each successful applicant will be expected to apply to the Medical Research Council of Canada for Scholarship support. Applications should include curriculum vitae, representative reprints, summary of present research activities, outline of future research directions and the names of three referees. Please apply to: **Dr. D. G. Gwyn, Professor and Head, Department of Anatomy, Faculty of Medicine, Dalhousie University, Halifax, Nova Scotia, Canada, B3H 4H7** by 1 January 1989. *In accordance with Canadian Immigration regulations, priority will be given to Canadian citizens and permanent residents of Canada. Dalhousie University has a policy of Affirmative Action in hiring qualified women staff.*

POSITIONS OPEN

ASSISTANT RESEARCH SCIENTIST (Laser Development and Atmospheric Remote Sensing). This research position is equivalent in rank to nontenured assistant professor in an academic faculty and is paid entirely from grant and contract funds (salary range: \$36,000 to \$39,000). Applicants for this position must hold the Ph.D. degree in laser physics, atmospheric sciences, or other applied physical sciences. Minimum of 2 years of experience required in optical remote sensing of the atmosphere, tunable laser construction and diagnostics, stimulated Raman scattering, and applications to molecular spectroscopy. Occupant will assume major responsibilities for oncampus and mobile atmospheric lidar observatories. Research will frequently require work at night, plus numerous field trips of several week's duration at remote and foreign locations. *Legal right to work in the United States is required.* Send résumé by 5 November 1988 to: **Department of Economic and Employment Development, 1100 North Eutaw Street, Room 212, Baltimore, MD 21201.** Job Order No. 700 8111.

Several tenure-track positions are available at the **ASSISTANT AND ASSOCIATE PROFESSOR** levels in the Department of Cellular and Molecular Physiology at Harvard Medical School. The Department is especially interested in studies at the cellular and molecular level on the following research topics: receptors, hormones, signal transduction, and cell motility. Successful candidates are expected to develop a strong independent research program and to participate in teaching medical and graduate students. The Department is acquiring newly renovated facilities and is undergoing substantial expansion. Send curriculum vitae, a brief description of future research, and names of three referees to: **Search Committee, Department of Cellular and Molecular Physiology, Harvard Medical School, 25 Shattuck Street, Boston, MA 02115.** *An Equal Opportunity/Affirmative Action Employer.*

ASSISTANT/ASSOCIATE PROFESSOR OF BIOCHEMISTRY: A tenure-track position is available in the Department of Biochemistry at the University of Mississippi Medical Center. Candidates with research interests in molecular, cellular or developmental biology are encouraged to apply. The Department of Biochemistry has twelve full-time faculty members, is well-equipped and the areas of research include various aspects of nucleic acid/protein structure, synthesis and functions in diverse experimental systems. Interested applicants should forward curriculum vitae, three letters of recommendation, and a statement of their future research plans to: **Dr. Donald B. Sittman, Search Committee, Department of Biochemistry, The University of Mississippi Medical Center, 2500 North State Street, Jackson, MS 39216-4505.** *Equal Opportunity Employer, M/F/H/V.*

ASSISTANT/ASSOCIATE PROFESSOR OF ENTOMOLOGY. Full-time, tenure-track 80% research; 20% teaching. Develop and conduct program basic and applied research in urban entomology, emphasis on biology and control of termites. Develop and teach graduate course in urban entomology and/or insect behavior. Minimum Qualifications: Assistant: Ph.D. in entomology or related field required, experience in urban entomology. Associate required four or more years of experience at equivalent to assistant level. Application and details: **Dr. M. Lee Goff, Department of Entomology, 3050 Maile Way, University of Hawaii, Honolulu, HI 96822.** Available approximately 1 May 1989; closing date: 15 November 1988.

ASSISTANT OR ASSOCIATE PROFESSOR TENURE-TRACK MOLECULAR/CELL BIOLOGIST

Position available in 1989 for an independent investigator to complement a broad spectrum departmental research program in the Department of Pharmacology and Toxicology in the School of Pharmacy, University of Maryland at Baltimore. Applicants should send curriculum vitae, a statement of research plans, and three letters of reference to: **Dr. Esam El-Fakahany, Chairman of Search Committee, Department of Pharmacology and Toxicology, University of Maryland School of Pharmacy, 20 North Pine Street, Baltimore, MD 21201.** *The University of Maryland at Baltimore is an Equal Opportunity/Affirmative Action Employer.*

POSITIONS OPEN

ASSISTANT/ASSOCIATE PROFESSOR CELLULAR/MOLECULAR NEUROBIOLOGY

The Department of Neurobiology and Physiology, Northwestern University invites applications for a tenure-track position in the area of cellular and molecular neurobiology beginning fall 1989. The Department has 23 faculty with research programs in sensory neurobiology, neuroendocrinology, development and plasticity. Faculty participate in 5 NIH training programs, 2 NIH program projects and the University's Graduate Program in Neuroscience consisting of 65 faculty. Our Department and the Department of Biochemistry, Molecular Biology and Cell Biology form the life sciences division at the Evanston campus. Applicants should have a Ph.D. or M.D. and have completed postdoctoral training. Curriculum vitae, list of publications, a description of current and future research, and three letters of recommendation should be sent by 1 November 1988 to: J. S. Takahashi, Department of Neurobiology and Physiology, Northwestern University, 2153 Sheridan Road, Evanston, IL 60208. An Equal Opportunity/Affirmative Action Employer.

ASSISTANT/ASSOCIATE PROFESSOR OF PHARMACOLOGY

The Department of Biomedical Sciences at the University of Illinois College of Medicine at Rockford Rockford invites applications for one or more tenure-track/tenured faculty positions. Candidates should have a doctoral degree in pharmacology or a related discipline. The successful applicant will participate in the teaching of pharmacology to medical students. Applications should include curriculum vitae, three representative reprints, a summary of current research activities and future research plans, and the names of at least three individuals from whom letters of reference may be solicited. Candidates should also state at which level they wish to be considered. Please send applications to: Chairman, Search Committee, Department of Biomedical Sciences, University of Illinois College of Medicine at Rockford, 1601 Parkview Avenue, Rockford, IL 61107. Applications should be received by 1 December 1988. The University of Illinois College of Medicine at Rockford is an Affirmative Action/Equal Opportunity Employer.

ASSISTANT/ASSOCIATE PROFESSORS OF BIOLOGY

The Department of Biology, San Francisco State University, invites applications for three tenure-track positions starting fall 1989. A Ph.D. is required and postdoctoral experience is desirable. Candidates should have a commitment to excellence in undergraduate teaching, an established research record, and the desire to maintain an extramurally funded program that includes supervision of M.A. student research. The department has a faculty of 40 with active groups in ecology, marine biology, microbiology, molecular biology, and physiology.

CONSERVATION ECOLOGIST. We seek an ecologist specializing in the developing field of conservation biology. Primary responsibilities will be to offer graduate and upper division courses in conservation biology and contribute to development of an M.A. program in conservation. Our preference is for candidates with an established research record in conservation biology whose expertise best integrates with current department research groups.

MARINE ECOLOGICAL PHYSIOLOGIST. We seek a person who studies physiological processes in an explicitly ecological context. While this person is expected to study marine animals, areas of specialty with regard to habitat, taxa and physiological system are open. Responsibilities include participation in lower division courses and teaching upper division and graduate courses in comparative/ecological physiology.

MOLECULAR PARASITOLOGIST. We seek a parasitologist whose research utilizes recombinant DNA and molecular biological techniques. Responsibilities include teaching an upper division course in general parasitology and participation in courses in molecular biology, genetic engineering, and introductory biology.

Send curriculum vitae, statement of teaching interests and research goals, and three letters of reference by 5 January 1989 to: Dr. John Hafernik, Chair, Hiring Committee, Department of Biology, San Francisco State University, San Francisco, CA 94132. Women and minority candidates are especially urged to apply. SFSU is an Equal Opportunity/Affirmative Action Employer.

Research Opportunity in Infectious Diseases



An equal opportunity
employer

Pfizer, a broad based multinational pharmaceutical company, has an immediate opening for a Research Assistant at its Central Research facility in Groton, CT. You would become part of a multidisciplinary research group and would conduct biochemically based experiments related to infectious diseases.

This position requires a BS or MS degree in Biochemistry or Molecular Biology or related discipline and relevant laboratory experience involving the pathogenesis of infectious diseases. In addition, you should have experience in one or more of the following areas:

- protein/glycoprotein purification, in particular FPLC experience
- enzymology
- receptor/ligand binding assays
- familiarity with computer interfaced instrumentation

Pfizer offers a stimulating scientific research environment with the opportunity to interact with researchers from several other disciplines. In addition, Pfizer has a competitive compensation/benefit package along with relocation assistance to this southeastern Connecticut shoreline community. Please send a resume, a description of your research experience, and names of three references to Mrs. Lorraine C. Corr, Personnel Associate, Pfizer Central Research, Eastern Point Road, Groton, CT 06340.

Assistant Director, Safety Evaluation, Preclinical Research

A health care company that markets prescription and proprietary products for human and animal health care has an opening for an Assistant Director, Safety Evaluation, Preclinical Research, at its research and development facility in King of Prussia, Pennsylvania.

The principal duties of the position include: (i) planning, organizing and directing the activities of the Safety Evaluation Unit in connection with animal studies with a duration of six months or longer including histopathological evaluation of such animal studies; (ii) conceiving, planning, directing and evaluating toxicologic/pathologic research in connection with lesions observed in long term rodent studies; (iii) developing strategies for defining the toxicity profile of new compounds, particularly the chronic toxicity and carcinogenic potential of such compounds; (iv) consulting on toxicologic/pathologic-related questions and problems which arise in various research and development projects and serve as pathologic/Toxicologic Project representative on such projects and (v) assisting in developing a budget for the Department of Investigative Toxicology and in allocating departmental resources including recommending personnel for assignment to project teams and to specific duties within such teams.

The minimum requirements for the position are a combination of a Ph.D. degree in pathology and a degree in medicine or veterinary medicine and eight (8) years experience in (i) rodent pathology and in developing animal models of human diseases such as brain diseases, autoimmunity and mammary cancer; (ii) in aging pathology and (iii) in the execution and evaluation of long-term carcinogenicity/toxicology studies.

Salary of \$72,615 with liberal employee benefits. No fee charged. For prompt confidential consideration, send resume or C.V. to The Philadelphia Job Bank, 444 N. 3rd Street — 3rd Floor, Philadelphia, PA 19123 and refer to Job Order #4208456.

POSITIONS OPEN

YALE UNIVERSITY ASSISTANT OR ASSOCIATE PROFESSOR OF NEUROLOGY (NEUROSCIENCE)

The Department of Neurology at the Yale School of Medicine seeks outstanding candidates with a Ph.D. or M.D. and with at least 2 years of postdoctoral training and experience (preferably in cellular or molecular neuroscience or related disciplines) to establish a research program on molecular or developmental neurobiology. The position will include teaching of medical students, graduate students, and postdoctoral fellows. Especially favorable opportunities exist in the areas of molecular biology or biochemical pharmacology of ion channels and receptors, synaptic structure-function, cell-cell recognition, membrane structure-function, developmental neurobiology, and neurogenetics. Excellent facilities and support are available. Joint appointment may be arranged for appropriate candidate in basic science department.

Send curriculum vitae and names of three references by 1 December 1988 to: **Jeffery D. Kocsis, Ph.D., Chairman, Neurology Search Committee, Department of Neurology, LCI 702, Yale Medical School, 333 Cedar Street, New Haven, CT 06510.** An Equal Opportunity/Affirmative Action Employer.

ASSOCIATE DIRECTOR OF THE IOWA AGRICULTURE AND HOME ECONOMICS EXPERIMENT STATION AND ASSOCIATE DEAN, COLLEGE OF AGRICULTURE IOWA STATE UNIVERSITY

Qualifications: An earned doctorate in a biological, physical, or social science discipline and an excellent record of research. Candidates should submit a complete résumé, a letter of application (which includes a description of the candidate's academic philosophy), and the names of at least five references to: **Dr. Dennis R. Starleaf, Chair, Search and Screening Committee, College of Agriculture, 124 Curtiss, Iowa State University, Ames, IA 50011. Telephone: 515-294-6132.** Application deadline is 30 December 1988 or until the position is filled. *Affirmative Action/Equal Opportunity Employer. Women, minorities and members of other protected classes are encouraged to apply.*

ASSOCIATE OR ASSISTANT PROFESSOR IN ANIMAL VIROLOGY. Applications are invited for a tenure-track position in the Department of Microbiology, Pathology and Parasitology of the North Carolina State University College of Veterinary Medicine. Applicants are expected to develop a strong research program in an area of Veterinary Virology. Candidates should have a D.V.M. and/or Ph.D. with training in animal virology. Teaching responsibilities include participation in instruction of veterinary students in virology and training of graduate students. Please send curriculum vitae, statement of research plans and the names of at least three references by 1 January 1989 to: **Dr. Leroy Coggins, Department of Microbiology, Pathology and Parasitology, Box 8401, North Carolina State University, Raleigh, NC 27606.**

North Carolina State University is an Affirmative Action/Equal Opportunity Employer, and encourages applications from women and minorities.

BIOCHEMIST—Applications and nominations are invited for a Ph.D. level individual with postdoctoral training and with expertise in the application of biochemistry to immunology. The successful candidate is expected to establish a vigorous and externally funded research program with emphasis on cellular/molecular biochemistry pertaining to immunological studies and to participate in the immunology teaching duties of the department. This is a tenure-track position and appointment will be at the assistant professor level. Applications, including curriculum vitae, transcripts, a summary of research goals, and three letters of recommendation should be sent to the following address by 1 December 1988: **Dr. James E. Robbers, Chairman Search Committee, Department of Medicinal Chemistry and Pharmacognosy, School of Pharmacy and Pharmaceutical Sciences, Purdue University, West Lafayette, IN 47907.**

Purdue University is an Equal Opportunity/Affirmative Action Employer.

POSITIONS OPEN

The University of Arizona is developing a joint program in science education spanning the several programs of the Faculty of Science within the College of Arts and Sciences and the Division of Teaching and Teacher Education within the College of Education. Applications are invited for a joint tenure-track faculty appointment at the level of **ASSOCIATE OR FULL PROFESSOR.** Candidates must be senior scientists of national or international stature with an established research agenda in the physical sciences. The position requires a high level of communication and expository skills and a strong commitment to the improvement of science education at the secondary level. The person appointed to this post will coordinate the preparation of teachers in science fields, support the continuing education of science teachers, participate in postbaccalaureate teacher training programs, and assist in the development of sponsored projects in the general area of science education. The successful candidate is also expected to maintain a vigorous research program in his or her academic discipline. The science education activities are expected to require approximately 75 percent of annual effort. It is intended that the search process be completed in time to make an appointment for the spring 1989 term. Thus, applications should be received before 15 November 1988. Applications should include a letter of interest, a complete curriculum vitae, and the names of five references. Please forward to: **Dean Gary D. Fenstermacher, College of Education, University of Arizona, Tucson, AZ 85721.** The University of Arizona is an Equal Employment Opportunity/Affirmative Action Employer.

ASTROPHYSICIST

A position is available at the Harvard-Smithsonian Center for Astrophysics (CfA) for a senior astrophysicist. This Federal appointment is at a level comparable to an associate or full professor in an academic institution.

The Smithsonian Astrophysical Observatory is filling a vacancy in its senior research staff and seeks an individual possessing outstanding ability in the formulation and conduct of independent scientific research at the forefront of astronomy and/or astrophysics. Candidates should be distinguished in their field of research and have a record of publications which have contributed significantly to advances in their field. Research areas of investigation at the CfA include atomic and molecular physics, high energy astrophysics, optical and infrared astronomy, the planetary sciences, radio astronomy, solar and stellar physics, and theoretical astrophysics.

The candidate selected will have some institutional support to carry out research programs. If additional financial support is needed, it is expected that research proposals will be developed and submitted to appropriate Federal agencies or private sector funding sources.

The position will be filled at either the GS-14 or GS-15 level (\$46,679 to \$71,377 per year) depending upon qualifications and professional experience.

Applicants should send curriculum vitae, bibliography, and a statement of research and career goals to: **Smithsonian Astrophysical Observatory, c/o Dr. Giovanni G. Fazio, Chairman, Federal Scientist Appointments Committee, MS/65, 60 Garden Street, Cambridge, MA 02138,** by 31 December 1988. Applicants should arrange for three letters of recommendation to be sent to the above address by the same date. Interested persons who are not United States citizens, or who wish additional information on this position, should contact: **Mr. Putnam S. Borden at 617-495-7371.** The Smithsonian Astrophysical Observatory is an Equal Opportunity/Affirmative Action Employer.

CELLULAR/MOLECULAR PHYSIOLOGY FACULTY POSITION. A tenure-track position in the Biology Department is available for August, 1989. The position is at the assistant professor level, although more experienced outstanding candidates will be considered. The successful candidate will be expected to develop a productive, extramurally funded research program; and alternately teach an undergraduate physiology course and a specialty graduate class. All research areas to be considered, although candidates who complement existing strengths in endocrinology, muscle physiology and neuroscience are especially encouraged to apply. Send complete vitae, statement of research, and names of at least three references by 15 December 1988 to: **Dr. Peter Abramoff, Biology Department, Marquette University, Milwaukee, WI 53233.** Equal Employment Opportunity/Affirmative Action Employer.

POSITIONS OPEN

AVIAN/WATERFOWL ECOLOGIST. A research scientist position with the USDA Forest Service, Pacific Northwest Research Station's Forestry Sciences Laboratory in Juneau, Alaska. May be filled on either a permanent basis, or as a 2-year postdoctoral research appointment. The incumbent will develop and conduct an independent research program with emphasis on functional processes between birds and their riparian and wetland habitats in southeastern Alaska and Prince William Sound, including the Copper River Delta.

Applicants must hold a Ph.D. in ecology, wildlife biology, or a related field. A strong background in avian biology and habitat ecology is required. Experience with waterfowl and wetlands is desired but not necessary. Preference will be given to applicants with a demonstrated ability to publish scientific literature. *We are an Equal Opportunity Employer and encourage women and minorities to apply.*

Salary: GS-12 or 13 (about \$41,500 to \$55,000 including 25% tax-free cost-of-living allowance) depending on qualifications.

Send current résumé, transcripts of college work, names of three references, and one copy of recent publications to: **Dr. Thomas A. Hanley, USDA, Forestry Sciences Laboratory, P.O. Box 20909, Juneau, AK 99802-0909.** Deadline: 30 November 1988.

BIOCHEMISTRY UNIVERSITY OF BRITISH COLUMBIA DEPARTMENT OF BIOCHEMISTRY

Applications are invited for a tenure-track position at the level of **ASSISTANT PROFESSOR** to begin 1 July 1989 or at a suitable subsequent date. Candidates should have a commitment to teaching and the ability to maintain a vigorous and creative research program. Applicants must have a Ph.D. or M.D. degree and at least 2 years of postdoctoral experience.

The Department of Biochemistry also intends to sponsor a candidate for a Medical Research Council of Canada Scholarship. The successful candidate would be appointed as an assistant professor.

Applicants for these positions should send curriculum vitae, list of publications, reprints of representative papers, a brief description of future research interests, and arrange for letters from three referees to be sent to: **Dr. Philip D. Bragg, Department of Biochemistry, Faculty of Medicine, University of British Columbia, 2146 Health Sciences Mall, Vancouver, B.C. Canada V6T 1W5.** Deadline for receipt of applications: 1 January 1989. **FAX Number: 604-228-5227.**

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

BIOCHEMISTRY/MOLECULAR BIOLOGY MEHARRY MEDICAL COLLEGE

Three faculty positions are available in the Department of Biochemistry at the level of **ASSISTANT OR ASSOCIATE PROFESSOR** for well-trained or experienced candidates in biochemistry and molecular biology. The Department expects to fill these positions in 1989. Successful applicants will be expected to develop and maintain a funded research program of high quality and to participate in the graduate and professional (medical, dental and allied health) school teaching programs of the Department. Applicants should send curriculum vitae, names of four individuals who may be contacted for reference, and a summary of potential research projects to: **Ifeanyi J. Arinze, Ph.D., Chairman, Department of Biochemistry, Meharry Medical College, Nashville, TN 37208.**

CHAIRPERSON, HUMAN GENETICS

New York State Institute for Basic Research in Developmental Disabilities (IBR) seeks person to provide leadership for ongoing programs including ones to prevent developmental disabilities (DD) and develop a research program in molecular genetics focused on a human disease related to DD. Candidate should have Ph.D. and/or M.D. and credentials for appointment as associate or full professor at affiliated medical school, as well as record of NIH funding. Send curriculum vitae to: **Personnel Officer, IBR, 1050 Forest Hill Road, Staten Island, NY 10314.** *Affirmative Action/Equal Opportunity Employer.*

**Forest Biotechnology and Regeneration
University of Victoria
Victoria, British Columbia, Canada**

The research and graduate program in forest biology, specializing in forest biotechnology and regeneration, is being expanded. The program currently has three faculty members conducting research in tree development, tissue culture and molecular biology of forest trees. We are seeking tenure-track appointments in each of the following areas:

**TREE PHYSIOLOGY (2) AND
PLANT BIOCHEMISTRY**

At least two of these positions will be filled effective July 1, 1989. Appointees will contribute to undergraduate teaching in the departments of biology or biochemistry/microbiology and graduate teaching in forest biology. They will be expected to seek research funding, develop an active research program, supervise graduate students and coordinate graduate courses to which adjunct professors from the Canadian Forest Service, Pacific Forestry Centre and the B.C. Ministry of Forests Research Branch will contribute.

Appointments will be made at the assistant or associate professor levels with one senior Lansdowne professor in tree physiology. Salaries are to be negotiated.

Canadian immigration regulations require the University to assess applications from Canadian citizens and permanent residents before others.

Applications, including full curriculum vitae and the names of three referees, will be accepted until December 31, 1988 and should be submitted to **Dr. John T. Weaver, Acting Dean of Science, Faculty of Arts and Science, University of Victoria, P.O. Box 1700, Victoria, B.C. V8W 2Y2, Canada. Telephone: (604) 721-7061, FAX: (604) 721-8653.**

The University of Victoria has approximately 11,000 undergraduates, over 1,000 graduate students and about 500 faculty members. The Division of Science, within the Faculty of Arts and Science, offers degrees in biochemistry, microbiology, biology, chemistry, computer science, mathematics, physics and astronomy.

The University of Victoria offers equal employment opportunities to qualified male and female applicants. Women are particularly encouraged to apply.

**National Institute of
Arthritis and
Musculoskeletal and Skin
Diseases (NIAMS)
National Institutes of Health,
Public Health Service**

The Section on Cellular Immunology of the Arthritis and Rheumatism Branch is seeking a well-qualified post-doctoral fellow with a Ph.D. or M.D. or equivalent interested in molecular approaches to immunology and immune-mediated disorders. Ongoing studies include isolation of genes which induce autoimmune diseases, study of new endogenous (not infectious) retroviral transcripts associated with murine lupus, immune regulation, B cell activation and gene expression in systemic lupus. The Branch is part of the intramural program of NIAMS with major interests in autoimmunity, chronic inflammation and clinical investigations in autoimmune diseases. The position which will be open around July 1, 1989 offers a starting salary for staff fellows ranging from \$24,000 to \$50,744. Applicants should send a curriculum vitae, bibliography, a short statement of research interests, as well as the names of three references to Alfred D. Steinberg, M.D., Chief, Cellular Immunology Section, ARB, NIAMS, 9000 Rockville Pike, Building 10, Room 9N-218, NIH, Bethesda, MD 20892 (301) 496-1961. U.S. Citizenship Required.

AN EQUAL OPPORTUNITY EMPLOYER

METABOLISM SCIENTIST

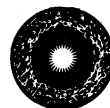
CIBA-GEIGY's Agricultural Division has an excellent opportunity for a Metabolism Scientist at its Environmental Health Center in Farmington, CT. You will conduct a variety of animal metabolism, and special research studies as part of a team of chemists, biochemists, and toxicologists. Responsibilities include study design, overall study supervision, interpretation of results, and report preparation. Your work will include the separation and identification of metabolites in biological systems to determine the mechanism of toxic effects.

The successful candidate will have an M.S. or Ph.D. or equivalent experience in biochemistry, chemistry or a related field, and be experienced in modern biochemistry and analytical procedures, including GC, HPLC, TLC and radioisotope handling.

CIBA-GEIGY Corporation offers on-going growth opportunities, excellent salaries and an attractive package of paid company benefits. The Environmental Health Center is adjacent to the University of Connecticut Health Center, in one of the state's most attractive semi-rural towns. To apply, please send your resume, a brief description of your experience, and your salary requirements to: Mrs. P.A. Frutchev, CIBA-GEIGY Corporation, 400 Farmington Ave., Farmington, CT 06032. We are an Equal Opportunity Employer M/F/H/V.

Science Serving Mankind

CIBA-GEIGY



آغا خان یونیورسٹی

THE AGA KHAN UNIVERSITY

Faculty of Health Sciences
Medical College

The Aga Khan University is now in its sixth year of operation. Its affiliated Aga Khan University Hospital has well equipped teaching and service laboratories and will have 654 beds when fully operational. The University and the University Hospital are autonomous, privately-funded and philanthropic institutions committed to the provision of effective health, professional education and health services relevant to Pakistan and the region. Our undergraduate curriculum in medicine stresses integrated training of the basic and clinical sciences with a hands-on, problem solving approach to patient care and parallel extensive training in Community Health Sciences.

Applications are invited from highly committed professionals for the following key positions:

PROFESSOR & CHAIRMAN, MICROBIOLOGY

PROFESSOR & CHAIRMAN, PHYSIOLOGY

The individuals filling these senior positions will be responsible to provide dynamic academic leadership in the administration of their departments.

Candidates must have suitable postgraduate qualifications in the appropriate field. Achievements in research and experience in teaching and administration at senior level is necessary.

Salary and benefits will be offered commensurate with qualifications, experience and level of responsibility. Candidates intending to pursue a career in Pakistan are preferred. If you are seeking professional growth and an excellent work environment, please send your detailed résumé, bibliography and names of at least three referees familiar with recent work history to the **Personnel Manager**, The Aga Khan University, P.O. Box 3500, Stadium Road, Karachi-5, Pakistan.

POSITIONS OPEN

CELL JOURNAL REVIEWS EDITOR

Scientist required to take responsibility for the review section of *Cell*. Applicants should have a strong interest in basic research in the areas represented in *Cell*, and will be expected to work independently to select minireviews and reviews for publication.

Research experience including a Ph.D. in molecular or cell biology or a related discipline is required. Write to: **Editor (Reviews), Cell, 50 Church Street, Cambridge, MA 02138.**

CHAIRPERSON DEPARTMENT OF PHARMACOLOGY THE UNIVERSITY OF VIRGINIA HEALTH SCIENCES CENTER

Applications are invited for the position of Professor and Chairperson of the Department of Pharmacology at the University of Virginia Health Sciences Center. Candidates must have a distinguished record of scholarship and professional achievement, and proven leadership and administrative ability. Curriculum vitae and names and addresses of three or more references should be submitted by 1 December 1988 to the Chairman of the search committee.

Dr. Robert M. Berne
Department of Physiology
University of Virginia Health Sciences Center
Box 449
Charlottesville, VA 22908

The University of Virginia is an Equal Opportunity Affirmative Action Employer.

CHIEF, LABORATORY OF ALLERGENIC PRODUCTS DIVISION OF BACTERIAL PRODUCTS CENTER FOR BIOLOGICS EVALUATION AND RESEARCH DHHS/PHS/FOOD AND DRUG ADMINISTRATION

The Food and Drug Administration (FDA), Center for Biologics Evaluation and Research, Division of Bacterial Products, invites applications for the position of Chief, Laboratory of Allergenic Products, located in Bethesda, Maryland. The Laboratory is responsible for the research and regulatory programs related to allergenic products. This is a supervisory interdisciplinary position appropriate for a chemist, microbiologist, or biologist with postgraduate training. Physicians may also apply for this position; and if selected, additional responsibilities would include medical evaluation of selected clinical studies for the Laboratory and the Division of Bacterial Products, and may include the performance of clinical studies. The Laboratory Chief is responsible for independently planning, organizing, and conducting research related to immunology, mechanisms of allergic disease, and procedures for laboratory and clinical analysis of allergenic products related to the regulatory mission. Knowledge of the study of allergic diseases, the use of allergens for diagnosis and immunotherapy, and the methods used for the standardization of allergens is required.

Salary range for chemist, microbiologist, and biologist is \$46,679 to \$60,683 at the GM-14 level and \$54,907 to \$71,377 at the GM-15 level. Salary range for physician is \$53,917 to \$67,642 at the GM-14 level and \$58,135 to \$72,500 at the GM-15 level. Physicians may also be eligible for a Physician's Comparability Allowance up to \$20,000 per year. Salary is commensurate with education and experience. *U.S. citizenship is required.*

Position information and specific qualification requirements may be obtained by contacting: **Mr. R. Manning on 301-443-4003.**

Application for Federal Employment (SF-171) must be received at the following address no later than 21 November 1988.

FDA Personnel Office
Attention: Mr. Manning
Vacancy Announcement FDA-88-290
Room 4B-26
5600 Fishers Lane
Rockville, MD 20857

FDA is an Equal Opportunity Employer

POSITIONS OPEN

CELL REPLICATION TECHNOLOGY

A NASDAQ listed, R&D company engaged in development and commercialization of novel, proprietary cell replication technologies seeks two outstanding **POST-DOCTORAL CANDIDATES** to fill new positions on its research team:

CYTOTOXICITY—The successful candidate for this position will have at least 2 years of experience at a prominent institution in the developing and conducting toxicity tests.

LONG-TERM CELL CULTURE—This position requires extensive experience in bone marrow cell culture or hematology; experience with progenitor assays and flow-cell cytometry will be a plus.

Successful candidates will have strong records of scientific achievement and have displayed a capacity for timely completion of projects with a minimum of supervision.

The company is currently based in New York City area. In 1 year, the R&D facility will be divided between Vermont and San Diego.

Compensation is designed to attract the best candidates and will include base salary, incentives, and stock participation.

Reply in confidence enclosing curriculum vitae to: **C.W.C. Capital Corporation, 420 Lexington Avenue, New York, NY 10170. Telephone: 212-697-2143.**

CHEMIST—Ph.D. in chemistry or physical chemical physics. Four years of experience as a researcher. Research experience should include experimental chemical or molecular physics in the gas phase, with emphasis on vacuum ultraviolet photoionization and/or photoelectron spectroscopy; laser photo-fragmentation and/or laser-induced fluorescence spectroscopy; computer control and analysis of experiments; and relevant theory. All of the above evidenced by publications in refereed journals. Will conduct research in vacuum ultraviolet photoionization mass spectrometry, vacuum ultraviolet photoelectron spectroscopy and ultraviolet laser photofragment spectroscopy, in collaboration with principal investigator and to initiate new programs in related fields. Salary: \$3850 per month, 40 hours per week; 8:30 a.m. to 5:00 p.m. Send résumé to: **Illinois Department of Employment Security, 401 South State Street—3 South, Chicago, IL 60605, Attention: Joan Haight, Reference #8566-H. An Employer paid ad.**

CHEMIST—ANALYTICAL/INORGANIC—The Grand Forks Human Nutrition Research Center of the USDA, Agricultural Research Service is seeking a 2-year research associate who is a recent Ph.D. in inorganic or analytical chemistry to conduct research on analysis of stable boron isotopes used as metabolic tracers. Research will focus on methodology for analysis of boron isotopes in biological samples using thermal ionization mass spectrometry. Will train in mass spectrometry. Well equipped modern laboratory in university town of 55,000. Salary commensurate with experience, GS-11/12 (\$27,000 to \$33,000). For information on the research contact: **Dr. Phyllis Johnson 701-795-8416.** For applications, application procedures contact: **Julia A. Murchison 301-344-3138.** Applications in response to this ad should be marked **8-W-018-RA-88-38** and addressed to: **Phyllis E. Johnson, Ph.D. USDA, ARS, Box 7166, University Station, Grand Forks, ND 58202. An Equal Opportunity Employer.**

CORNELL UNIVERSITY GENEVA CAMPUS DEPARTMENT CHAIR OF FOOD SCIENCE AND TECHNOLOGY

Chair is sought for world-recognized department, total staff of 60, current faculty of 16. A number of vacancies await the filling of this position. Applicants must possess Ph.D. in an area of food science, and a record of scholarly accomplishments sufficient to be appointed at Cornell with tenure at the rank of professor or associate professor. Position will be available 1 July 1989 or as negotiated, and applications will be accepted until 1 February 1989. Send letter of application, résumé, names and addresses of three references to: **Dr. Robert A. Plane, Director, New York State Agricultural Experiment Station, P.O. Box 462, Geneva, NY 14456. Telephone: 315-787-2211. Cornell University is an Equal Opportunity Affirmative Action Employer.**

POSITIONS OPEN

CHAIRPERSON—BOTANY

The Department of Botany, University of Maryland at College Park (Main Campus) is seeking nominations and applications of scientists qualified to serve as departmental chairperson. The Department currently consists of 29 faculty and 52 graduate students. A substantial number of faculty hold appointments in the Maryland Agricultural Experiment Station and the Cooperative Extension Service. Research programs range from whole-plant to subcellular and molecular areas with emphasis in ecology and systematics, cellular and molecular biology and plant pathology. The faculty actively collaborates with scientists at the Smithsonian Institution, USDA, and the University's Biotechnology Institute. Applicants must have a Ph.D. degree and have demonstrated outstanding abilities in research in some field of modern plant biology. Evidence of administrative ability is desirable. Appointment will be made at the professorial level (tenured) with appropriate salary and benefits, preferably starting 1 July 1989. For full consideration submit a letter of application, curriculum vitae, and the names, addresses, and telephone numbers of four references by 1 December 1988 to: **Dr. A. L. Steinhauer, Botany Chair Search Committee, Department of Entomology, University of Maryland, College Park, MD 20742. Telephone: 301-454-3843. An Equal Opportunity/Affirmative Action Employer.**

DEAN of the College of Agriculture and Home Economics, Washington State University, effective 1 July 1989. Earned Ph.D. or equivalent (preferably in one of the fields of the College), scholarly, instructional, and service achievement commensurate with the rank of professor, a familiarity with Land-Grant institutions, prior experience in administration, a thorough understanding of agriculture and home economics, and a demonstrated ability to communicate effectively with agricultural and home economics leaders. A letter of application, curriculum vitae, and a list of five references should be sent to: **Dr. John C. Pierce, Washington State University, Pullman, WA 99164-2630.** Applications and nominations must be received by 1 December 1988. *WSU is an Equal Opportunity/Affirmative Action Educator and Employer.*

DEVELOPMENTAL NEUROBIOLOGIST. The Department of Anatomy and Cell Biology at the University of Michigan invites applications for a Tenure-track assistant professor position starting in the 1989 to 1990 academic year. Applicants should have or develop an active, independent research program in which significant problems are approached with contemporary techniques. Teaching can be in neuroscience, histology, or gross anatomy. Candidates should send their curriculum vitae, reprints, statement of research interests, and three letters of reference to: **Dr. Bruce M. Carlson, Chairman, Department of Anatomy and Cell Biology, University of Michigan Medical School, Ann Arbor, MI 48109-0616. The University of Michigan is an Equal Opportunity Employer.**

DIRECTOR VIRGINIA MUSEUM OF NATURAL HISTORY

The Virginia Museum of Natural History, established as the state museum in 1988, is seeking a director. The museum has a broadly defined mission in research, collections, and education in the natural sciences and currently occupies a building of 34,000-square-feet. Its biennial appropriation is \$5-million. The successful candidate will plan, develop, and direct the operations and capital projects for the museum. A doctorate is preferred and a record of research in the natural sciences, prior broad museum administrative experience, including budget preparation and presentation, university or college teaching and administrative experience, and demonstrated fund-raising ability are requisites.

The Director reports to the Board of Trustees. Salary commensurate with experience and salary history, in the range of \$47,067 to \$72,956. Closing date for applications is 30 November 1988. Applications should be mailed to: **Chairman, Director Search Committee, Virginia Museum of Natural History, 1001 Douglas Avenue, Martinsville, VA 24112. The Commonwealth of Virginia is an Affirmative Action/Equal Opportunity Employer.**

POSITIONS OPEN

DEVELOPMENTAL BIOLOGIST

The Department of Cell Biology and Anatomy at Oregon Health Sciences University invites applications for a tenure-track faculty position at the level of assistant or associate professor. We are looking for an individual with a strong research background in developmental biology or developmental neurobiology, and who is currently using cellular and molecular biological approaches in their work. The applicant will be expected to develop an independent, competitively funded research program, and to participate in the teaching of graduate and medical students. Submit curriculum vitae, selected reprints, and the names of three references by 1 January 1989 to: **Dr. Gary Ciment, Department of Cell Biology and Anatomy (L215), School of Medicine, Oregon Health Sciences University, Portland, OR 97201.** Affirmative Action/Equal Opportunity Employer.

DIRECTOR: The University of Kansas is seeking a Director of the Gerontology Center, one of the major units of the Institute for Life Span Studies. The Director of the Gerontology Center will have a faculty appointment in a department appropriate to the individual's area of research expertise and will be an Associate Director in the Life Span Studies Institute.

A complete job description is available upon request. Salary will be commensurate with qualifications and experience. All communications should be addressed to: **Dr. Richard Schiefelbusch, Chairperson, Gerontology Center Search Committee, 2045 Haworth Hall, Lawrence, KS 66045.** The application deadline is 10 December 1988. An Equal Opportunity/Affirmative Action Employer.

ECOLOGY AND PHYSIOLOGY (TWO POSITIONS)

The Department of Biology at the University of Utah seeks to hire two **TENURE-TRACK BIOLOGISTS**, specializing in non-marine invertebrates (especially insects). Positions will be filled at the assistant professor level in the areas of (i) evolutionary ecology/systematics and (ii) comparative and/or ecological physiology. We are especially interested in candidates who can establish mutually beneficial interactions with existing faculty and graduate students. The successful applicant will be expected to establish a strong independent research program and to contribute to graduate and undergraduate instruction.

Applications will be accepted until the position is filled, but we will begin screening applications 1 December 1988.

Interested persons should send a letter of application, curriculum vitae, copies of representative publications, and three letters of recommendation to:

**Dr. Diane Davidson
Department of Biology
University of Utah
Salt Lake City, UT 84112**

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

ENVIRONMENTAL TOXICOLOGIST

Exxon Biomedical Sciences, Inc. has an immediate opening for a qualified individual specializing in environmental impact and hazard assessment. The successful candidate will have a Ph.D. in environmental chemistry, toxicology, or a related field. One to 3 years of practical experience in exposure assessment, fate prediction/modeling, waste and contaminated site evaluations is desired. In addition, the applicant should have a strong background in environmental chemistry. Exxon Biomedical Sciences, Inc. performs both consulting and laboratory toxicology for affiliates around the world. Its resources include state-of-the-art aquatic toxicology, environmental chemistry and mammalian toxicology laboratories. The candidate will be consulting directly with our affiliates on matters pertaining to the assessment of potential environmental hazards associated with products, effluents, hazardous wastes, etc. Client interactions are an important aspect of our work, and thus, we are seeking an individual who has excellent communication skills. Please forward résumé to: **Human Resources:**

**EXXON BIOMEDICAL SCIENCES, INC.
CN 2350, Mettlers Road
East Millstone, NJ 08875-2350
Equal Opportunity Employer M/F/H/V**



Saudi Arabia

The **King Faisal Specialist Hospital and Research Centre** in Riyadh, Saudi Arabia has fully equipped research laboratories. The objective of the **RESEARCH CENTRE** is to provide facilities for research into a broad range of disorders particularly those prevalent in Saudi Arabia. The Research Centre collaborates closely with the clinical departments in the 500 bed technically advanced hospital. The Research Centre has a Cyclotron CS-30 which produces short-lived diagnostic and therapeutic radionuclides for radiopharmaceutical research and manufactures radiopharmaceuticals for distribution.

All positions in **RADIONUCLIDE AND CYCLOTRON OPERATIONS** have research as well as production responsibilities. This area is seeking qualified individuals for the following positions:

Radionuclide Consultant - Ph.D. plus 15 years experience
Hot Cell Radiochemist - BS degree plus 5 years experience
Quality Control Chemists - AS, BS or MS degree plus 5 years experience

The **DEPARTMENT OF BIOLOGICAL AND MEDICAL RESEARCH** is currently seeking highly qualified individuals for the following positions:

Scientist I - Ph.D. plus 15 years experience in immunology research to head an active section working on immunochemical aspects of airborne allergens, tumor immunology and the immunological aspects of virology.

Scientist II or III - Ph.D. plus 5-10 years experience in biochemistry of endocrine disorders to continue work on thyroid cancer.

Scientist II or III - Ph.D. plus 5-10 years experience to work on oncogenes.

Scientist III - Ph.D. or M.D. with 5 years experience to work on the clinical aspects of kidney stone formation.

Research Technicians - BS or MS with 3 years experience to support scientist working on cancer, immunological disorders, parasitic disorders, inborn errors of metabolism, and clinical biochemistry of endocrine disorders.

The substantial tax savings and attractive benefits for a 24 month contract include:

- Relocation allowance and free furnished housing
- 7 day post leave and 13 holidays during each year of contract
- 30 day annual leave with a round trip ticket to point of origin
- Educational leave for Ph.D.'s
- Free medical and dental care and emergency leave
- Educational assistance for eligible dependent children

For further information and/or to apply please send a detailed resume to: **HCA International Company, Dept. S-1007, P.O. Box 550, Nashville, TN 37202-0550** or call toll free **1-800-251-2561**. HCA is an equal opportunity employer.

HCA International Company

HOWARD FLOREY INSTITUTE OF EXPERIMENTAL PHYSIOLOGY & MEDICINE, University of Melbourne, Parkville, Victoria 3052, Australia.

PEPTIDE/PROTEIN CHEMIST

The Howard Florey Institute is one of the leading medical research laboratories in Australia, at the growing-edge of research in physiology, molecular biology and peptide and nucleic acid chemistry.

The Institute's major research activities are in the field of endocrinology, with particular emphasis in the areas of ingestive behaviour, fluid and electrolyte metabolism, reproduction, high blood pressure and the chemistry and molecular biology of hormones.

We are seeking an experienced, innovative peptide and protein chemist to provide leadership and direction in protein isolation, peptide and protein characterization, and high sensitivity sequence and analysis. The peptide laboratory is well equipped with state-of-the-art gas phase sequencing instrumentation and associated HPLC equipment, peptide synthesizers, oligonucleotide synthesizer and an amino acid analyzer.

The successful applicant will work closely with molecular biologists and physiologists as part of an integrated team approach to the study of hormone synthesis and regulation. Opportunities exist for commercial innovation and appropriate international travel to scientific meetings is encouraged.

Applicants should have extensive experience with an international track record of achievement in peptide or protein chemistry. This is a senior appointment, the successful applicant would collaborate directly with the Associate Director.

Salary is to be negotiated and will be commensurate with qualifications and experience, and includes a generous superannuation scheme. Assistance with relocation expenses will be provided.

For further details write to:

Dr. G. W. Tregear
Howard Florey Institute of Experimental
Physiology and Medicine
University of Melbourne
Parkville, Victoria 3052, Australia

The American Association for the Advancement of Science

MEDIA RELATIONS SPECIALIST

Prestigious science association located in downtown Washington, D.C., is seeking a Media Relations Specialist to work in the Office of Communications. Individual will work under the direction of the Office Head. The successful candidate will be writing and working directly with journalists on science-related issues for a national audience. Responsibilities will include arranging media interviews/programs, researching and writing radio scripts, preparing news releases, preparing booklets and similar materials; scheduling press conferences and arranging media seminars. Qualifications: Bachelors degree in either English or Communications with some demonstrated familiarity with science and at least 2 additional yrs of related education or exper. Alternatively, candidate may have a degree in Science with a demonstrated proficiency in writing and media.

AAAS offers a competitive salary & a good benefits package. For immediate consideration, please submit resume, letter of application & salary requirement along with relevant writing samples to: Debra Wright, AAAS, 1333 H St. NW, Suite 854, Washington, D.C. 20005

AAAS is an Equal Opportunity Employer

THE UNIVERSITY OF SOUTH FLORIDA COLLEGE OF MEDICINE ST. PETERSBURG AT ALL CHILDREN'S HOSPITAL ANDREW AND ANN HINES ENDOWED CHAIR IN PEDIATRICS

The University of South Florida College of Medicine, Department of Pediatrics (St. Petersburg) at All Children's Hospital seeks an eminent scholar of professorial rank for the Andrew and Ann Hines Endowed Chair in Pediatrics. Candidates must have demonstrated expertise in independent research with the ability to focus techniques of molecular biology to clinical problems in the areas of immunology, endocrinology, virology, and/or neuro science for children as well as demonstrated expertise in independent research and demonstrated capability to organize and/or interact with developing programs in pediatric research.

The University seeks qualified candidates with the degree of M.D., M.D./Ph.D., or Ph.D. who have demonstrated the ability to work with and guide clinicians in the medical sciences. Criteria for selection will include interest and demonstrated expertise in the area of eukaryotic molecular genetics including techniques such as gene cloning, chromosome mapping, application and use of gene probes, and analysis of gene functions at both the protein and messenger RNA levels. In addition, extensive experience is sought with demonstrated expertise in independent research with an established international/national record of extramural peer-reviewed research grant support. Demonstrated ability to administer complex grant support programs and stimulate other investigators is desirable.

Responsibilities will include: scholarly activity and guidance of clinicians in the application of molecular biologic techniques in genetics and immunology in childhood associated disease, continued independent research, and an active role in teaching health care professionals at all levels.

Qualified candidates should submit a letter of interest together with current curriculum vitae and the names of five recognized national/international authorities as referees for consideration to John S. Curran, M.D., Chairperson, Search Committee for the Andrew and Ann Hines Endowed Chair of Pediatrics, Department of Pediatrics, University of South Florida College of Medicine, MDC 15, 12901 Bruce B. Downs Blvd., Tampa, FL 33612.

The University of South Florida is an Equal Opportunity/Affirmative Action employer. Qualified minorities, women and handicapped applicants are encouraged.

Deadline for application is **December 31, 1988.**

MICROBIOLOGISTS

The Acquired Immunodeficiency Syndrome (AIDS) Program of the National Institute of Allergy and Infectious Diseases (NIAID), National Institutes of Health, is seeking two senior level scientists in Molecular Biology, Biochemistry, Biophysics, Virology, and Immunology for its Pathogenesis Branch.

The Pathogenesis Branch plans and directs a major extramural research program to acquire basic knowledge of the biological properties, molecular biology, host response and the pathogenesis of human immunodeficiency virus (HIV) and related retroviruses.

Responsibilities of the positions include: planning and directing extramural research projects emphasizing molecular biology, biochemistry, and biophysics; oversight for the Reference Reagent (Repository) Program to provide the availability and standardization of reagents critical to AIDS research; developing and initiating new extramural research initiatives; and serving as a scientific liaison to study sites.

Salary commensurate with experience. Applicants should have a Ph.D. and general research project administration experience. U.S. citizenship required. Please send a curriculum vitae to:

AIDS Program/NIAID
Attention: Leslie Friel
6003 Executive Boulevard
Room 251P
Bethesda, MD 20892



NIAID/NIH is an Equal Opportunity Employer



Yale UNIVERSITY

Director Peabody Museum

Yale University invites applications for the Directorship of the Peabody Museum. The Director will have responsibility for a broad spectrum of collections encompassing the biological sciences, geology, and anthropology. The Director has traditionally held an academic appointment in one or more of the University departments representing the above fields of study. The Director will also have responsibility for the public education functions of the Museum's acquisitions and basic research pertaining to the above fields.

Applicants should forward letters of inquiry and interest together with a curriculum vitae to the Chairman of the Peabody Directorship Search Committee, Yale University, Department of Biology, P.O. Box 6666, New Haven, CT 06511. Applications should be received by 15 November 1988.

Yale University is an Affirmative Action/Equal Opportunity Employer, m/f.

BIOANALYTICAL SENIOR SCIENTIST

We have discovery
down to a science.



Hoffmann-La Roche is known throughout the world as a highly progressive and responsible medical research organization; we are comprised of a dedicated team of professionals whose main concern is finding the solutions to tomorrow's problems today.

We are seeking a Senior Scientist to supervise a bioanalytical laboratory, which is involved in performing a variety of assays, employing mammalian cell culture techniques. This will include the stability evaluation of different protein formulations such as Interleukin-1, Interleukin-2, and Interferon- α 1 as well as the development, improvement and validation of bioanalytical procedures for recombinant protein products.

Qualifications include a PhD in Biochemistry, Immunology or a related field, with 1-2 years' experience in cell culture and bioanalytical techniques. Familiarity with GLP's and computers is highly desirable.

In return, you will receive a comprehensive compensation package, and the benefits of joining an organization that is committed to discovery. For confidential consideration, please send your resume indicating salary history/requirements (those without this information will not be acknowledged), to: **Mrs. Eleanor M. Malone, Department K.I., Hoffmann-La Roche Inc., Nutley, New Jersey 07110.** We are an equal opportunity employer.



Hoffmann-La Roche

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TOXICOLOGIST

Staff position available at Lovelace Inhalation Toxicology Research Institute for toxicologist with orientation towards multidisciplinary team approach to solving research problems. The individual we seek will have doctoral level training in toxicology and have completed a rigorous postdoctoral fellowship or possess equivalent experience in an area compatible with the research interests of the institute. A background in chemistry, biochemistry, cell or molecular biology, pathology, immunology, particle deposition/clearance, physiology, pharmacology, pharmacokinetics, metabolism or other fields will be considered. Competitive salary and fringe benefit package. Submit resume to **Personnel Unit, Dept. M, P.O. Box 5890, Albuquerque, NM 87111.** We are an Equal Opportunity/Affirmative Action Employer.



BIOTECH, INC.

GROUP LEADER FERMENTATION MICROBIOLOGY

Coors BioTech, Inc. is seeking a qualified scientist to work as a key member of a multidisciplinary effort to develop fermentation process for the production of specialty chemicals and nutritional biochemicals. This position requires a PhD plus a minimum of five years experience in a relevant industrial environment. The successful individual will have experience in studying and optimizing fermentation process from shake flask through laboratory fermenter, and will have developed an appreciation for what is needed to successfully scale-up a fermentation process into production.

Coors BioTech, Inc., a biotechnology company with research facilities in Fort Collins, Colorado, offers an excellent compensation and benefits package, as well as opportunities for personal and professional growth. Fort Collins is an attractive university community convenient to the outstanding recreational opportunities found in Colorado.

Send your resume, along with salary history, to:

**Personnel
Coors BioTech, Inc.
6204 South College Ave., Fort Collins, CO 80525**

An Equal Opportunity Employer M/F/V/H

POSITIONS OPEN

ENVIRONMENTAL PATHOLOGY/TOXICOLOGY. NRSA supported PRE- AND POSTDOCTORAL POSITIONS available after October 1988. Research emphasis on cellular and molecular effects (mutagenesis, neurotoxicity, biotransformation, DNA dosimetry) of toxic chemicals (especially trace metals, aromatic hydrocarbons, ozone respiratory epithelial injury, aflatoxins). Inquiries: **Dr. N. K. Mottet, Program Director, Department of Pathology, SM-30, University of Washington, Seattle, WA 98195.** U.S. Citizen/Permanent Resident. An Equal Opportunity/Affirmative Action Employer.

ENVIRONMENTAL SCIENTIST/TOXICOLOGIST—\$27,248 to \$36,122. Minnesota Department of Health seeking an experienced scientist to perform risk assessments on various environmental media. Applicants for this civil service position must meet education and experience requirements. For an application and more information, contact: **David Gray, Minnesota Department of Health, 717 SE Delaware Street, Minneapolis, MN 55440.** Telephone: 612-623-5352. The State of Minnesota is an Equal Opportunity Employer.



EXECUTIVE DIRECTOR SPACE RESEARCH INSTITUTE

The Florida Institute of Technology invites applications and nominations for the position of Executive Director of its Space Research Institute (SRI). SRI is a new organization which serves as the focal point for space oriented research at F.I.T., near Cape Canaveral and the Kennedy Space Center.

The Executive Director will provide over all management of SRI. Qualifications for the Executive Director include an earned Ph.D. in science or engineering, demonstrated experience in acquiring and managing funds from federal and/or private research agencies, evidence of accomplishment in space research at a level that is commensurate with appointment as full professor, and the vision to establish SRI as a world leader in research in the areas of space engineering, space science, and space enterprise.

The Executive Director reports to the Vice President for Research, and will be given the opportunity to define the research objectives of SRI. There are presently 12 active research projects underway in three research centers supported with funds from the state of Florida. Salary and other benefits are negotiable.

We are also searching for highly qualified, senior researchers in space sciences and related engineering disciplines. We are particularly interested in individuals who will be able to build research groups within SRI's research centers while serving as faculty members at the rank of associate professor or professor in departments such as Physics and Space Sciences or Mechanical and Aerospace Engineering.

F.I.T. is an independent, non-profit comprehensive university located in Melbourne on the east coast of Florida 20 miles south of Cape Canaveral. F.I.T. has the nation's oldest academic programs in Space Sciences and Space Technology, and offers a wide range of academic programs through the Ph.D. The University has an on-campus enrollment of nearly 4000 students, 1100 of whom are pursuing graduate degrees. The faculty number in excess of 200.

Applications should include: curriculum vitae, publication and funding history, and names of four references. To be assured of full consideration, all materials should be sent to: **Dr. Allan T. Mense, Vice President for Research, FIT, Melbourne, FL, 32901 by 15 December 1988.** FIT is an Equal Opportunity/Affirmative Action Employer.

FACULTY POSITION. A 12-month, tenure-track appointment requiring research and teaching expertise is open to individuals holding a Ph.D. in toxicology, pharmacology, or a related discipline. Candidates with a D.V.M. degree and expertise in cellular and/or molecular level studies are desirable. Send curriculum vitae and a statement of research interests to: **Dr. Stephen Safe, Department of Veterinary Physiology and Pharmacology, Texas A&M University, College Station, TX 77843-4466.** Texas A&M University is an Affirmative Action/Equal Opportunity Employer.

POSITIONS OPEN

ENVIRONMENTAL TOXICOLOGIST. Tenure-track position at the assistant professor level in the Institute for Environmental Studies, an interdisciplinary unit of the University of Illinois at Urbana-Champaign. Appointment at higher rank is possible for appropriately qualified applicants. Ph.D. degree and demonstrated potential for research productivity required. Emphasis on original research on the health effects of environmental agents. Applicants from all areas of environmental toxicology are sought though there is a special interest in the areas of behavioral-, pulmonary-, or molecular-toxicology. Responsibilities will include contributing to the ongoing research program in environmental toxicology, interacting with faculty and students in other colleges and departments at the university, and teaching in the Interdisciplinary Environmental Toxicology Graduate Program. A joint appointment in another disciplinary department is anticipated. Salary commensurate with qualifications. Send curriculum vitae, brief description of research goals, and three letters of reference to: **Dr. Michael J. Plewa, Chairman, Toxicologist Search Committee, Institute for Environmental Studies, University of Illinois, 1005 West Western Avenue, Urbana, IL 61801.** Telephone: 217-333-3614. Position available 21 August 1989. The search will remain open until position filled, but full evaluation of applications will begin on 1 February 1989. The University of Illinois is an Affirmative Action/Equal Opportunity Employer.

EVOLUTION—POPULATION BIOLOGY

The Department of Biology at the University of Oregon is expanding its program in population biology through the addition of several new faculty lines. Candidates with interdisciplinary interests in evolution, ecology, and genetics are especially encouraged to apply, as are individuals with strong quantitative skills. The specific areas of recruitment are open, but the highest initial priority will be in the areas of molecular evolution and plant population biology. With respect to the molecular evolution position, candidates whose primary interests are in mechanisms of evolution, rather than phylogeny reconstruction, will be favored. It is anticipated that positions will be filled at the **ASSISTANT PROFESSOR** level, but strong candidates at all levels will be considered. Applicants should forward curriculum vitae, a brief description of research and teaching interests, recent publications, and three letters of reference to: **Evolution Search Committee, Department of Biology, University of Oregon, Eugene, OR 97403.** More information may be obtained by calling: **Michael Lynch, 503-686-4526.** Closing date: 1 December 1988.

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

FACULTY POSITIONS MOLECULAR AND CELLULAR NEUROBIOLOGY DARTMOUTH MEDICAL SCHOOL

Dartmouth Medical School is expanding in the area of neuroscience through the establishment of the Center for Molecular and Cellular Medicine. We seek three new faculty members with primary research interests in molecular and cellular neurobiology. These individuals will be members of the Molecular and Cellular Neuroscience Program and will also hold appointments in an appropriate basic science or clinical department. Preference will be given to candidates whose research interests and expertise complement other Programs in the Center, including cell biology, endocrinology, immunology, molecular genetics, and structural biology.

Candidates should hold the Ph.D. or M.D. degree and have a minimum of 2 years of postdoctoral experience. The level of appointment will depend on experience. All faculty will be expected to establish a strong research program and will participate in the teaching of graduate and medical students.

Send curriculum vitae, statement of research interests, and names of at least three references to:

**Neuroscience Search Committee
Center for Molecular and Cellular Medicine
Dartmouth Medical School
Hanover, NH 03756**

Dartmouth Medical School is an Equal Opportunity Employer. Women and members of minority groups are encouraged to apply.

POSITIONS OPEN

EVOLUTIONARY BIOLOGY

The Department of Biology at the University of Pennsylvania is renewing its search for an evolutionary biologist and invites applications for a tenure-track position at either the **ASSISTANT OR ASSOCIATE PROFESSOR** level. We welcome applications from individuals interested in molecular evolution, systematics, population genetics or evolutionary theory. The successful candidate is expected to develop an active research program and to participate in teaching undergraduate and graduate courses in evolution and population genetics.

Send curriculum vitae, summary of research and teaching interests, reprints and three letters of reference by 7 November 1988 to: **Dr. Peter Petraitis, Evolutionary Biology Search Committee, Department of Biology, University of Pennsylvania, Philadelphia, PA 19104-6018.**

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

The Department of Surgery, University of North Carolina School of Medicine, is seeking a full-time **FACULTY MEMBER** who has completed his/her graduate education in general surgery and who has demonstrated ability as a teacher and clinician. Academic rank is dependent upon qualifications of individual. The successful applicant should have completed fellowship training in surgical oncology. He/she should have a special competence in tumor immunology with the ability to carry out basic and clinical investigations in this field. Interested applicants should forward their curriculum vitae and bibliography to: **George F. Sheldon, M.D., Chairman, Department of Surgery, University of North Carolina, 136 Burnett-Womack Building 229H, CB #7050, Chapel Hill, NC 27599.** The University of North Carolina is an Equal Opportunity/Affirmative Action Employer. Minority and female applicants are encouraged to voluntarily identify themselves.

FACULTY POSITION

Microbiologist with a D.V.M. and/or Ph.D. or equivalent degree(s) with experience in veterinary clinical microbiology. Rank will be assistant or associate professor. The new faculty member will be expected to contribute to the veterinary teaching program (course of bacteriology/mycology to freshman veterinary students and graduate courses) and will be expected to establish a competitive, independent research program in area of food animals. Other responsibilities include sharing the supervision of the diagnostic microbiology services of the Veterinary College and interacting with the veterinary students in the clinical microbiology rotations of their senior year. Closing date for application will be 1 December 1988 or until a suitable candidate is chosen. Submit curriculum vitae and names of three references to: **Dr. Herman A. Berkhoff, Professor of Bacteriology and Chairman of the Search Committee, Department of Microbiology, Pathology and Parasitology, College of Veterinary Medicine, North Carolina State University, Raleigh, NC 27606.**

North Carolina State University is an Equal Opportunity/Affirmative Action Employer.

FACULTY POSITION: Division of Life Sciences, Department of Kinesiology at the University of California, Los Angeles invites applications from individuals with research specialties in musculoskeletal function and adaptation. Expertise in connective tissue biochemistry is preferred but not required. This is a tenure-track position at the assistant or associate professor level and is anticipated to start 1 July 1989. The appointee is expected to conduct an independent research program, teach courses in basic physiology and develop a graduate seminar in her/his area of specialty. Applicants must have a Ph.D. or M.D. degree, and have had at least 2 years of postdoctoral training or comparable experience. Submit curriculum vitae, including a statement of research interests and three names for references to: **Professor R. James Barnard, Department of Kinesiology, 2859 Slichter Hall, University of California, Los Angeles, Los Angeles, CA 90024-1568 by 15 January 1989.** The University of California is an Equal Opportunity/Affirmative Action Employer.

POSITIONS OPEN

FACULTY POSITION AVAILABLE

Applications are invited for a tenure-track position in the Department of Pharmacology, University of South Carolina, School of Medicine. Ph.D. and/or M.D. degree and postdoctoral experience required (rank open). The successful candidate will be expected to develop an independent research program which merits extramural support and to teach medical/graduate students. Preference will be given to individuals whose research uses molecular or biochemical techniques to study biological actions. Candidates with backgrounds in biochemistry, physiology, pharmacology, or other biomedical sciences will be considered. Individuals should submit curriculum vitae, statement of professional goals, and the names of three references: **Dr. D. O. Allen, Chairman, Department of Pharmacology, University of South Carolina, School of Medicine, Columbia, SC 29208.** *The University of South Carolina is an Equal Opportunity/Affirmative Action Employer.*

FACULTY POSITION IN EVOLUTIONARY BIOLOGY CANADIAN INSTITUTE FOR ADVANCED RESEARCH DEPARTMENT OF BIOCHEMISTRY UNIVERSITY OF BRITISH COLUMBIA

The Canadian Institute for Advanced Research has opened a program in genome evolution which provides support for junior and senior faculty research positions at a number of Canadian universities. Initial support is for a period of 5 years. The Institute provides for costs of interaction between members of the program.

A position, at the level of assistant professor, is currently available in the Department of Biochemistry at the University of British Columbia. The position is for a molecular geneticist/biochemist with research interests which impact either directly or indirectly on the field of evolution. The successful candidate must meet criteria for appointment both as a Scholar of the Canadian Institute for Advanced Research and as an Assistant Professor in the Department of Biochemistry at the University of British Columbia.

Applicants should send curriculum vitae, selected reprints, a statement of research interest and letters of reference from at least three referees to: **Dr. Patrick P. Dennis, Department of Biochemistry, Faculty of Medicine, University of British Columbia, 2146 Health Sciences Mall, Vancouver, B.C., Canada V6T 1W5. FAX NO. 604-228-5227.** *In accordance with Canadian Immigration requirements, priority will be given to Canadian citizens and permanent residents of Canada.* Applications should be received by 1 January 1989. The position will remain open until a suitable candidate is appointed.

JUNIOR AND SENIOR FACULTY POSITIONS PROTEIN CHEMISTRY

The Department of Microbiology and Immunology in the College of Medicine at The University of Tennessee, Memphis, invites applications for junior and senior level, tenure-track positions focusing on the molecular analysis of significant problems in protein chemistry. Senior candidates should have a strong record of research accomplishment with sustained program growth and development. Junior candidates will be expected to develop a high quality, independent research program with long term growth potential. Teaching responsibilities, which emphasize quality rather than quantity, include medical, dental and graduate students. A large Center of Excellence grant has resulted in establishment of a Molecular Resource Center within the Department featuring state-of-the-art facilities for: oligonucleotide synthesis, peptide synthesis, monoclonal antibody production, amino acid analysis, protein sequencing, molecular graphics, polymerase chain reaction, and flow cytometry. Funds for the initiation of research programs will be available and salaries will be highly competitive. Applications should consist of curriculum vitae, copies of several recent publications, a brief statement of future research goals, and three letters of reference to be sent to: **Dr. Terrance G. Cooper, Department of Microbiology and Immunology, The University of Tennessee, Memphis, 858 Madison Avenue, Memphis, TN 38163.** Applications will be received until 1 November 1988 or until the positions are filled thereafter. *The University of Tennessee is an Affirmative Action/Equal Opportunity Employer.*

CANCER RESEARCH SCIENTISTS

Progress in anti-cancer research is accelerating at Bristol-Myers' pharmaceutical research facility in Wallingford, Connecticut. It's a setting that encourages cooperation and rewards achievement. The successful candidates will join interdisciplinary groups working on growth factor gene expression in tumor cells and lymphocytes.

RESEARCH SCIENTIST Biochemistry and Protein Chemistry

PhD in biological or chemical science and at least 2 years postdoctoral or industrial experience are required. You will also need a background in protein purification and characterization, amino acid analysis and peptide chemistry.

ASSOCIATE RESEARCH SCIENTISTS

- BS/MS with 2-4 years of experience in protein isolation and characterization required to pursue structure/function studies.
- BS/MS with 2-4 years of technical experience in the operation of HPLC/FPLC and/or oligonucleotide synthesis and DNA sequencing necessary. The desire to develop and explore new applications of these technologies is important.
- BS/MS in Biochemistry, Cell Biology, Immunology or related areas with 2-4 years relevant experience with biochemistry and immunological techniques is necessary. Previous *in vivo* working experience desirable. Responsibilities will include production and biological characterization of protein drug conjugates.

POSTDOCTORAL SCIENTISTS

Molecular/Cell Biology

Challenging positions are available involving the study of gene expression and regulation in human cancer cell lines. You should have a recent PhD and experience in mammalian tissue culture (preferably primary tissue culture) and molecular biology techniques.

Immunology

Recent PhD to join interdisciplinary group working on molecular and biochemical pathways in immunoregulation. Options are available to undertake research on regulation of gene expression, signal transduction pathways and growth factors involved in the modulation of the immune response. A strong background in modern cellular immunology and/or one of the areas above required.

Bristol-Myers offers sustained growth, highly competitive salaries, extensive benefits and career support. Our countryside location is convenient to New Haven and Hartford, Connecticut; New York City and New England. Please send resume with salary history indicating position of interest to: **BRISTOL-MYERS COMPANY, Pharmaceutical Research & Development Division, Attn: AZ1, P.O. Box 5100, 5 Research Parkway, Wallingford, CT 06492.** An Equal Opportunity Employer M/F/H/V.



Bristol-Myers Company

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POSITIONS OPEN

FACULTY POSITION BIOPHYSICS NORTH CAROLINA STATE UNIVERSITY

The Physics Department invites applications for a tenure-track assistant professor appointment in biophysics to begin fall, 1989. The physics department is developing collaborative research programs with the Biochemistry Department, and preference will be given to applicants with postdoctoral experience in research areas which complement existing strengths in both departments. The successful candidate, aided by start-up funds, is expected to participate in an active research program and to have interest in teaching at both the graduate and undergraduate level. For full consideration, applicants should submit by 1 January 1989 curriculum vitae, statement of research interests, and arrange to have at least three letters of recommendation sent to: **Professor A. W. Jenkins, Chairman, Personnel Committee, Department of Physics, North Carolina State University, Raleigh, NC 27695-8202.** *North Carolina State University is an Equal Opportunity/Affirmative Action Employer.*

FACULTY POSITIONS. The Department of Chemistry at New York University (NYU) seeks applicants for three projected faculty positions in physical and organic chemistry. The Department has interests in developing biophysical and bioorganic chemistry, but will consider applicants from any research area. Candidates are expected to demonstrate exceptional research potential and/or achievement, and should have a strong commitment to teaching. Salary and level of appointment are commensurate with experience. Applicants should submit curriculum vitae including a list of publications, a summary of past research accomplishments, an outline of proposed research activities, and arrange for three letters of reference. Reprints or preprints of two articles that best display the applicant's research ability will be helpful to the search committee. This material should be sent by 15 November 1988, to be assured of full consideration, to: **NYU Faculty of Arts and Science, Department of Chemistry, 4 Washington Place, New York, NY 10003. Attention: Michelle DeFranco, Secretary to the Search Committee.** *NYU encourages women and members of minority groups.*

FULL OR SENIOR ASSOCIATE PROFESSOR AND ASSISTANT PROFESSOR OF MEDICINAL CHEMISTRY. University of Utah Department of Medicinal Chemistry. Applications are invited for two tenure-track faculty positions. Preference will be given to applicants whose research interests include natural products chemistry and/or the applications of chemistry to biological problems. The department is unusually well equipped with mass spectrometry and NMR facilities. Candidates should demonstrate research skills and productivity consistent with appointment to the appropriate rank at a major research-intensive university. Participation in the professional and/or graduate teaching activities of the department, as appropriate, is expected. Postdoctoral experience is essential for the entry-level position. *The University of Utah is an Affirmative Action/Equal Opportunity Employer and applications from women/members of minority groups are welcomed.* Application deadline is 15 November 1988 or until a qualified candidate is identified. Please submit curriculum vitae, a statement of proposed research, and names and addresses of three or more references to: **Dr. Arthur D. Broom, Chairman, Department of Medicinal Chemistry, College of Pharmacy, Salt Lake City, UT 84112.**

GENETICIST

Concordia College, Moorhead, Minnesota invites applications for a possible tenure-track position in the biology department at the rank of instructor or assistant professor beginning August 1989. Ph.D. is preferred. Successful applicant expected to teach genetics, cell biology or developmental biology and introductory biology courses. Teaching excellence and development of an undergraduate research program is required. Concordia College is a coeducational liberal arts college affiliated with the Evangelical Lutheran Church in America. Submit letter of application, résumé, statement of teaching and research goals, and three letters of recommendation by 31 October 1988 to: **Dr. Gerald L. VanAmburg, Department of Biology, Concordia College, Moorhead, MN 56560.** *Concordia College is an Equal Opportunity Employer.*

POSITIONS OPEN

FACULTY POSITION IN PHYSICAL CHEMISTRY: Applications are being accepted for a tenure-track position in physical chemistry at the University of Virginia for September, 1989. The appointment is expected to be made at the assistant professor level, although more senior applicants will be considered. Preference will be given to outstanding individuals with a commitment to excellence in research and teaching. Applicants in any area of physical or biophysical chemistry will be considered; however, preference will be given to exceptional individuals who add to current strengths in the department. Curriculum vitae, including a list of publications and a brief description of proposed research should be sent to: **Robert E. Ireland, Chairman, Department of Chemistry, McCormick Road, University of Virginia, Charlottesville, VA 22901.** *The University of Virginia is an Equal Opportunity/Affirmative Action Employer.*

FACULTY POSITIONS IN CELLULAR AND MOLECULAR BIOLOGY

Applications are invited for a tenure-track position in the Department of Cell Biology and Anatomy at Northwestern University Medical School. This position is at the assistant professor level. Applicants must have a Ph.D. or equivalent degree, with research experience in cellular and/or molecular biology. Applicants will be screened with respect to their ability to carry on vigorous research programs and to participate in departmental teaching programs. Send complete curriculum vitae, brief description of research interests, and at least three letters of recommendation by 1 December 1988, to: **Dr. Robert D. Goldman, Department of Cell Biology and Anatomy, Northwestern University Medical School, 303 East Chicago Avenue, Chicago, IL 60611.** *Northwestern University is an Equal Opportunity/Affirmative Action Employer and invites applications from all qualified individuals.*

GENETICIST DEPARTMENT OF BIOLOGY UNIVERSITY OF PENNSYLVANIA

Applications are invited for a tenure-track faculty position at the assistant professor level in the discipline of genetics. Candidates who use a genetic approach to study problems in cell and developmental biology are encouraged to apply.

Candidates should have a Ph.D. with postdoctoral experience and demonstrated research accomplishments. The successful candidate is expected to develop a strong research program and participate in teaching at the undergraduate and graduate levels.

Interested persons should send curriculum vitae, representative reprints, a brief description of future research plans, and three letters of reference by 18 November 1988 to:

**Genetics Search Committee
Department of Biology
University of Pennsylvania
Philadelphia, PA 19104-6018**

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

GENETICS INDIANA UNIVERSITY-BLOOMINGTON

The Department of Biology has one or two **FACULTY POSITIONS** open in any area of genetics. These appointments may be filled by candidates at all levels from assistant to full professor. The successful candidates will be expected to conduct vigorous, independent research programs and contribute to teaching. Applicants at the junior level should have postdoctoral research experience and demonstrated ability as creative scientists. They should send curriculum vitae, a description of research interests, including future plans, and arrange to have three letters of reference sent from individuals familiar with their work. Applicants at the senior level need only indicate their potential interest in the position by writing to: **Dr. Tom Blumenthal, Chairman, Department of Biology, Indiana University, Bloomington, IN 47405 or Fax 812-335-6705.**

Please send applications by 1 December 1988. *Indiana University is an Affirmative Action/Equal Opportunity Employer.*

POSITIONS OPEN

HEAD DEPARTMENT OF CROP SCIENCE

The College of Agriculture and Life Sciences of North Carolina State University is searching for an outstanding individual to administer the teaching, research, and extension programs of the Department of Crop Science. Applicants must have earned the Ph.D. in agronomy or a closely related discipline, have a record of professional achievement and leadership in the field with an intimate knowledge of current development. Administrative experience or demonstrated leadership potential in teaching, research, and extension is preferred. Applications should include a résumé with publication list, names of at least three references, and a position paper concerning goals of a Crop Science Department Head. Screening of applications will begin 31 October 1988 and continue until a suitable candidate is found. Address applications to: **Dr. Ernest D. Seneca, Chairman, Search Committee, Botany Department, Box 7612, North Carolina State University, Raleigh, NC 27695-7612.** *North Carolina State University is an Equal Opportunity/Affirmative Action Employer.*

Position open: Immediately available position as **LABORATORY DIRECTOR**, chief cytogeneticist at Ph.D. level. Practice of John D. Stephens, M.D., Inc. in conjunction with the laboratory, California Prenatal Diagnosis Institute, a practice limited to prenatal diagnosis. Candidate should be Board-eligible, American Board of Medical Genetics, or Board-certified, or Ph.D. with 4 years of experience as a laboratory director in a cytogenetics facility in amniocentesis prenatal diagnosis, specifically with amniotic fluid and blood chromosome analysis studies. The responsibilities will include active participation in culture, karyotyping as well as administrative/management (laboratory) duties. Salary is commensurate with comparable positions in the San Francisco Bay area. Benefits include medical/dental, annual bonus and eligibility for existing retirement plan.

Send curriculum vitae and three letters of recommendation to: **Dr. John Stephens, M.D., Medical Director, 1390 South Winchester Boulevard, San Jose, CA 95128.** For further inquiries call 408-866-6266. The program is an approved Comprehensive Prenatal Diagnosis Center and contracted as an AFP Follow-up Center.

YALE UNIVERSITY SCHOOL OF MEDICINE DEPARTMENT OF HUMAN GENETICS MOLECULAR AND CLINICAL GENETICIST

The Department of Human Genetics invites applications for a tenure-track faculty position in a stimulating environment that includes excellent laboratory and clinical facilities. This faculty appointment will be made at the level of assistant, associate, or full professor, depending on the credentials of the successful candidate. We seek a person with an M.D. degree in addition to a strong record of accomplishment in research and experience in clinical genetics. Applicants should submit curriculum vitae, reprints, and a statement of research interests, and should arrange to have three letters of recommendation sent to:

**Dr. Sherman M. Weissman
Chairman, Faculty Search Committee
Department of Human Genetics
Yale University School of Medicine
P.O. Box 3333
New Haven, CT 06510**

The deadline for applications is 15 November 1988. *Yale is an Equal Opportunity Affirmative Action Employer.*

MOLECULAR BIOLOGISTS—PERMANENT OR POSTDOCTORAL to join group engaged in studies on the strain-dependent, tissue-specific gene expression of acutely-regulated murine serum amyloid P component. Research project will focus on identification of regulatory regions of the genes and characterization of DNA binding proteins. The ideal candidates should be well versed in recombinant DNA techniques although all applicants will be considered. Salary is \$25,000 to \$35,000. Please forward curriculum vitae to: **Dr. John E. Mole, Department of Biochemistry, University of Massachusetts Medical Center, 55 Lake Avenue North, Worcester, MA 01655.** *UMMC is an Equal Opportunity/Affirmative Action Employer.*

MICROBIAL GENETICIST

The Department of Biological Sciences at DePauw University invites applications for a tenure track position at the level of **Assistant Professor**, with a starting date of August 1989. The individual filling this position will be primarily responsible for teaching courses in introductory microbiology and microbial genetics, as well as developing upper level courses in her/his areas of expertise. The successful candidate will also be expected to develop a research program involving undergraduates. We invite applications from candidates with research interests in all areas of microbial genetics. Candidates should possess a Ph.D. by the starting date.

DePauw University is an independent undergraduate liberal arts institution with an enrollment of 2,300 students. The Department of Biological Sciences consists of 8 full-time faculty and attracts considerable outside funding for undergraduate research and equipment. Interested individuals should send curriculum vitae, undergraduate and graduate transcripts, and three letters of recommendation to: Search Committee, Department of Biological Sciences, DePauw University, Greencastle, IN 46135. Application deadline: November 1, 1988.

DePauw University is an Affirmative Action, Equal Opportunity Employer.

THE UNIVERSITY OF TEXAS SOUTHWESTERN MEDICAL CENTER AT DALLAS

Dean of Southwestern Graduate School of Biomedical Sciences

Applications and nominations are invited for the position of Dean of Southwestern Graduate School of Biomedical Sciences, one of three component schools of Southwestern Medical Center, an institution of established international reputation in biomedical education and research. Southwestern Graduate School enrolls over 300 students in fourteen programs. Seven of these programs (Biochemistry, Cell Biology, Cell & Molecular Biology, Immunology, Microbiology, Pharmacology, and Physiology) participate in the Medical Scientist Training Program (M.D./Ph.D. program) at Southwestern Medical Center.

Southwestern seeks a person of high academic achievement and demonstrated leadership to fill this position. Candidates must have an earned doctorate and a distinguished record in biomedical research and graduate education. Qualifications to hold an appointment at the professorial level in one of the departments of Southwestern Medical School are essential.

Nominations and applications must be received before October 30, 1988. The University of Texas Southwestern Medical Center at Dallas is an equal opportunity institution and encourages minorities and women to apply. Please send nominations or applications with curriculum vitae and three references to:

**Search Committee for Dean
Southwestern Graduate School of
Biomedical Sciences
c/o Office of the Executive Vice President
for Academic Affairs
5323 Harry Hines Boulevard
Dallas, Texas 75235-9002**

Howard Hughes Medical Institute Doctoral Fellowships in Biological Sciences 1989 Competition

The Howard Hughes Medical Institute will award 60 fellowships for full-time study toward the Ph.D. or Sc.D. degree in cell biology and regulation, immunology, genetics, neuroscience, and structural biology of macromolecules.

Eligibility:

- At or near the beginning of graduate study.
- No citizenship requirements. U.S. citizens may study abroad; others must study in the United States.
- Medical, dental, and veterinary students or professionals are eligible if they are at or near the beginning of Ph.D. or Sc.D. degree studies. Students receiving full tuition via M.D./Ph.D. programs are not eligible.

Fellowship Awards:

- Three-year awards, with option to extend to five years.
- \$12,300 annual stipend.
- \$10,700 annual cost-of-education allowance to the fellowship institution.

Deadlines:

- November 14, 1988, application deadline.
- Awards announced by early April 1989.
- Fellowship tenure must begin by January 1990, at the latest.

Potential applicants should be aware of the intense competition for awards. In the 1988 competition, more than 1,000 applications were reviewed to select 60 fellows.

For information:
Call (202) 334-2872
or write:

Hughes Doctoral Fellowships
The Fellowship Office
National Research Council
2101 Constitution Avenue, N.W.
Washington, DC 20418
United States of America

The Howard Hughes Medical Institute welcomes all qualified applicants and encourages women and members of minority groups to apply.

Chemical Research Associates

A.E. Staley Manufacturing Company — a major corn refiner — is participating in cooperative research programs with the U.S. Department of Agriculture. These assignments, in the Northern Regional Research Center, Peoria, Illinois, will continue throughout 1989.

Rumen Bacterial Polysaccharides

Challenges in the study of chemical and physical properties of extra-cellular polysaccharides produced by anaerobic ruminal bacteria. Requires experience with polysaccharide isolation and structural determination, and knowledge of carbohydrate chemistry, MS, GC and high pressure liquid chromatography. PhD in Chemistry, Biochemistry, Molecular Biology or related field required.

Polysaccharide Chemical Modification

Challenges include utilization of a twin screw extruder as chemical reactor for modifying polysaccharides, and characterization of these products. Requires experience in organic reaction kinetics, thermodynamics and/or mechanistic investigation, with knowledge of current spectroscopic and chromatographic methods. PhD in Organic, Physical Organic, Polymer or related Chemistry field.

Submit your resume before November 11, 1988 to Staley headquarters in Decatur, IL: **Suzanne H. Bandy, A.E. STALEY MANUFACTURING COMPANY, 2200 E. Eldorado, Decatur, IL 62521.** An equal opportunity/affirmative action employer.



Where Imagination Touches Technology.

Applied bioTechnology

Molecular Biologist

Oncogene Structure and Function

Applied bioTechnology is a growing company specializing in:

- genetically engineered vaccines for the veterinary and human markets
- novel products for cancer diagnostics and therapeutics based on oncogene technology.

Immediate openings exist for highly motivated individuals to join our Oncogene Group. As a member of our oncogene team, you will be involved in developing diagnostic and therapeutic cancer reagents based on oncogene technology. The successful candidate should have a Ph.D. in Molecular Biology or a related field and at least two years of postdoctoral experience. A strong background in the molecular basis of cancer is preferred but not essential.

Applied bioTechnology, Inc. offers a stimulating environment coupled with the opportunity to make a significant contribution to our future directions.

Please submit your resume or curriculum vitae to:

Applied bioTechnology, Inc.
80 Rogers Street
Cambridge, MA 02142

An Equal Opportunity Employer M/F/H/V



UNIVERSITY OF COLORADO VISITING FACULTY AND POSTDOCTORAL FELLOWSHIPS (1989-90)

FOR RESEARCH IN

- atmospheric chemistry
- analytical chemistry
- environmental chemistry, biochemistry and geochemistry
- atmospheric and climate dynamics
- remote sensing
- global change

at the Cooperative Institute for Research in Environmental Sciences (CIRES).

Five competitive fellowships will be awarded to recent Ph.D. recipients and to senior scientists, including faculty on sabbatical leave. Stipends average \$26,500 for twelve months. Appointments can begin at any time during the year. Selection of awardees is made in part on the likelihood of active interaction with CIRES scientists and other research groups in Boulder. Senior CIRES-affiliated scientists working in these fields include James Avery, Susan Avery, Ben Balsley, Roger Barry, John Birks, Maurice Blackmon, William Bowman, Henry Diaz, R. Ray Fall, Lang Farmer, Fred Fehsenfeld, Alexander Goetz, Howard Hanson, William Hay, Murray Johnston, Bruce Koel, William Lewis, Uwe Radok, Colin Ramage, George Reid, Russ Schnell, Robert Sievers, and Harold Walton. Candidates are encouraged to contact one or more of the senior investigators as they are preparing their proposals. Apply to

**Prof. R. Sievers, Director, CIRES,
Visiting Fellows Program
University of Colorado, Campus Box 449
Boulder, CO 80309.**

Include vitae, publications list, and brief outline of proposed research. Also request that three persons familiar with your qualifications send letters of recommendation. Junior applicants must submit undergraduate and graduate transcripts. First consideration will be given to applications received by December 1. Final application deadline is February 15.

The University of Colorado at Boulder has a strong institutional commitment to the principle of diversity. In that spirit, we are particularly interested in receiving applications from a broad spectrum of people, including women, members of ethnic minorities, and disabled individuals.

PENNSTATE



University Park
Campus

ENDOWED CHAIRS COMPUTER SCIENCE, MOLECULAR AND CELL BIOLOGY, AND PHYSICS

The Departments of Computer Science, Molecular and Cell Biology and Physics in the College of Science of Penn State, invite nominations and applications for Eberly Family Chairs in each department.

Candidate with international reputations in their specific research areas are sought who possess outstanding publication and grant-support records and who have made major contributions to their professions. Chair-holders will be expected to assume a leadership role in their department, the College of Science and in the University.

Candidate's credentials will be accepted until suitable individuals are selected.

Nominations, inquiries and applications should be directed to:

COMPUTER SCIENCE, Professor Joseph Lambert, Box SCS, Ph. (814) 865-9505; **MOLECULAR AND CELL BIOLOGY**, Professor Reginald Deering, Box SMCB, Ph. (814) 863-1851; **PHYSICS**, Professor Howard Grotch, Box SPHY, Ph. (814) 863-0117. Correspondence and applications should be mailed to appropriate Box, 211 Whitmore Laboratory, University Park, PA 16802.

An Affirmative Action/Equal Opportunity Employer
Women and Minorities Encouraged to Apply

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SCIENTISTS

AIDS PROGRAM NATIONAL INSTITUTES OF HEALTH

The AIDS Program of the National Institute of Allergy and Infectious Diseases is seeking senior level scientists in IMMUNOLOGY, VIROLOGY, BIOLOGY, BIOCHEMISTRY, MICROBIOLOGY and PHARMACOLOGY for its Treatment Research Branch, Developmental Therapeutics Branch, and Vaccine Research and Development Branch.

The Treatment Research Branch plans and directs a Federal research program to develop drugs and therapies for treating AIDS and its related conditions. The Branch supports a national network of 35 clinical trials units, which examine and evaluate potential therapeutic interventions in Phase I, II, or III clinical trials. Responsibilities of the Branch for which staff are being recruited include: administrative and technical management of the AIDS Clinical Trials Units; development of initiatives to meet emerging requirements of the national clinical trial effort; monitoring the virologic, immunologic and pharmacologic aspects of trials; development and management of an investigator-initiated research grant program to complement the clinical trial effort and a program of identification, review and tracking of agents to be considered for clinical evaluation.

The Developmental Therapeutics Branch supports basic and applied research leading to the development of new drugs for treating AIDS and its complications. The Branch's research includes studying the preclinical stages of AIDS therapies, improved methods for drug delivery, and the structure and mechanisms of action of antiviral and immunomodulatory compounds. Responsibilities of the position include: assessing needs for research, developing research priorities, surveying sources of AIDS-related drug development, administering programs that augment the capabilities of the National Cooperative Drug Discovery Group for AIDS and other areas of basic research related to the development of potential therapeutics for AIDS and its complications.

The Vaccine Research and Development Branch plans and directs a Federal research program for the development and evaluation of vaccines for the prevention of AIDS and its opportunistic infections. Responsibilities of the Branch for which staff are being recruited include: development and management of a basic and applied research program addressing the agenda surrounding AIDS vaccine development; neutralization assay standardization and development; correlates and markers of immunity to HIV infection; the HIV Genetic Variation Program for AIDS Vaccine Development; the simian immunodeficiency model for AIDS vaccines, the National Cooperative Vaccine Development Groups for AIDS; the AIDS Cooperative Adjuvant Group; AIDS vaccine clinical trials; international collaboration on evaluating the efficacy of AIDS vaccines.

Candidates must have a doctoral level degree with post-doctoral experience in biomedical research either in academia or industry. Salary commensurate with training and experience. U.S. citizenship is required. Please send a curriculum vitae or Application for Federal Employment (SF-171) to:

AIDS Program
Attn: Leslie Friel
NIAID/Room 251P
6003 Executive Boulevard
Bethesda, MD 20892



NIH is an Equal Opportunity Employer

Cambridge NeuroScience Research Research Scientists

Cambridge NeuroScience Research is a young research and development company which focuses on Neurobiology and its applications. We have a new, well-equipped facility located in Cambridge, Massachusetts, close to M.I.T. and Harvard University. We currently have positions available for staff scientists and a post-doctoral research fellow in our Cell Culture and Electrophysiology and Cell Biophysics groups.

Staff Scientist in Electrophysiology and Cell Biophysics

Candidates for this position should have a Ph.D. with at least two years of postdoctoral training in electrophysiological techniques particularly in the use of voltage- and patch-clamping in *in vitro* preparations. The successful applicant will most likely have already developed a reputation for independent research in neurobiology and will be expected to lead a small research team.

Staff Scientist in Cell Culture

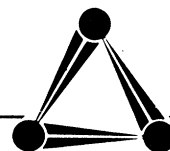
Candidates for this position should have at least 3 years' experience in primary cell culture of nervous system tissue and should have an interest in developing *in vitro* models of neurotoxicity. The successful applicant will most likely have a Ph.D. or M.S. degree and will have some background in biochemistry or pharmacology.

Postdoctoral Fellow in Electrophysiology and Cell Biophysics

Candidates for this position should have a Ph.D. and experience in electrophysiological techniques. The successful applicant will play a key role in a multidisciplinary research team which aims to develop new therapeutics based on an understanding of receptor mechanisms.

These scientists will interact with the organic chemists, biochemists, molecular biologists and neuropharmacologists within the Company and will be encouraged to take advantage of the opportunities to interact with the many neurobiologists in the Boston area.

Cambridge NeuroScience Research offers a stimulating research environment with competitive salaries and excellent benefits. Applicants for the above positions should send their curriculum vitae and the names of three references to: CNS Research, Human Resources Manager, One Kendall Square, Building 700, Cambridge, MA 02139, U.S.A.



CNS RESEARCH

POSITIONS OPEN

We are recruiting people for a major program on **INFLAMMATION**.

PROTEIN CHEMIST (Ph.D.)—Structure/function relationships between enzyme and enzyme inhibitors; protein modeling and enzyme kinetics.

MOLECULAR BIOLOGIST (Ph.D.)—Expression of proteases and protease inhibitors in bacterial and mammalian systems; site directed mutagenesis; regulation of gene expression.

CELL BIOLOGIST (Ph.D.)—Polymorphonuclear leukocyte and macrophage/monocyte responses to inflammatory stimuli; tissue culture models of inflammation, radiation damage and malignant transformation.

Starting Date: Immediately. Please forward résumés and three letters of recommendation to:

Harvey Rubin, Ph.D., M.D.
University of Pennsylvania
Infectious Diseases Section
536 Johnson Pavilion/6073
36th Street and Hamilton Walk
Philadelphia, PA 19104-6073

Also, the University of Pennsylvania is an Equal Opportunity Employer.

MICROBIOLOGIST

The Department of Biological Sciences at the State University of New York at Binghamton invites applications for a tenure-track position at the assistant professor level. (Exceptional candidates at higher rank will be considered.) The candidate is expected to have a strong background in microbiology and must have demonstrated excellence in research. He/she will be expected to develop an externally funded research program that uses a molecular biological approach in the study of microbial systems, and to teach undergraduate microbiology as well as specialized graduate courses. Send curriculum vitae, current and proposed research summaries, statement of teaching interests, and recent publications; and have three letters of recommendation sent by referees to: **Dr. Anna Tan-Wilson, Department of Biological Sciences, SUNY-Binghamton, Binghamton, NY 13901** by 18 November 1988. SUNY-Binghamton, one of the four university centers of the SUNY system, has a reputation for excellence in undergraduate studies and is committed to growth in research and graduate education. The research interests of faculty in the department span the range from molecular and cellular to organismal and population biology. *An Equal Opportunity/Affirmative Action Employer.*

MOLECULAR BIOLOGISTS/IMMUNOLOGISTS: Tenure-track faculty positions (two), at the assistant or associate professor rank, are available for Ph.D. molecular biologists with two or more years of postdoctoral experience in recombinant DNA technology. Candidates should have interests in gene structure/function and expression in mammalian cells, and have demonstrated skills in constructing cDNA and genomic DNA libraries, molecular cloning, DNA sequencing, preparing prokaryotic and eukaryotic expression vectors, restriction enzyme mapping, and oncogenes. Preference will be given to individuals interested in the molecular biology of cancer. Major responsibilities will be to develop an independent research program and to collaborate on research projects with other faculty members. The department is undergoing a major growth phase, with a focus on cancer research, offering the successful candidates excellent incentives, including competitive salaries, research space and state-of-the-art equipment. Please send curriculum vitae, three letters of reference, and a description of your cancer research interests to: **George L. Wright, Jr., Ph.D., Professor and Chairman, Department of Microbiology and Immunology, Eastern Virginia Medical School, P.O. Box 1980, Norfolk, VA 23501.** *An Affirmative Action/Equal Opportunity Employer.*

MOLECULAR DEVELOPMENTAL BIOLOGIST with excellent scientific credentials to develop independent program at appropriate professorial rank from assistant through full professor in the tenure-track. Submit curriculum vitae, a short statement of future plans and direct three letters of recommendation to be sent to: **Dr. Gerald Litwack, Deputy Director, Fels Institute for Cancer Research and Molecular Biology, Temple University School of Medicine, 3420 North Broad Street, Philadelphia, PA 19140.** *An Equal Opportunity Employer.*

POSITIONS OPEN

MOLECULAR AND CELL BIOLOGY OF HIV MOLECULAR MEDICINE PROGRAM FRED HUTCHINSON CANCER RESEARCH CENTER

The Molecular Medicine Program of the Fred Hutchinson Cancer Research Center invites applications for a tenure-track **FACULTY POSITION** at the assistant member level, in the area of HIV cellular and molecular biology. The position offers interactions with a diverse group of basic and clinical scientists, and will complement an ongoing program in the molecular biology of HIV. Candidates should have a Ph.D. or M.D. degree, as well as significant postdoctoral research experience and potential for developing an independent research program.

Interested applicants should forward a brief description of research plans, curriculum vitae, and names of three or four references to:

Molecular Medicine Search Committee
c/o Beth Carlson
Fred Hutchinson Cancer Research Center
1124 Columbia Street
Seattle, WA 98104

on or before 15 December 1988.

The Fred Hutchinson Cancer Research Center is an Equal Opportunity/Affirmative Action Employer.

MOLECULAR BIOLOGY—RNA PROCESSING

A **RESEARCH ASSOCIATE** position will be available in the laboratory of **Thor Pederson** in January 1989, to join projects addressing alternative mRNA processing, spliceosome components, assembly and structure of small nuclear ribonucleoproteins, and the transcription and maturation of U1 and U2 snRNA's. This position can be filled at a senior research associate level for an individual with substantial relevant postdoctoral experience at a salary of \$29,000 to \$37,500. The Worcester Foundation is an academically-oriented basic research institute, emphasizing molecular approaches to cell and developmental biology, reproductive biology and neurobiology. The institute is located on a wooded suburban campus 38 miles west of Cambridge. This position carries a competitive fringe benefits package. Send curriculum vitae and names of two references to: **Dr. Thor Pederson, c/o Personnel Office, Worcester Foundation for Experimental Biology, 222 Maple Avenue, Shrewsbury, MA 01545.**

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NEUROSCIENCES

ASSISTANT OR ASSOCIATE PROFESSOR of neurosciences. Requirements: Ph.D. with preparation in neurosciences and anatomy; commitment to teaching podiatric medical students and graduate students; minimum 5 years of full-time teaching experience; postdoctoral teaching/research experience. Applicants should be engaged in active ongoing research program. Responsibilities include lecture, laboratory, and student advising. Salary open. Send résumé, transcripts, and three letters of recommendation by 20 November 1988 to: **Sister John Karen Frei, O.P., Ph.D., Associate Vice President, Academic Health Science Center, Barry University, Miami Shores, FL 33161.**

ST. GEORGE'S UNIVERSITY SCHOOL OF MEDICINE GRENADA, WEST INDIES

The University anticipates 1989 **OPENINGS IN PHYSIOLOGY, PHARMACOLOGY, AND BIO-CHEMISTRY.** Prior medical school teaching experience is required. Initial appointments are for 1 year, with renewals possible for periods of 1 to 3 years.

There is also a short-term position beginning January 1989 for a laboratory demonstrator in histology.

Applications will be considered from recent retirees in good health. Level of appointment will depend on the background of applicants. Send curriculum vitae and teaching references to:

Dean of Basic Sciences
St. George's University School of Medicine
c/o Foreign Medical School Services Corporation
One East Main Street
Bay Shore, NY 11706

POSITIONS OPEN

The Department of Chemistry at the University of Virginia is seeking an outstanding individual for a position in **ORGANIC/BIOORGANIC CHEMISTRY.** This appointment is expected to be made at the **ASSISTANT PROFESSOR** level (tenure-track), though exceptional senior applications will be considered. All areas of organic/bioorganic chemistry will be considered, including organometallic chemistry. Candidates with a commitment to excellence in research and teaching are encouraged to send curriculum vitae containing a list of publications, a concise outline of research plans, and arrange to have three letters of recommendations sent to: **Robert E. Ireland, Chairman, Department of Chemistry, University of Virginia, McCormick Road, Charlottesville, VA 22901.** *The University of Virginia is an Equal Opportunity/Affirmative Action Employer.*

PHYSICIANS

H. T. McCormick Associates, Inc., a nationally recognized executive search firm has exclusive openings in leading U.S. and European companies for physicians wishing to enter or expand their present experience in the industrial sector. **SENIOR DIRECTOR OF CLINICAL TRIALS:** OB/GYN area; MD with 5 years experience in the design and supervision of clinical trials. Six figure compensation. **ASSISTANT DIRECTOR OF REGULATORY AFFAIRS:** M.D. with strong regulatory experience with FDA interaction. Six figure compensation. **ASSOCIATE DIRECTOR OF CLINICAL TRIALS:** Infectious diseases/Internal medicine. \$90,000 range. **CLINICAL TRIALS DIRECTORS:** Multiple opportunities for M.D.'s to design and monitor clinical trials in cardiovascular and gastrointestinal areas. \$90,000 range. **ASSOCIATE DIRECTOR OF MEDICAL SERVICES:** M.D. preferably with MBA, corporate business development and supervision of medical inquiry responses. Company paid fees. Company paid relocation when appropriate. Send curriculum vitae in confidence to: **Ann F. Lees, Director of Scientific Recruitment, H. T. McCormick, Inc., P.O. Box 1206, Princeton, NJ 08540. Telephone: 201-297-8600.**

PLANT BIOLOGIST. Butler University is seeking to fill a tenure-track position at the assistant professor level to begin fall 1989. Butler emphasizes liberal education for undergraduates. Candidates should be broadly trained biologists with teaching and research interests in plant physiology. Training in molecular biology is desirable. Teaching responsibilities will include participation in introductory biology and upper division courses as well as supervising undergraduate research projects. A Ph.D. is required. Send curriculum vitae, a list of references, and statements of teaching strategies and research interests by 1 December 1988 to: **James L. Shellhaas, Department of Biological Sciences, Butler University, Indianapolis, IN 46208.** *Butler University is an Equal Opportunity/Affirmative Action Employer.*

PLANT CELL BIOLOGY

Research will emphasize the manipulation of cultured maize cells and tissues for genetic modification. Previous experience with cereal tissue culture desirable. B.S. or M.S. with relevant experience in plant science required. Position is available immediately. Applications will be accepted until 15 November 1988 or until position is filled. Letters of application, curriculum vitae, and names of three references should be sent to: **Debbie Bosch, Recruitment, United AgriSeeds, Inc., P.O. Box 4011, Champaign, IL 61820.**

Quantitative PLANT/CROP PHYSIOLOGIST OR ECOLOGIST needed to participate in research, applying mathematical modeling of the physiology of loblolly pine trees to forest stand growth and productivity. Candidate should be a U.S. citizen and have a Ph.D. with a strong background in whole-plant physiology, crop growth modeling, and mathematics, including differential equations. The position is permanent; salary range is \$22,900 to \$33,200. Position location: USDA Forest Service, Forestry Sciences Laboratory, Charleston, South Carolina. Applicants should send curriculum vitae, work history, and names of three references to: **Ivory Walker, Personnel Section, Southeastern Forest Experiment Station, P.O. Box 2680, Asheville, NC 28802.** *The Forest Service is an Equal Opportunity Employer; women and minority candidates are encouraged to apply.*

DIRECTOR

Institute of Biotechnology
The University of Texas Health Science
Center at San Antonio

The University of Texas Health Science Center at San Antonio (UTHSC-SA) includes the following schools: Allied Health Sciences, Dental, Medical, Nursing, and the Graduate School of Biomedical Sciences. Planning is underway for a major research building to house The University of Texas Health Science Center's Institute of Biotechnology (UTIBT), and the structure will be completed during the Summer of 1989. The UTIBT represents the cornerstone research facility for the 1500-acre Texas Research Park. The UTIBT is funded by state and private sources which include support for three endowed chairs and other faculty and staff positions. The director and faculty will hold academic appointments in established university departments. The UTIBT will be involved in the development of its own research strategies, technologies and products for transfer to the private sector, and in collaborative activities with other UTHSC-SA faculty and neighboring research institutions. It is intended that one focus of the UTIBT will be molecular pathogenesis and diagnosis of disease, although numerous other possibilities exist, depending upon the interests and qualifications of the director and the UTIBT research staff. This is a unique opportunity for an outstanding scientist with administrative experience to establish innovative research programs and to create an environment for technology transfer in close association with the developing Texas Research Park. The Director of the UTIBT will report to the Dean of the Graduate School of Biomedical Sciences. The UTIBT is located Southwest of the UTHSC-SA in the rolling hills and sylvan setting of San Antonio with easy access to the UTHSC-SA, downtown San Antonio, and the Texas Hill Country.

Please send curriculum vitae, a statement of current accomplishments and future research goals and the names of four references by December 30, 1988 to Dr. Joel B. Baseman, Chairman of Search Committee for UTIBT Director, Department of Microbiology, The University of Texas Health Science Center at San Antonio, 7703 Floyd Curl Drive, San Antonio, TX 78284-7758. UTHSC-SA is an equal opportunity, affirmative action employer.



香港城市理工學院

City Polytechnic of Hong Kong

TEACHING POSITIONS FROM AUTUMN 1989

IN A RAPIDLY EXPANDING INSTITUTION IN HONG KONG

DEPARTMENT: Applied Science

POSTS & SUBJECT AREA: Principal Lecturer/Senior Lecturer/Lecturer in Physical Sciences, Life Sciences, Environmental Science

REQUIREMENTS FOR APPOINTMENT: A good honours degree, and a higher degree preferably a PhD for senior appointments. Relevant professional, including teaching and research/industrial experience.

SALARY SCALE: HK\$141,480 p.a. to HK\$382,380 p.a. depending on level of appointment. (Exchange Rate: US\$1 = HK\$7.805 approximately)

TERMS & CONDITIONS: Option for appointment on gratuity-bearing terms (25% on basic salary) for two years or on superannuable terms with provision for retirement benefits will usually be offered. Excellent fringe benefits include medical & dental schemes and long leave. Passages and housing are provided where applicable.

APPLICATION PROCEDURE: Please send detailed resume together with names and addresses of 3 appropriate academic and professional referees to reach the General Secretary, City Polytechnic of Hong Kong, P.O. Box 98441, Tsim Sha Tsui Post Office, Kowloon, Hong Kong by 29 October 1988 the latest. Information regarding the Polytechnic and on posts advertised may be obtained by mail upon request.

LANSDOWNE CHAIR

Faculty of Arts and Science
University of Victoria
Victoria, British Columbia, Canada

Applications are invited for a new chair in biological sciences in the expanded program in forest biotechnology and regeneration. The successful applicant will be a person of national and international reputation who will enhance and encourage scholarship in the area of forest tree physiology. The program currently has three faculty members conducting research in tree development, tissue culture and molecular biology of forest trees. Two additional faculty members will be hired in the areas of tree physiology and plant biochemistry. The research and graduate program offers M.Sc. and Ph.D. degrees in the field of forest biotechnology and regeneration. The successful candidate for this chair will be appointed in the Department of Biology in the Faculty of Arts and Science.

Salary, conditions and benefits are to be negotiated, but they will be in line with terms of appointment associated with comparable senior academic positions in the faculty. Canadian immigration regulations require the University to access applications from Canadian citizens and permanent residents before others.

Applications, including full curriculum vitae and the names of three referees, will be accepted until December 31, 1988 and should be submitted to Dr. John T. Weaver, Acting Dean of Science, Faculty of Arts and Science, University of Victoria, P.O. Box 1700, Victoria, B.C., V8W 2Y2, Canada. Telephone: (604) 721-7061, Fax: (604) 721-8653.

The University of Victoria has approximately 500 faculty members, 11,000 undergraduate students and over 1,000 graduate students. The division of science, within the Faculty of Arts and Science, offers degrees in biochemistry, microbiology, biology, chemistry, computer science, mathematics, physics and astronomy.

The University of Victoria offers equal employment opportunities to qualified male and female applicants. Women are particularly encouraged to apply.

Biochemist/ Pharmacologist

The Agricultural Research Division of American Cyanamid Company is growing rapidly and currently has an exciting opportunity for a Biochemist or Pharmacologist in the Biochemistry & Physiology Group of its Animal Industry Discovery and Biotechnology Department. This individual will be involved in the development of novel immunological methods for animal growth regulation.

The successful candidate will have a Ph.D. in Biochemistry or Pharmacology and a strong background in the characterization and purification of receptors, and will be expected to generate information (such as amino acid sequences) essential for cloning of receptors. He or she will also be involved in assays and mechanism of action studies of novel peptide and non-peptide animal growth regulators. Additional skills in immunology and molecular biology are desirable but not essential. Collaboration with other investigators both inside and outside the company will be encouraged. We provide an opportunity to explore basic research problems in a goal-oriented environment.

American Cyanamid offers a competitive compensation and benefits package. For prompt and confidential consideration, forward your resume to the Employment Office.



American Cyanamid Company

Agricultural Research Division
P.O. Box 400
Princeton, NJ 08540

An Equal Opportunity Employer M/F/H/V

POSITIONS OPEN

PLANT ECOLOGIST—The Department of Biological Sciences at the University of Wisconsin-Milwaukee (UWM) invites applications for an anticipated faculty position at the level of **ASSISTANT OR ASSOCIATE PROFESSOR**. We are seeking a person using innovative approaches at the population or community level. The position offers broad opportunities for a versatile scientist to collaborate with existing faculty in ecological and evolutionary biology. Candidates for the tenured level should have strong records of teaching, research and grant support.

UWM is a major Ph.D.-granting urban university. Research facilities include the UWM Field Station, which has a diversity of habitats from bog lakes to upland forests, and the Center for Great Lakes Studies located on Lake Michigan in Milwaukee.

Applicants should send curriculum vitae, statements of research plans and teaching interests, reprints of selected publications, and at least three letters of recommendation to: **Chair, Plant Ecologist Search Committee, Department of Biological Sciences, University of Wisconsin-Milwaukee, P.O. Box 413, Milwaukee, WI 53201.**

Closing date: 1 December 1988.

The University of Wisconsin-Milwaukee is an Affirmative Action/Equal Opportunity Employer.

PLANT PHYSIOLOGIST/MOLECULAR BIOLOGIST, ASSISTANT OR ASSOCIATE PROFESSOR, Oklahoma State University. Tenure-track, 12-month appointment; research emphasis on plant responses and adaptations to environmental stress. Must have Ph.D., preferably in the plant sciences, and demonstrated ability in molecular aspects of plant physiology. Postdoctoral experience is desirable. Send statement of professional goals/research interests, curriculum vitae, reprints, college transcripts, and at least three letters of reference to: **Dr. Charles J. Scifres, Head, Department of Agronomy, Oklahoma State University, Stillwater, OK 74078.** *Oklahoma State University is an Equal Opportunity Employer.*

PLANT PHYSIOLOGY

The Department of Biology at the University of Utah, continuing its development in plant biology, invites applications for a **TENURE-TRACK POSITION** in plant physiology. We seek candidates with extensive backgrounds in plant biology who will establish a strong research program and contribute to instruction at undergraduate and graduate levels, including a basic course in plant physiology. We particularly hope to appoint a colleague who can establish productive interactions with existing programs in the Department. This position may be filled at either a junior or senior level. Under exceptional circumstances, a second position may be filled, pending final budgetary approval.

Address applications or nominations to:

**Dr. James Ehleringer
Plant Physiology Search Committee
Department of Biology
University of Utah
Salt Lake City, UT 84112**

Please send a résumé, copies of recent publications, and three letters of reference. The deadline for receipt of all application materials is 15 December 1988.

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

POSTDOCTORAL FELLOW/SENIOR RESEARCH ASSOCIATE position available immediately to study the regulation of a newly identified cancer/leukemia related gene. Experience in molecular biology is essential. This research will be performed at the SUNY Health Science Center/VA Hospital in Brooklyn, New York. Send curriculum vitae and names of three references to: **Dr. G. F. Atweh, VA Hospital (111E), 2215 Fuller Road, Ann Arbor, MI 48105.** *An Equal Opportunity Employer.*

POSTDOCTORAL FELLOW OR RESEARCH ASSOCIATE. Position available immediately to study the use of primary hepatocyte cultures as a model of alcohol toxicity. Experience in tissue culture and general biochemical techniques desirable. Salary commensurate with experience. Please send résumé and references to: **Dr. Arthur I. Cederbaum, Box 1020, The Mount Sinai School of Medicine, One Gustave L. Levy Place, New York, NY 10029-6574.** *An Equal Opportunity Employer.*

POSITIONS OPEN

POSTDOCTORAL ASSOCIATE— INSECT ENDOCRINOLOGY

Project concerns the endocrinology of oogenesis and sterility in ants. Preferred background includes RIA, other quantitative immunoassays, in vitro culture, and microsurgery. Available January 1989. Send curriculum vitae and list with names and phone numbers of three references to: **Dr. D. Wheeler, University of Arizona, Entomology Department, Tucson, AZ 85721.** Closing 15 November 1988 or until position filled. *An Equal Employment Opportunity/Affirmative Action Employer. Women and minorities are especially encouraged to apply.*

POSTDOCTORAL FELLOW— FISHERIES/PHYSICAL OCEANOGRAPHY

A postdoctoral position is available immediately in the Department of Biology at McGill University to work, in conjunction with scientists at the Bedford Institute of Oceanography (Dartmouth, Nova Scotia), and NAFC (St. John's, Newfoundland), on the Grand Bank of Newfoundland. The study involves the analysis and interpretation of adult and larval fish data, and moored and survey physical oceanographic measurements taken in 1958 to 1988; participation in a continued field program in 1989; and the development of simple models for atmospheric-oceanographic-biological interactions. The nature of this work will require that the incumbent spend some time at the Bedford Institute of Oceanography each year.

Forward curriculum vitae, representative reprints, and names, addresses, and telephone numbers of at least three potential referees to:

**Dr. W. C. Leggett
Room 211
Dawson Hall
McGill University
853 Sherbrooke Street West
Montreal, Quebec H3A 2T6**

POSTDOCTORAL FELLOW

A position is available for a candidate trained in organic, medicinal or peptide chemistry to work on a project involving the design and synthesis of inhibitors of neuropeptide degrading enzymes. This fellowship is supported by a training grant from the National Institute of Drug Abuse (NIDA). Requirements are a Ph.D. or M.D. degree and U.S. citizenship or permanent resident. Salary: NIDA stipend plus supplement. Immediate availability.

Send curriculum vitae and names of three references to: **Graduate and Postgraduate Training Committee, Department of Pharmacology, Box 1215, The Mount Sinai School of Medicine, One Gustave L. Levy Place, New York, NY 10029-6574.** *An Equal Opportunity Employer.*

POSTDOCTORAL FELLOW OR RESEARCH INVESTIGATOR to work with nuclear medicine/neuroscience research team developing radiotracers for positron emission tomography studies. Background in pharmacology or neuroscience and experience in handling radioactivity desirable. Send résumé to: **Kirk Frey, M.D., Ph.D., Division of Nuclear Medicine, University Hospital B1G412, Box 0028, 1500 East Medical Center Drive, Ann Arbor, MI 48109-0028.** *A Non-discriminatory, Affirmative Action Employer.*

POSTDOCTORAL FELLOWS: Ph.D. organic or medicinal chemists to conduct interdisciplinary research on developing radiopharmaceuticals for diagnostic imaging. Strong background on organic synthesis is essential, working knowledge on radioisotopes is helpful but not necessary. Please send curriculum vitae to: **Hank F. Kung, Ph.D., Department of Radiology, University of Pennsylvania, Philadelphia, PA 19104.** *The University of Pennsylvania is an Equal Opportunity Employer.*

POSTDOCTORAL POSITION available to study regulation of *Ldh-c* gene expression and its relationship to spermatogenesis in the mammalian testis. A recent Ph.D. in biochemistry, molecular biology or cell biology is preferred. Excellent references required. Please send names and addresses of three references and curriculum vitae to: **Dr. Erwin Goldberg, Professor, Northwestern University, Department of Biochemistry, Molecular Biology and Cell Biology, Evanston, IL 60208.** *Equal Opportunity Employer.*

POSITIONS OPEN

POSTDOCTORAL POSITION available for neuropharmacologist/physiologist to study neuroimmunoregulation of gastrointestinal motility and transport in a productive research laboratory at USUHS School of Medicine, Bethesda, and Walter Reed Army Institute of Research, Washington, D.C. Experience with in vivo techniques or in vitro muscle strips desirable. Salary is \$24,000 to \$28,000 commensurate with qualifications. Position available September 1988. Initial appointment is for 1 year and is renewable subject to availability of funding. Send curriculum vitae and names of three references to: **USUHS School of Medicine, Civilian Personnel, Attention: Dr. Robert Sjogren, 4301 Jones Bridge Road, Bethesda, MD 20814.**

POSTDOCTORAL POSITION (M.D. or Ph.D.) available with the Department of Neurosurgery at Thomas Jefferson University in experimental and clinical neurophysiology of the spinal cord. The position entails basic spinal cord physiology work involving electrophysiological techniques carried out in the physiology department as well as clinical work with electrodes implanted on the spinal cord in humans. Emphasis is placed on close integration between basic research and clinical neurophysiology. Send curriculum vitae and three reference letters to: **Giancarlo Barolat, M.D., Department of Neurosurgery, Thomas Jefferson University, 1025 Walnut Street, Philadelphia, PA 19107.**

POSTDOCTORAL POSITION

There will be a position available for a postdoctoral associate to participate in a joint research project in the laboratories of **Drs. Steven Treistman and José Lemos**, beginning in January 1989. We will use patch clamp techniques to study the effects on ethanol on voltage-dependent channels in isolated peptide-releasing nerve terminals from the neural lobe of the rat. A component of the study will use rats which have been selectively-bred for their alcohol preferences, to examine a possible genetic predisposition for alcoholism. Please send résumé and the names of three references to: **Dr. Steven N. Treistman, c/o Personnel Office, Worcester Foundation for Experimental Biology, 222 Maple Avenue, Shrewsbury, MA 01545.**

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

POSTDOCTORAL POSITION

Postdoctoral position in molecular immunology/cell biology is available for Ph.D. or M.D. interested in regulation of immunoglobulin gene expression and/or molecular mechanisms of carcinogenesis in transgenic animals. Research involves cloning and expression of Ig genes, identifications of mechanisms responsible for preferential gene usage, and studies of tumors in transgenic animals carrying oncogenes. Send curriculum vitae, including references to: **Dr. Katherine L. Knight, Department of Microbiology and Immunology, University of Illinois at Chicago, P.O. Box 6889, Chicago, IL 60680.**

POSTDOCTORAL POSITION available immediately to study adrenergic receptor regulation in the CNS. Ph.D. with training in pharmacology/biochemistry is required. Experience in tissue culture and neurochemistry is desirable. Send curriculum vitae and three letters of recommendations to: **Dr. Mohan K. Raizada, Department of Physiology, Box J274 (Telephone: 904-392-3791) or Dr. Stephen P. Baker, Department of Pharmacology, Box J367 (Telephone: 904-392-3540), University of Florida, College of Medicine, Gainesville, FL 32610.** *Equal Opportunity/Affirmative Action Employer.*

POSTDOCTORAL POSITION (biochemistry/cell biology) available to study cell surface glycoconjugates in the retina and retinal pigment epithelium and their alterations in retinal pathology. Experience in glycoprotein, proteoglycan and/or oligosaccharide characterization, immunological techniques, or cell culture desirable. Send curriculum vitae and names of three references to: **A. Tyl Hewitt, Ph.D., Retinal Degenerations Research Center, Wilmer Eye Institute, The Johns Hopkins University School of Medicine, Maumenee 519, 600 North Wolfe Street, Baltimore, MD 21205.**

POSITIONS OPEN

POSTDOCTORAL POSITION—1 December 1988. To study the chemistry, enzymology, and structure of neuro and atrial peptides and their precursor proteins. Areas include peptide synthesis, protein/peptide chemistry, cell culture, and molecular modeling. Send curriculum vitae and names of three references to: **Dr. Robert B. Harris, Virginia Commonwealth University, Department of Biochemistry, Box 614, Richmond, VA 23298.** An Equal Opportunity/Affirmative Action Employer.

POSTDOCTORAL POSITION available in molecular neurobiology to study voltage-dependent Ca channels expressed in mRNA-injected *Xenopus* oocytes. Background in molecular biology or electrophysiology would be helpful. Send curriculum vitae and names of three references to: **Dr. John P. Leonard, Department of Biological Science, MC/066, University of Illinois at Chicago, PO Box 4348, Chicago, IL 60680.** An Equal Opportunity/Affirmative Action Employer.

POSTDOCTORAL POSITION: available 1 January 1989 to study the bioenergetics and biogenesis of the cytochrome *b-c₁* complex of yeast mitochondria. Background in membrane biochemistry and/or molecular genetics preferred. Send curriculum vitae and the names of three references to: **Dr. Diana S. Beattie, Professor and Chair, Department of Biochemistry, West Virginia University School of Medicine, Morgantown, WV 26506.** An Equal Opportunity/Affirmative Action Employer.

POSTDOCTORAL POSITION for 2 years in alcohol research available immediately. Studies include the hormonal regulation of ethanol metabolism in primary hepatocyte culture and the effects of ethanol on glutathione metabolism both in vivo and in hepatocyte culture. *U.S. citizen or permanent resident.* Send letter of application and curriculum vitae to: **Esteban Mezey, M.D., Professor of Medicine, The Johns Hopkins University, Hunt. 415, 725 North Wolfe Street, Baltimore, MD 21205.**

POSTDOCTORAL POSITION available immediately for research on the structure and function of mitochondrial outer membrane. A combination of protein biochemical and molecular cell biological approaches will be used in these studies. Candidates should be recent Ph.D.'s. Experience in protein purification, phospholipid metabolism or membrane biochemistry is desirable. Send curriculum vitae and names of three references to: **Dr. Dipak Haldar, Department of Biological Sciences, St. John's University, Jamaica, NY 11439.** *St. John's University is an Equal Opportunity Employer M/F.*

POSTDOCTORAL POSITION in computational chemistry available immediately. The project involves developing novel numerical methods for searching for molecular conformations, especially as applied to peptides and proteins. Send curriculum vitae and names of three references to: **Dr. G. M. Crippen, College of Pharmacy, University of Michigan, Ann Arbor, MI 48109.**

POSTDOCTORAL POSITION available 1 December, 1988 for NIH-funded study of protective immunity in filariasis. We are looking for an imaginative person with experience in protein chemistry and/or molecular biology to complement ongoing program. Experience in parasitology is not essential. Send curriculum vitae and names of three references to: **Gary J. Weil, M.D., The Jewish Hospital at Washington University Medical Center, 216 South Kingshighway, St. Louis, MO 63110.**

POSTDOCTORAL POSITION available to study structure/function of post-translational processing of neuroendocrine proteins (proteolytic, phosphorylation, sulfation). Experimental approaches may include: cell culture, HPLC, immunochemistry, peptide synthesis and sequencing, and FAB mass spectrometry. Send curriculum vitae and names of three references to: **Dr. Ruth Hogue Angeletti, Developmental Biology and Cancer, Albert Einstein College of Medicine, 1300 Morris Park Boulevard, Bronx, NY 10461.** Equal Opportunity Employer M/F/H/V.

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We're The R.W. Johnson Pharmaceutical Research Institute, a member of the Johnson & Johnson Family of Companies. Our strategy is to maintain a fast-growing pharmaceutical business by continuing to discover and develop products of the highest quality. More than 4,000 trademark registrations worldwide attest to our past. A variety of therapeutic drug categories attest to our future. You can be part of this exciting and meaningful environment and give your career new momentum if you meet the requirements of one of the following openings.

Sr. Associate Scientist/ Associate Scientist (Immunopharmacology)

The senior level position requires an MS or equivalent in Physiology, Biophysics or Radiation Biology and 5-8 years' experience or a BS or equivalent and 7-10 years' experience. To qualify at the Associate level, you should have 2-5 years' or 4-7 years' experience with MS or BS or equivalent respectively.

You must be able to work with small laboratory animals and conduct the bioassay of erythropoietin by determining the incorporation of radioactive iron into newly produced red blood cells. To qualify at the senior level, you must have demonstrated ability to supervise technical personnel, familiarity with GLP operation, and experience handling radionuclides. To qualify at the Associate level, you should have radiation experience and familiarity with computers, data handling and statistical analysis of data. (Dept. 75A)

Associate Scientist Research Associate (Immunopharmacology)

Requires MS/BS or equivalent in Pharmacology or Biology and 2-7 years' experience for Associate Scientist or 0-2 years' for Research Associate. You will investigate different methods for the bioassay of erythropoietin. You must be able to work with laboratory animals to confirm results of independent investigators and develop alternatives to the current EPO bioassays. You should have research experience in developing new methodologies in vivo, and be able to take a known biological pathway and restructure it to assay pharmacologic agents. (Dept. 75B)

Research Associate (Micro Validation)

Requires MS or equivalent in Microbiology or a BS and 2 years' experience in an industrial microbiological laboratory. You will prepare written investigations and protocols as appropriate to the microbiological validation of non-sterile products. This includes collecting both product and environmental samples, preparing them for testing, and performing a variety of tests on the samples collected. (Dept. 75C)

We offer competitive salaries and the comprehensive benefits you would expect from a Johnson & Johnson Company. We invite you to forward your resume, including salary requirements, to: Ms. Georgia Grant, Ortho Pharmaceutical Corporation, Dept. # as indicated above, P.O. Box 300, Raritan, New Jersey 08869-0602.

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MEDICINAL CHEMIST

The Microbiology and Infectious Diseases (MID) Program of the National Institute of Allergy and Infectious Diseases (NIAID) of the National Institutes of Health is seeking a Medicinal Chemist to join the Antiviral Substances Program. The Program is responsible for planning and directing a Federal program of extramural research projects for the discovery and preclinical development of potential therapies for the treatment of viral diseases other than AIDS. Major efforts include drug discovery and synthesis, *in vitro* screening, evaluation in animal models for efficacy and pharmacokinetics and clinical trials. The medicinal chemist will have preliminary responsibility for managing synthetic, screening, and pharmacokinetic activities of the Program. The medicinal chemist will also organize workshops and make recommendations for program directions and new activities. Salary commensurate with training and experience, but is anticipated to be at the GM 13/14 level (\$39,501-\$46,679). A Ph.D. in a chemical, pharmacologic or microbiological science and at least three years of relevant research experience is required. U.S. citizenship is required.

Send curriculum vitae, bibliography and names of references to:



Dr. Catherine Laughlin
Development and Applications Branch
MIDP, NIAID, NIH, PHS
5333 Westbard Avenue, Room 750
Bethesda, Maryland 20892
(301) 496-7051

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University
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APPOINTMENTS

School of Animal and Microbial Sciences

PROFESSORSHIP OF MOLECULAR BIOLOGY

Applications are invited for the newly established Professorship of Molecular Biology. Candidates should have an established reputation in cellular or molecular biology including fields such as development, gene expression, immunology or oncology.

The Professor will be expected to contribute to developments and research leadership in molecular biology throughout the School of Animal and Microbial Sciences.

The Professor will be based in the Department of Pure and Applied Zoology but an applicant's interests need not be in the areas conventionally viewed as zoological.

A Research Fellowship for a fixed term of five years will be assigned to the Professorship.

The appointment will be made from a date to be agreed with the successful candidate.

Further information may be obtained from the Registrar, Room 212, Whiteknights House, P.O. Box 217, The University, Whiteknights, Reading RG6 2AH.

The closing date for applications is 14 November 1988.

Scientist

The Immunology Department of BOEHRINGER INGELHEIM PHARMACEUTICALS, INC., a highly respected and rapidly growing pharmaceutical company, is seeking an experienced Scientist for our Research and Development Center located in DANBURY, CONNECTICUT.

The individual we seek should have an M.S. degree in Biochemistry with 3 years experience or a B.S. degree with 7 years experience. Requirements include an understanding of Immunology or Cell Biology, Immunochemical techniques, lab experience with gel electrophoresis systems, affinity chromatography, protein purification, sterile techniques and the ability to integrate biochemical and cell biology techniques is desirable.

This position is responsible for the independent performance of routine and non-routine lab duties, design, execution and interpretation of experiments and assisting in the development of new research areas and protocols.

BOEHRINGER INGELHEIM PHARMACEUTICALS, INC., offers a highly competitive compensation and benefits package, relocation assistance, excellent work environment and the opportunity to have your contributions recognized.

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Dept. PTC-1Q, BOEHRINGER INGELHEIM
PHARMACEUTICALS, INC., 90 East Ridge, P.O. Box 368,
Ridgefield, CT 06877. We are an equal opportunity employer m/f/h/v.



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BS/MS SCIENTISTS

Toxicology Division

For more than a century, scientists at ELI LILLY AND COMPANY have developed innovative, high quality pharmaceutical products. In 1988, Lilly is investing over \$500 million in research-and-development programs. More than 3,000 scientists at the company's Lilly Research Laboratories and Biochemical Development Divisions are pursuing creative research programs that involve many important health care needs.

To further build its research capabilities, Lilly is seeking self-motivated, innovative scientists for the Toxicology Division.

Biochemist/Neurobiologist

- To actively participate in the design, execution, and analysis of experiments examining the neurochemical/neuroendocrinological functions of the brain.
- Bachelor's or Master's degree in Physiology, Biochemistry or Neurobiology required.
- Experience in areas such as HPLC, RIA, brain dialysis probes, reverse hemolytic plaque assay, or *in situ* hybridization techniques preferred.
- Excellent oral and written communication skills necessary.

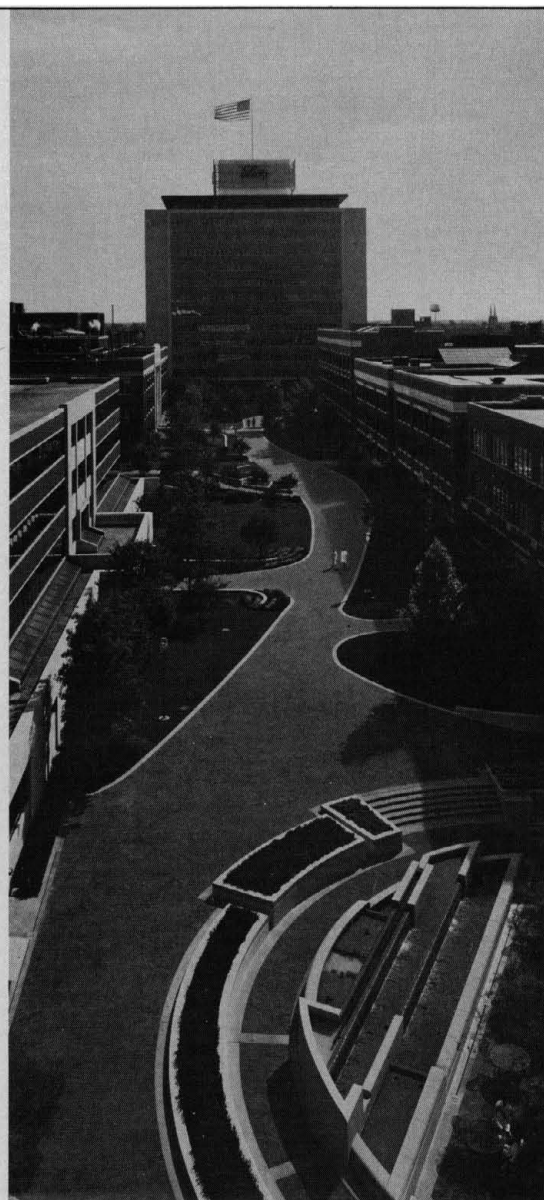
Microbiologist/Cell Biologist

- To assess the genotoxic potential of new drug candidates through the conduct of *in vitro* tests in bacterial and cultured cells and to contribute to the development of novel methods to predict chemical carcinogenesis.
- Bachelor's or Master's degree in Life Sciences area required, with training in microbiology, cell biology, or a related discipline.
- Laboratory experience preferred in cell culture methodologies.
- Excellent oral and written communication skills necessary.

Eli Lilly and Company is committed to scientific excellence. Lilly provides a stimulating professional atmosphere with many opportunities for collaborative, multidisciplinary research. The company offers an attractive total compensation program. Entry level and salary will be based upon each candidate's experience.

For prompt consideration, please forward your *résumé* to:

Maria L. Poor
Science Recruitment (AT3)
Eli Lilly and Company
Lilly Corporate Center
Indianapolis, Indiana 46285



Equal Opportunity Employer

POSITIONS OPEN

POSTDOCTORAL POSITION

Postdoctoral position available to study gene expression during spermatogenesis. Experience in molecular biology or biochemistry preferred. Must hold Ph.D. or equivalent degree. Send curriculum vitae, including bibliography and the names and addresses of three references to: **Dr. Samuel S. Koide, The Population Council, Center for Biomedical Research, 1230 York Avenue, New York, NY 10021.**

POSTDOCTORAL POSITION available 1 December 1988, to study structure-function of high molecular weight actin crosslinking proteins, primarily in platelets and smooth muscle. Structural and functional properties of filament or actin binding protein will be investigated using peptide domains together with biochemical and protein chemical methods. Prefer Ph.D. in biochemistry. Some experience with HPLC and protein isolation/characterization and an interest in cytoskeletal dynamics at the submolecular level are advantageous. Send curriculum vitae with names, addresses, and telephone numbers of three references to: **Dr. David Speicher, Protein Chemistry, The Wistar Institute, 36th and Spruce Streets, Philadelphia, PA 19104.** *Equal Opportunity Employer, M/F.*

POSTDOCTORAL POSITION available to study the biochemistry/molecular biology of regulation of neural cells by protease nexin-1 (PN-1) and the protease thrombin. PN-1 is a protein secreted by glial cells that inhibits thrombin. PN-1 stimulates neurite outgrowth; thrombin brings about neurite retraction. PN-1 and thrombin also reciprocally regulate glial differentiation. PN-1 is reduced 8-fold in Alzheimer's disease. Ongoing projects include: (a) regulation of PN-1 synthesis and secretion by cultured glial cells, (b) molecular basis of the PN-1 decrease in Alzheimer's disease, (c) regulation of PN-1 activity by the extracellular matrix, and (d) synthesis and secretion of thrombin by cultured neural cells. Experience in biochemistry/molecular biology is desirable. Send curriculum vitae and the name of three references to: **Dr. Dennis D. Cunningham, Department of Microbiology and Molecular Genetics, University of California, Irvine, CA 92717.**

Equal Opportunity/Affirmative Action Employer

THE SALK INSTITUTE POSTDOCTORAL POSITION IN COMPUTATIONAL BIOCHEMISTRY

The Clayton Foundation Laboratories for Peptide Biology of The Salk Institute for Biological Studies is seeking a candidate to undertake research in molecular modelling of naturally occurring peptides and peptide analogs using molecular dynamics, energy minimization, and state-of-the-art conformational search and analysis procedures toward the understanding of the role of conformation in biological activity. The ideal candidate will have a strong background in computational chemistry, theoretical chemistry, statistical mechanics, and/or physical-organic chemistry. Experience in an academic computing environment is required, and further experience in computer programming and vector architecture systems such as the CRAY X/Mp-48 is highly desirable. The starting salary depends upon qualifications. Recruitment and selection will be completed by 1 December 1988.

Interested individuals may submit curriculum vitae and a statement of research experience and interests to:

**Search Committee JR
The Salk Institute for Biological Studies
P.O. Box 85800
San Diego, CA 92138-9216**
Equal Opportunity Employer M/F/H/V.

POSTDOCTORAL POSITION IN PLANT MOLECULAR BIOLOGY

To work on one of the following: (i) evolution of gene families and mechanisms of DNA duplication and movement within and among the plant genomes, (ii) molecular evolution of flower-pollinator interaction. Other topics in molecular evolution might also be suitable. Position available June 1989 or later. Write to: **Eran Pichersky, Biology Department, The University of Michigan, Ann Arbor, MI 48109.**

The University of Michigan is a nondiscriminatory Affirmative Action Employer.

POSITIONS OPEN

POSTDOCTORAL POSITION IN MOLECULAR VIROLOGY. A postdoctoral position is available to study the regulation of mRNA stability in cells infected with herpes simplex virus. The successful candidate will join a research group interested in characterizing trans acting molecules which regulate mRNA half lives, as well as cis acting signals that distinguish mRNAs with different stabilities. The work will include construction and analysis of viruses carrying mutations in a gene whose product has been shown to regulate mRNA stability. Applicants should have a strong background in molecular biology, virology, or molecular genetics. Send curriculum vitae and three letters of recommendation to:

**Dr. G. Sullivan Read
Department of Microbiology
Loyola University of Chicago
Stritch School of Medicine
2160 South First Avenue
Maywood, IL 60153**

Loyola University is an Affirmative Action/Equal Opportunity Employer.

POSTDOCTORAL POSITION MOLECULAR BIOLOGY COLUMBIA UNIVERSITY

A postdoctoral position is available for an individual with a background in molecular genetics or biochemistry to investigate structure/function relationships in RNA polymerase of *E. coli*. The multidisciplinary approaches used include: in vitro mutagenesis of cloned *rpo* genes; overexpression of RNA polymerase subunits; assembly of RNA polymerase from isolated subunits; analysis of RNA-polymerase-promoter complexes; sequence analysis of mutations induced [for detail, see: *Gene* 58, 13, (1987); *J. Biol. Chem.* 263, 1174, (1988)]. Salary according to qualifications. Interested individuals contact: **Dr. Alex Goldfarb, Department of Microbiology, Columbia University, 701 West 168 Street, New York, NY 10032.**

POSTDOCTORAL POSITIONS are available immediately in the Laboratory of Neurochemistry (**Dr. G. Kapatos**) and the Laboratory of Molecular Neurobiology (**Dr. M. Bannon**). Emphasis is placed on the use of tissue culture techniques to study dopamine- and peptide-containing neurons and basal ganglia function. Studies in the Laboratory of Neurochemistry involve neurochemical and flow cytometric analysis of the adult and developing nervous system, focusing primarily on the biochemical/cell biological characterization of dopamine cells. Studies in the Laboratory of Molecular Neurobiology focus mainly on the regulation of neuropeptide gene expression in vivo and in culture using neurochemical and molecular genetic techniques. Applicants should have experience in one or more of the following areas: tissue culture, protein purification, cloning, oocyte expression, or in situ hybridization. Send curricula vitae and the names of three references to: **Center for Cell Biology, Sinai Research Institute, Sinai Hospital of Detroit, 6767 West Outer Drive, Detroit, MI 48235.**

POSTDOCTORAL RESEARCH ASSOCIATE. Position open immediately to participate in research on the biosynthesis of glycoproteins by the retina with emphasis on (i) mechanisms regulating the glycosylation of rhodopsin; (ii) regulation of the dolichol pathway. Please send your curriculum vitae and the names and addresses of three references to: **Dr. Edward Kean, Eye Research Laboratory, Room 653 Wearn Building, Case Western Reserve University, Cleveland, OH 44106.**

POSTDOCTORAL RESEARCH ASSOCIATE POSITION available immediately for M.D., D.V.M. and/or Ph.D. interested in studying the role of intracellular enzyme(s) as important second messengers in regulation of mRNA for interleukins and in lymphocyte proliferation. Applicants should have knowledge of cellular and molecular immunology and competent to use HPLC. Interaction with other postdoctoral fellows is available. P.I. currently have funds from NIH, USDA and American Heart (Kansas). Send a letter of application along with curriculum vitae and also request that three letters of recommendation be sent to: **Dr. Rao Atluri, Department of Anatomy of Physiology, College of Veterinary Medicine VMS228, Kansas State University, Manhattan, KS 66506.** *KSU is an Equal Opportunity/Affirmative Action Employer.*

POSITIONS OPEN

POSTDOCTORAL RESEARCH APPOINTMENTS are occasionally available with individual faculty members of the Departments of Chemistry and of Chemical Engineering at the University of California, Berkeley. Appointments are normally made for a year, but with the possibility of renewal for a second. Highly qualified persons are invited to apply for positions to be assumed at the time of, or shortly after, the completion of doctoral studies. A single application should be addressed to the faculty member with whom the applicant prefers to be associated. (In the event that no position is available with that faculty member, the application will be circulated to other faculty members with similar research interests.) Arrangements should be made for one confidential letter of reference to be sent by the person best able to judge the applicant's research achievements and potential. Applications should include a résumé, a brief statement of research experience, interests and goals, and the names and addresses of two additional references. *The University of California is an Equal Opportunity/Affirmative Action Employer.*

POSTDOCTORAL RESEARCH ASSOCIATE

Available immediately for studies of milk proteins and development of bioprocesses using techniques based on surfaces that exhibit molecular recognition. Prefer Ph.D. in biochemistry/food science or a related biotechnology area and a working knowledge of HPLC and other techniques of protein chemistry. Send curriculum vitae and letters of reference to: **Dr. Harold E. Swaisgood, Department of Food Science, North Carolina State University, Raleigh, NC 27695-7624.**

POSTDOCTORAL RESEARCH ASSOCIATE

Projects include identification, isolation, cloning, and DNA sequencing of a peptide hormone receptor. A molecular biologist would function within a state of the art protein chemistry facility. Studies in progress concern protein design, synthesis, modeling, and evolution. Candidates must have a strong background in molecular biology and/or protein chemistry. Salary is competitive. Send curriculum vitae and names of three references to:

**Dr. Christian Schwabe
Department of Biochemistry and Molecular Biology
Medical University of South Carolina
171 Ashley Avenue
Charleston, SC 29425**

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POSTDOCTORAL RESEARCH ASSOCIATES

The U.S. Department of Agriculture (USDA), Agricultural Research Service (ARS), has openings for three postdoctoral research associate positions at the Regional Poultry Research Laboratory, East Lansing, Michigan, in areas of: (i) construction of expression vectors from Marek's disease virus, and (ii) fowlpox construction recombinant vaccines. Recent Ph.D. in molecular biology or related disciplines required. Salary commensurate with experience (\$27,716 to \$33,218). Please send curriculum vitae and names of three references to **James Harbin, USDA, ARS, Regional Poultry Research Laboratory, 3606 East Mt. Hope Road, East Lansing, MI 48823.** Applications must be marked 8N032 (i) or (ii), depending on research area for which application is made. Additional information may be obtained by calling: (i) **R. F. Silva** or (ii) **K. Nazerian** at 517-337-6828. Applications must be received by 15 November 1988. *ARS is an Equal Opportunity Employer.*

POSTDOCTORAL RESEARCH ASSOCIATES (two). Available 1 November 1988 to study animal models of neuro-degenerative diseases and the role of neurotrophic factors in preventing cell death. Ph.D. or M.D. Experience with rat neurosurgery, limbic system organization, neuroanatomical techniques, and immunocytochemistry desired. Send curriculum vitae and names of three references to: **Dr. Gary M. Peterson, Department of Anatomy and Cell Biology, East Carolina University School of Medicine, Greenville, NC 27858.** *An Equal Opportunity/Affirmative Action Employer. Federal law requires proper documentation of identity and employability at the time of employment.*

POSITIONS OPEN

POSTDOCTORAL/RESEARCH ASSOCIATE position available immediately to study the biology of cell surface proteoglycans of epithelial and/or myeloid cells. Studies examine proteoglycan structure, expression and interactions with the cytoskeleton and matrix. Experience in recombinant DNA methods and cell/developmental biology desirable. Send curriculum vitae to: **Dr. Alan Rapraeger, Department of Pathology, University of Wisconsin, 1300 University Avenue, Madison, WI 53706.**

POSTDOCTORAL RESEARCH ASSOCIATE/RESEARCH ASSISTANT PROFESSOR: Pathobiology department at the University of Pennsylvania has a position for a recent Ph.D. or a person with postdoctoral training. Salary and position depends on experience. Candidate must have experience with standard molecular biology techniques, and will be expected to take an active part in further developing and carrying out research in developmental or pathobiological aspects of smooth muscle in an ongoing program. Send résumé, statement of research interests, names of three references to: **Dr. Samuel K. Chacko, Department of Pathobiology, 389 E School of Veterinary Medicine, University of Pennsylvania, 3800 Spruce, Philadelphia, PA 19104.** *University of Pennsylvania is an Equal Opportunity/Affirmative Employer.*

POSTDOCTORAL RESEARCH FELLOW position to investigate the role of neuronal growth factors, e.g., NGF in neuronal plasticity and axonal growth in the mature mammalian brain. Applicants should have prior training in one or more of the following areas: tissue culture, biochemistry (protein purification, ELISA, hplc), histology (immunohistochemistry), or molecular biology. Send curriculum vitae and the names of three references to: **Keith A. Crutcher, Ph.D., Department of Neurosurgery, University of Cincinnati Medical Center, Cincinnati, OH 45267.**

POSTDOCTORAL TRAINING OPPORTUNITIES: Positions are available immediately to study the biochemical mechanisms of antiviral peptide transport and metabolism at the blood-brain barrier using an established tissue culture model. Background in biochemistry and experience with cell culture, peptides, and HPLC desirable. Send curriculum vitae, summary of research experience, and the names of three references to: **Dr. Kenneth L. Audus, Department of Pharmaceutical Chemistry, The University of Kansas, Lawrence, KS 66045-2504. Telephone: 913-864-3609.**

PROFESSORSHIP AT UCLA MICROBIOLOGY OF ORGANISMS FROM EXTREME HABITATS DEPARTMENT OF MICROBIOLOGY AND CENTER FOR THE STUDY OF LIFE IN EXTREME ENVIRONMENT (CSLEE)

University of California, Los Angeles (UCLA) is recruiting a general bacteriologist with an established research program in the areas of molecular genetics, evolutionary biology or physiology of organisms which thrive under and require extremes of temperature, pH or salinity. This appointment can be made at any level from assistant professor to professor. There is special interest in candidates whose research focus is on sulfur respiring, chemolithotrophic anaerobes.

Teaching responsibilities within the Department will be in the candidates' area of research interest.

The professor will have the opportunity to interact with investigators from the Departments of Chemistry, Biochemistry, Chemical Engineering, Geology, and Biology and from the MBI in the newly formed Center for Study of Life in Extreme Environments. UCLA has committed substantial resources to the Center to create a facility for scale-up fermentation of "extremeophiles" to facilitate study of their cellular processes and macromolecules.

Please submit curriculum vitae, brief description of research goals, and the names of at least three references, by 15 November 1988 to: **Dr. C. Fred Fox, Chairman of Search Committee, Department of Microbiology, University of California, Los Angeles, CA 90024.** *UCLA is an Equal Opportunity/Affirmative Active Employer.*

This position is independent of another opening for a Symbiosis/Developmental Bacteriologist (see *Science*, 9 and 30 September 1988).

Enrico Fermi Scholar Program in Science and Engineering

Argonne National Laboratory seeks outstanding doctoral degree recipients for these distinguished research appointments. Individual Enrico Fermi Scholar opportunities will be available in most research areas at Argonne including Biology, Chemistry, Mathematics and Computer Science, Materials Science, Condensed Matter studies at the Intense Pulsed Neutron Source, Nuclear Physics, Atomic Physics, High Energy Physics, 7GeV Advanced Photon Source related accelerator and materials studies, Chemical Technology, Reactor Safety, Materials and Components Technology, Reactor Physics, Energy and Environmental Science and Technology, and Engineering.

Honoring Enrico Fermi who founded the laboratory which became Argonne, these appointments are intended to recognize scientists and engineers who exhibit the potential to emerge as leaders in their field. Appointments will be awarded on a competitive basis to promising scientists who are about to earn a doctorate or who have earned one within the last three years. Candidates should submit a resume and a statement of research interests. Applicants will be evaluated by a group of staff members assembled for this purpose in the appropriate Argonne Divisions. The candidates' excellence and creativity in research will be the basis for final selections.

Annual stipends will range from \$35K to \$50K, depending upon discipline and experience. Appointments will be for two years.

For more information and application material, write to: Ronald A. Johns, Appointments Officer, Ref. D-EFA-55, Argonne National Laboratory, 9700 So. Cass Avenue, Argonne, IL 60439. Completed applications must be received by January 1, 1989. Argonne is an affirmative action/equal opportunity employer.



**ARGONNE
NATIONAL LABORATORY**
University of Chicago/DOE



Microbiologist Entry-Level

CIBA-GEIGY's Agricultural Division has an excellent opportunity for a Microbiologist in our genetic engineering and crop improvement program. Long recognized as one of the world's foremost producers of crop protection chemicals, we have made a major commitment to Biotechnology research at our facility in Research Triangle Park, NC.

The Scientist we seek will possess a BS in Microbiology, Plant Pathology or a related field. Additionally, the successful candidate will have experience or a strong interest in plant-bacterial interaction, biological disease suppression or plant growth-promoting bacteria. Course work in Biochemistry and Microbial Genetics would be a plus.

You'll find that our career support and advancement opportunities are exceptional. CIBA-GEIGY provides a competitive salary and generous company-paid benefits. Please forward your resume and transcript, along with three letters of professional reference, in confidence, to: **Dr. Mary-Dell Chilton, Executive Director, P.O. Box 12257, Research Triangle Park, NC 27709.** We Are An Equal Opportunity Employer M/F/H/V.

Science Serving Mankind

CIBA-GEIGY

Graduate and Postdoctoral Biotechnology Fellowships

Iowa has committed nearly \$50 million in the last two years to strengthen an effective program of agricultural biotechnology at Iowa State University. Interdisciplinary research teams are addressing opportunities in basic molecular biology and its applications to agricultural development, including plant, animal, and bioprocessing research.

ISU invites applications for graduate and postdoctoral fellowships in its interdisciplinary program of agricultural biotechnology. Graduate stipends are \$15,000 per year. Postdoctoral salaries are \$22,000 minimum, plus an additional 21.7% in fringe benefits paid by the university.

Graduate and postdoctoral fellows will be a part of the active and stimulating research programs; will use state-of-the-art instrumentation for nucleic acid, protein, cell, image analysis, and fermentation research; and will interact with international leaders in biotechnology research through seminars, symposia, and workshops.

For research project descriptions and fellowship application forms, contact the **Office of Biotechnology**, 1010 Agronomy, Iowa State University, Ames, Iowa 50011. Closing date: January 1, 1989.

Iowa State University is an Equal Opportunity/Affirmative Action Employer. Women, minorities, and members of other protected groups are strongly encouraged to apply.



Applied bioTechnology

Staff Scientist

Applied bioTechnology is a growing company specializing in:

- *genetically engineered vaccines for the veterinary and human markets*
- *novel products for cancer diagnostics and therapeutics based on oncogene technology.*

We are seeking an individual with a strong background in protein chemistry to join an interdisciplinary team of scientists in the development of vaccines and cancer diagnostics. This individual will work closely with virologists, immunologists, and molecular biologists in the design of antigen and antibody purification schemes, and in the analysis and characterization of proteins. Development of own research program related to ongoing projects is encouraged. Knowledge of virology, immunology, or oncogenes is desirable. The successful candidate will have a Ph.D. and 2-3 years of postdoctoral experience.

Please submit your resume or curriculum vitae to:

Applied bioTechnology, Inc.
80 Rogers Street
Cambridge, MA 02142

An Equal Opportunity Employer M/F/H/V



RESEARCH SCIENTIST

Wyeth-Ayerst Laboratories, a leading pharmaceutical firm in the development and production of prescription drugs, biologicals and infant nutritionals, currently has a position available in our Radnor facility for a Research Scientist in the Nutritional Research and Development Division.

Major responsibilities will be assessing the antigenic potential of protein sources, as well as participating in studies of other factors in infant formula related to immune function. This senior level position requires a Ph.D. and 3-5 years relevant experience including a thorough knowledge of all immunological techniques with emphasis on humoral immunity. Experience in purifying and characterizing antigenic proteins would be a significant asset. Knowledge of Nutritional principles are preferred.

Explore your exceptional career advantages with Wyeth-Ayerst. We offer a competitive salary, comprehensive company benefits and an innovative environment with top professional colleagues. For confidential consideration, please forward your resume and salary history to:

Recruitment Manager, Position #319, WYETH-AYERST LABORATORIES, INC., P.O. Box 8299, Philadelphia, PA 19101. Equal Opportunity Employer, M/F/H/V responses encouraged.



MANAGING DIRECTOR PRODUCT DEVELOPMENT GROUP

Molecular Biosystems, Inc., a leader in genetic probe based *in vitro* diagnostics, has the following opportunity in the Product Development Group of the Diagnostics Division. We seek an individual with at least three years of experience in a commercial diagnostics company managing the development of novel *in vitro* assays. The position involves total responsibility for the development of new products and clinical trials. A Ph.D. degree in a relevant scientific area, such as Molecular Biology and/or Biochemistry is required. The successful candidate will have a proven record of creative research, project management, regulatory/FDA experience, and supervision of technical and scientific personnel. Molecular Biosystems, Inc., located in San Diego, California offers an excellent salary and benefits package with an opportunity to make major impact on the future growth of the company as a key member of senior management. For consideration, please send your resume and compensation history to:

Molecular Biosystems, Inc.
Human Resources Department
10030 Barnes Canyon Road
San Diego, CA 92121

MOLECULAR BIOSYSTEMS, INC., is an Equal Opportunity Employer



Molecular Biosystems, Inc.

10030 Barnes Canyon Road, San Diego, California 92121

(619) 452-0681

NATIONAL CANCER INSTITUTE
National Institutes of Health, Public Health Service

CANCER PREVENTION FELLOWSHIP PROGRAM (CPFP)

The DIVISION OF CANCER PREVENTION AND CONTROL (DCPC) is accepting applications for the Cancer Prevention Fellowship Program (CPFP). The primary purpose of this program is to attract individuals from a multiplicity of health science disciplines into the field of cancer prevention and control research. The program provides for: participation in the DCPC Cancer Control Academic Program (a formal four-month course in cancer prevention and control); 20 months at NCI working directly with individual preceptors on ongoing cancer prevention and control projects; and, one year at a DCPC-approved cancer control program or State Health Department (may be optional). Funding permitting, up to 10 Fellows will be accepted for up to three years of training, beginning August 27, 1989.

APPLICANTS MUST (BY THE DEADLINE):

1. Possess an M.D. or D.O. degree from a U.S., territorial, or Canadian medical school OR foreign medical graduates must have current ECFMG/FMGEMS certification and have completed one year residency in a training program approved by the Accreditation Council for Graduate Medical Education --OR-- Possess other accredited U.S., territorial, or Canadian doctoral degree (Ph.D., Dr. P.H., D.D.S., etc.) in a discipline related to cancer prevention and control research (biomedical, medical, nutritional, public health or behavioral sciences). Foreign doctoral graduates must provide documented evidence that the foreign education is comparable to doctoral education received in accredited institutions noted above;
2. Possess U.S. citizenship or be a resident alien eligible for citizenship within four years;
3. Complete and return the application packet by the deadline (including arranging for official academic transcripts and four current, original letters of reference to be sent directly by the academic institutions and referees to the CPFP Coordinator).

For questions concerning the program's scientific or administrative aspects, please contact Dr. Peter Greenwald or Mrs. Barbara Redding at (301) 496-8640. Application packets may be obtained by sending a POSTCARD with your name and home address to CPFP Coordinator, NIH/NCI/DCPC/CCAB, EXPS Terrace Level, 9000 Rockville Pike, Bethesda, MD 20892. Please do not send any material until after you have read the instructions in the application packet.

DEADLINE FOR RECEIPT OF APPLICATIONS: JANUARY 11, 1989
NIH is an Equal Opportunity Employer

PROTEIN BIOCHEMIST

Committed To
Scientific
Excellence



The Sterling Research Group, the world-wide pharmaceutical research and development organization of Sterling Drug, Inc., announces an opening for a Sr. Research Scientist in the Pharmacology Department of its Rensselaer, New York facility.

We are currently adding to our pharmacology sections devoted to the discovery of new therapeutic agents in cardiovascular and pulmonary diseases. An excellent opportunity exists for a Protein Biochemist/Molecular Biologist who has an interest in signal transduction to participate in an interdisciplinary approach to basic research and drug discovery. A background in inflammatory cell function or cardiovascular diseases is desirable. The successful candidate will have a doctoral degree in biochemistry or a related discipline and at least two years of relevant post-doctoral training.

The Rensselaer facility is located near Albany, New York, which is a center for summer and winter recreational activities. We offer attractive salary and benefit programs and an exciting work environment based on a team approach to research and development.

Please send resume in confidence to:

Mr. John P. Harvey
Employment Administrator

**STERLING-WINTHROP
RESEARCH INSTITUTE**
Sterling Research Group
Columbia Turnpike
Rensselaer, New York 12144
An Equal Opportunity Employer M/F/H



The World's Foremost Manufacturer of Research Biochemicals And Organic Compounds...

Sigma Chemical Company employs hundreds of staff personnel at our St. Louis laboratory and manufacturing headquarters. Our biochemicals and organic compounds are distributed to a quality conscious international market that relies on our integrity and professionalism. Openings are available in several production, analytical and technical service areas.

PRODUCTION/ANALYTICAL

Fermentation Microbiologist, Molecular Biologist: Requirements include BS, MS in microbiology or biochemistry. 1-3 years experience in large scale microbial and fungal fermentations helpful. Good mechanical aptitude necessary.

Molecular Biology: Requirements include a BS degree in biology or biochemistry with 2-3 years experience in molecular biology or an advanced degree. Duties include the production and analysis of restriction endonucleases, nucleic acid modifying enzymes and nucleic acids.

Enzyme/Protein Analysis: Requirements include a degree in chemistry or biochemistry. 2-3 years experience with traditional wet method chemistry or advanced degree in Biochemistry with emphasis in enzymology including: protein determination, enzyme kinetics preferred.

TECHNICAL SERVICE

These positions offer the opportunity to utilize technical and problem solving skills to provide product information to customers worldwide.

Tissue Culture: Requirements include a degree in biology or biochemistry and 3-5 years general tissue culture lab experience. Scientific writing experience, knowledge of GMP and sterility and validation testing helpful.

Immunochemicals: Requirements include a BS degree in biology or biochemistry along with laboratory experience in one or more of the following areas: Immunohistochemistry, monoclonal antibody development, production and characterization, radioimmunoassay, or tissue culture.

All candidates must possess strong written and verbal communication skills and be able to work independently. Selected applicants will be provided with compensation commensurate with experience and education, plus full company-paid benefits package. Send your confidential resume to: **SIGMA CHEMICAL COMPANY, P.O. Box 14508, St. Louis, MO 63178.**

SIGMA
CHEMICAL COMPANY

An Equal Opportunity Employer

POSITIONS OPEN

PROFESSOR AND CHAIR DEPARTMENT OF MICROBIOLOGY

Arizona State University (ASU) is searching for candidates for chair to lead the newly reorganized Department of Microbiology in its pursuit of excellence. The candidates should have an exceptional record of research accomplishments in microbiology or immunology, a commitment to excellence in the education of graduate and undergraduate students, and demonstrated leadership qualities with ability to administer and manage a complex organization. The chair is expected to provide leadership and direction to the expanding Department of Microbiology, and to contribute to the growth and enhancement of the life sciences at ASU. The university is prepared to make an attractive and competitive offer to a highly qualified candidate. Review of applications will begin 15 December 1988 and continue until a suitable applicant is selected. The curriculum vitae should include attention to previous experiences relevant to an administrative appointment, details of extramural funding, and accomplishments in teaching and research. Send curriculum vitae, recent reprints, and names, addresses, and telephone numbers of three referees to: **Microbiology Chair Search Committee, Department of Microbiology, Arizona State University, Tempe, AZ 85287-2701**. Full descriptions of the position will be sent to all applicants. *Arizona State University is a committed Equal Opportunity/Affirmative Action Employer.*

PROGRAMMER ANALYSTS

H. T. McCormick Associates, Inc., a nationally recognized executive search firm has exclusive openings in highly visible organizations in the scientific community for persons with expertise in C, Fortran and Oracle or a related database in a VAX/VMS environment. Exposure to Interleaf a plus. Junior and senior positions available. Salary considerations in the \$40,000 to \$50,000 range. Company paid fees. Company paid relocation if appropriate. Send curriculum vitae in confidence to: **Todd A. Collier, Director of Computer Science Recruitment, H. T. McCormick Inc., P.O. Box 1206, Princeton, NJ 08540. Telephone: 201-297-8600.**

POSITIONS OPEN

PROFESSOR OF ANATOMY AND CELLULAR BIOLOGY. The Department of Anatomy and Cellular Biology at Harvard Medical School seeks to fill a tenured professorship with an embryologist whose research has contributed significantly to our understanding of molecular mechanisms regulating the activation of early development. The candidate should exhibit exceptional ability to work at the interface between cell and molecular biology. The individual would be expected to participate in teaching one or more of the required courses for medical students (e.g., gross anatomy, histology, human embryology), and thus previous experience along these lines is a desirable attribute. At the present time, anatomy and histology are presented together in an eight-week block called "The Body" and embryology is presented in a 6-week block with genetics. Participation in teaching elective courses in developmental biology to graduate students is also expected. Please submit curriculum vitae and letter of interest to: **Dr. Elizabeth D. Hay, Chairperson, Department of Anatomy and Cellular Biology, Harvard Medical School, 220 Longwood Avenue, Boston, MA 02115. Harvard University is an Affirmative Action/Equal Opportunity Employer.**

PROTEIN BIOCHEMIST with excellent scientific credentials to develop his/her own program preferably in the areas of growth factors or receptors to qualify for a tenure-track position at any professorial rank. Submit curriculum vitae, a short statement of future plans, and direct three letters of reference to be sent to: **Dr. Gerald Litwack, Deputy Director, Fels Institute for Cancer Research and Molecular Biology, Temple University School of Medicine, 3420 North Broad Street, Philadelphia, PA 19140. An Equal Opportunity Employer.**

RESEARCH ASSOCIATES

Immediate openings are available for candidates with experience in molecular biology, biochemistry, and cell biology to work on molecular mechanism(s) of gonadotropins, eicosanoids and growth factors action in reproductive tissues. Address inquiries to: **Dr. Ch. V. Rao, Department of Ob/Gyn, 438 MDR Building, University of Louisville, Louisville, KY 40292.**

POSITIONS OPEN

RESEARCH ASSOCIATE/ POSTDOCTORAL FELLOW DEPARTMENT OF MOLECULAR BIOLOGY CLEVELAND CLINIC FOUNDATION

In this newly formed Department several positions are immediately available for research associates, postdoctoral fellows, and technical assistants in the following research groups.

A. K. Banerjee: RNA virus gene structure, function, and replication. **M. S. Galinski:** Paramyxovirus gene expression/molecular mechanism of host-virus interaction. **M. L. Harter:** Adenovirus E1a and E1b proteins. **G. C. Sen:** Expression and functions of interferon inducible genes/tissue-specific expression of hypertension regulating genes. **D. W. Stacey:** Biological functions of protooncogenes in normal and tumor cells.

Advancement opportunities exist for outstanding individuals at all levels. Excellent compensation and benefits are available for every position.

Please address all applications or inquiries including curriculum vitae and names of references to: **Dennis W. Stacey, Department of Molecular Biology, The Cleveland Clinic Foundation, 9500 Euclid Avenue, Cleveland, OH 44195-5178.**

RESEARCH LABORATORY SUPERVISOR

(Morphology Laboratory). The University of Southern California (USC) Department of Ophthalmology/Doheny Eye Institute has an immediate opening in its Morphology Laboratory for a Laboratory Supervisor. This position requires that you function highly independently as you directly supervise, assist and advise EM and Histology Technicians as well as a group of six to ten Research Fellows. The qualified candidate will have a Ph.D., Master's degree or equivalent laboratory experience in electron microscopy, immunocytochemistry, darkroom techniques and handling radioactive materials. USC provides an excellent salary and comprehensive benefits package, including tuition refund. For immediate consideration, please forward your résumé to: **Carmen Carillo at USC/Doheny Eye Institute, 1355 San Pablo Street, Los Angeles, CA 90033. Telephone: 213-224-7263. Equal Opportunity Employer.**

Old Dominion University Associate Vice President for Research and Graduate Studies

Old Dominion University invites applications and nominations for the position of Associate Vice President for Research and Graduate Studies. Established in 1930, Old Dominion University is a state-supported institution located in Norfolk, Virginia, and serves a rapidly growing metropolitan area with a population in excess of 1.3 million people. The university has a strong research faculty and has approximately 15,000 students enrolled in its graduate and undergraduate programs.

The Associate Vice President for Research and Graduate Studies reports to the Vice President for Academic Affairs, is the chief academic officer responsible for research and graduate education and serves in the following capacities: as the principal proponent for research and graduate programs and, as such, helps initiate, formulate, review and implement policies concerning research and graduate education; as the responsible official who determines that proposals are prepared in accordance with university policy and state and federal regulations; as the liaison officer with the Old Dominion University Research Foundation—the agency that acts as the fiscal agent for the administration of grants and contracts; as the administrator who promotes interdisciplinary and industrial research opportunities and represents the university to external sponsors; as the officer who oversees and encourages the development of graduate programs and controls the distribution of graduate fellowships and assistantships; as an advocate for research and graduate faculty; and as the university's representative at state and national meetings involving graduate program administration.

The successful candidate is expected to be an outstanding academician and research administrator who not only has an earned doctorate but also credentials deserving of a tenured full professorship in one of the university's graduate departments. The desired credentials include: a significant publication record; demonstrated success in obtaining external support for scholarly activity; experience in dealing with external funding agencies; experience in graduate-level teaching; interpersonal and public relations skills; and demonstrated administrative prowess.

The position will be available July 1, 1989. Applicants should submit a current resume and the names, addresses and phone numbers of three current professional references. The initial closing date for submission of all materials is November 15, 1988; however, applications will be accepted until a pool of qualified applicants has been established. Old Dominion University is an affirmative action, equal opportunity employer and requires compliance with the Immigration Reform and Control Act of 1986. The search committee particularly seeks minority and women candidates. Applications and nominations should be sent to:



Dr. Paul Schollaert, Chair
AVP-RGS Search Committee
c/o Office of the Vice President for Academic Affairs
Old Dominion University
Norfolk, Virginia 23529-0011



LIPID BIOCHEMISTS and MOLECULAR BIOLOGISTS

Sphinx Biotechnologies is a young and rapidly expanding company whose mission is to create novel therapeutic and diagnostic products to improve human health. Our research and development programs emanate from state-of-the-art and proprietary knowledge of lipid second messengers and lipid mediators, signal transduction mechanisms, biochemistry and cell biology.

Lipid Biochemist We are seeking a lipid biochemist to expand and strengthen our established research team working in the area of lipid second messengers. A strong background in lipid enzymology, enzyme purification, protein chemistry and lipid-protein interactions is required with interest in participating in a group directed toward drug discovery and design.

Molecular Biologist We are also seeking a molecular biologist to aid with our drug discovery and diagnostic programs. Several projects require cloning, sequencing, and expression experience and a willingness to interface with our discovery and design teams.

A Ph.D. and several years of postdoctoral research experience are required for these entry-level positions.

Sphinx Biotechnologies has state-of-the-art laboratories at two locations and an excellent work environment. In the near future, we shall relocate to an outstanding new facility. We are located in the Research Triangle area of North Carolina.

Sphinx Biotechnologies offers competitive salaries, and fringe benefits packages including equity participation through stock option plans.

Please forward curriculum vitae and/or resume along with list of publications to:

Sphinx Biotechnologies
P.O. Box 727
710 W. Main Street
Durham, NC 27702-0727

Attention: Ms. Sherry Reynolds, Human Resources

Integrated Genetics, Inc., a recognized leader in biotechnology, develops therapeutic and diagnostic products for the healthcare industry. Our continued success leads to the following opportunities.

STAFF SCIENTISTS

Protein Engineering

Perform mutational analysis of therapeutic proteins using state-of-the-art mutagenesis techniques. Produce variants using mammalian cell expression and perform biochemical analysis of the variants. Requires a Ph.D. in Biochemistry with at least 2 years' postdoctoral experience and a strong record of publications in protein engineering.

Protein Chemistry

Enhance our structural characterization of natural and recombinant proteins by developing novel techniques to characterize recombinant proteins and study their post-translational modifications. A Ph.D. in Biochemistry and experience in peptide mapping, purification, sequencing and amino acid analysis, or chemical modification of proteins is required. Postdoctoral and/or industrial experience in a protein sequencing facility a plus.

Integrated Genetics offers an excellent compensation and benefits package, including stock options. Our brand new facility is conveniently located just 30 minutes from Boston. For immediate consideration, please send your resume to: David Nikka, Manager of Human Resources, Dept. 5107, Integrated Genetics, Inc., One Mountain Road, Framingham, MA 01701. An equal opportunity employer.

INTEGRATED
GENETICS



University
of Missouri
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DIRECTOR DIVISION OF BIOLOGICAL SCIENCES

The Division of Biological Sciences of the College of Arts and Science invites applications and nominations for Professor and Director. Candidates must have an outstanding research program, a record of scholarly achievement, strong leadership qualities, and commitment to excellence in undergraduate and graduate education. Qualified women and members of minority groups are urged to apply.

STRENGTHS: This multidisciplinary department of 35 faculty has strong extramural research programs in cell and molecular biology, genetics, neurobiology and behavior, plant sciences, reproductive biology, developmental biology, evolution and ecology. The Columbia campus has 23,000 students in 14 Colleges including Medicine, Agriculture, Veterinary Medicine and Engineering. Our faculty are involved in collaborative research with each of these professional schools, and they are active participants in campus-wide programs in Molecular Biology and Food for the 21st Century. Service facilities in the Department include research greenhouses, an electron microscopy lab and new animal research facilities. Campus services include oligonucleotide synthesis, immunobiology, protein sequencing, HPLC, NMR, GC-mass spectrometry, computer services, and a research nuclear reactor.

CHALLENGES: To build on the momentum of recent program development, lead recruitment of at least eight new faculty, and expand relationships with other campus programs in biological and biotechnological research.

Nominations and applications in response to this announcement should be received no later than January 15, 1989 for a preferred fall, 1989 or January, 1990 appointment. Requests for information, letters of nomination, or applications including C.V. and names and telephone numbers of four or more references should be sent to:

Dr. H. Carl Gerhardt, Search Committee Chair
Division of Biological Sciences, Tucker Hall
University of Missouri
Columbia, MO 65211

The University of Missouri is an Affirmation Action/Equal Opportunity Employer

Toxicology

FMC CORPORATION's Chemical R & D Center, located in beautiful Princeton, NJ, currently has two excellent openings within our Corporate Toxicology Department.

Manager, Toxicology Programs

This position requires a PhD in Toxicology or related field, 5-10 years experience in toxicology, including knowledge of Agricultural Chemical Registration Process, toxicology programs, risk assessment and GLPs. Responsibilities include managing all activities related to assessment and communication of toxicology and safety of FMC chemicals throughout the US and internationally, including assessing potential toxicity problems; assisting Regulatory Affairs and Product Development Groups in defense of current products and support of new products; and serving as liaison with other companies and trade associations.

Mammalian Toxicologist

Position requires an MS/PhD degree in Toxicology or a related field and 0-3 years in an industrial or contract research environment. Responsibilities include assisting the Manager of Toxicology Programs in planning and directing sub-chronic and chronic toxicity programs; interpreting and analyzing study results and supervising report preparation; compiling and disseminating technical information including overviews, MSDSs, product literature and study and program summaries.

FMC offers an excellent salary, and a full range of benefits to include educational and relocation support. For a highly challenging career with the Chemical R & D Group of a Fortune 150 company, send your resume with salary history/requirements (specifying which position is of interest) to: **Personnel Representative, FMC CORPORATION, Chemical R&D Center, Box 8, Princeton, NJ 08543.** An equal opportunity employer, M/F.

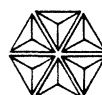
FMC

RESEARCH SCIENTIST

The Bristol-Myers Pharmaceutical Research and Development Division has an excellent career opportunity in its Pharmaceutical Product Development Department located in Syracuse, New York. The successful candidate will work in a multidisciplinary research group responsible for determination of the basic physical and chemical properties of newly discovered proteins and peptide drug substances. This knowledge will be utilized in the development of state-of-the-art pharmaceutical dosage forms and delivery systems.

To qualify, you should have a PhD in Physical or Analytical Biochemistry, or a closely related field, and extensive experience in physical chemical characterization proteins.

We offer a competitive salary and a comprehensive benefit package. Interested candidates should submit a resume indicating salary history and requirement, to: **EMPLOYMENT MANAGER**



**BRISTOL-MYERS COMPANY
RESEARCH AND
DEVELOPMENT DIVISION**

P.O. Box 4755,
Syracuse, New York, 13221-4755

An equal opportunity employer M/F/H/V

POSITIONS OPEN

RESEARCH ASSOCIATE. Research on growth, development, and morphogenesis of fungi, with emphasis on the physiology of apical extension. Application of concepts and techniques from biochemistry, botany, and electrophysiology; improvise and fabricate devices for use in the research program. Techniques used will include: microelectrode recording, microscopy and biochemical and microbiological methods. Minimum requirements: Ph.D. in biology with specialization in microbial physiology; 1 year of experience in research in membrane biophysics and microbial electrophysiology. Salary: \$23,000 per year; 40 hour week. Send résumé to: **Colorado Department of Labor and Employment, 600 Grant Street, Suite 900, Denver, CO 80203-3528.** Refer to job order #CO2918090.

The Walker Cancer Research Institute, Inc. seeks a **RESEARCH BIOLOGIST** to perform in vitro and in vivo cancer prodrug screening for R&D of the TDTA—time-delayed toxin activation—approach to cancer chemotherapy. Ph.D. or equivalent combination of education and experience required. Send résumé to: **Dr. E. H. Walker, The Walker Cancer Research Institute, Inc., 1075 Sand Pebble Drive, Suite 100, Edgewood, MD 21040-1319.**

RESEARCH FELLOWSHIP POSITION available at the University of Virginia in Hematology and Oncology. Due to the unexpected availability of support from other sources we now have a research fellowship position open in hematology and oncology. U.S. citizens (NIH guidelines) with M.D. or Ph.D. degrees interested in studies on hemopoiesis, retroviral leukemogenesis, experimental marrow transplantation, genetic mechanisms of neoplasia, proteinases in hemostasis and cell biology or second messenger signalling should send their curriculum vitae and three references to: **Dr. Peter Quesenberry, University of Virginia School of Medicine, Box 502, Charlottesville, VA 22908.**

RESEARCH OPPORTUNITIES IN BIOTECHNOLOGY

Department of Biotechnology Research at Pioneer Hi-Bred International, Inc. is seeking applicants for a **NUCLEIC ACID CHEMIST/BIOCHEMIST** to participate in our ongoing program of crop improvement. The position will emphasize the development of new methodologies for the separation, isolation, and detection of nucleic acids in gene mapping, isolation, and vector construction. The successful applicant will also provide current methodologies in nucleic acid separation, identification, and sequencing to other research groups. Pioneer offers competitive salaries, excellent facilities, and a highly cooperative research environment. Successful candidates will be expected to interact extensively with ongoing programs in transformation, regeneration, gene isolation, and gene mapping. A Ph.D. or equivalent in chemistry or biochemistry with a proven record of research with nucleic acids is required.

Pioneer Hi-Bred International is an Equal Opportunity Affirmative Action Employer. Send résumé and indicate for which job you are applying with at least three references to:

**Lisa Wilson
Pioneer Hi-Bred International, Inc.
7300 N.W. 62nd Avenue,
P.O. Box 38
Johnston, IA 50131**

MEDICAL COLLEGE OF OHIO RESEARCH Ph.D. IN ORAL BIOLOGY

Immediate opening for Ph.D. with interest in basic research work in oral biology, especially with oral epithelial cells. Experience in tissue culture, histology, histochemistry, and molecular biology highly desirable. Position involves establishing immortalized epithelial cell lines representative of certain epithelial phenotypes and using the cells to evaluate the toxicologic and potential carcinogenic effects of dental materials. Candidates should have 4 to 5 years of research experience in oral biology and currently be funded by governmental or private grants. Salary commensurate with experience. Send letters of application along with curriculum vitae to: **William J. Davis, D.D.S., M.S., or Gary D. Stoner, Ph.D., Medical College of Ohio, 3000 Arlington Avenue, Toledo, OH 43699.**

POSITIONS OPEN

East Tennessee State University **RESEARCH PATHOLOGIST:** Senior tenured-track position at the rank of professor for a Board-certified pathologist with a track-record of extramural funding to head the department's division of research pathology and participate in the university's M.S./Ph.D. program. A molecular biologist is preferred. This position includes a joint appointment at our affiliated VA hospital. Replies to: **Philip S. Coogan, M.D., Chairman, Department of Pathology, P.O. Box 19540A, East Tennessee State University, Johnson City, TN 37614.** ETSU is an Affirmative Action Equal Opportunity Employer, and employs only U.S. citizens and aliens authorized to work in the United States. Women and minorities are encouraged to apply.

RESEARCH TECHNICIAN, applicants should have a Bachelors or Masters level degree in biochemistry or related field, and experience working in a research environment. Applications are encouraged from individuals with a strong background recombinant DNA technology. Send full curriculum vitae and references to: **Howard Hughes Medical Institute, 5323 Harry Hines Boulevard, Room Y5.322, Dallas, TX 75235-9050.**

Stanford University seeks a distinguished **SENIOR PALEOANTHROPOLOGIST** with expertise in the last 300,000 years of human evolution to provide leadership for a new Program in Human Biocultural Evolution within the Anthropology Department and to teach in the Human Biology Program. For more information, contact: **Dr. William Durham, Department of Anthropology, Stanford University, Stanford, CA 94305-2145.** Application deadline is 1 December 1988. Stanford is an Affirmative Action/Equal Opportunity Employer.

Louisiana State University (LSU) Eye Center is looking for a **SENIOR PHARMACOLOGIST.** Applicant should be interested in drug delivery systems although other areas of research will be considered.

Previous experience in ophthalmology not necessary. Interested applicants send curriculum vitae to: **Herbert E. Kaufman, M.D., LSU Eye Center, 2020 Gravier Street, Suite B, New Orleans, LA 70112.** LSUMC is an Equal Employment Opportunity/Affirmative Action Employer.

SENIOR RESEARCH ASSOCIATE INTERNATIONAL TECHNIDYNE CORPORATION

The world-wide recognized leader of bedside hemostasis monitoring products seeks an ambitious and qualified product leader to join our expanding R&D staff. This individual is responsible for coordination of new product development including laboratory studies and clinical evaluation. The successful applicant will have an advanced degree and research experience in hematology/coagulation. Competitive salary and benefits. Reply to:

**Director of Medical Research
International Technidyne Corporation
23 Nevsky Street
Edison, NJ 08820**

TEACHING POSITION MOLECULAR GENETICS/ MOLECULAR BIOLOGY

The Department of Biology, Washington and Lee University, invites applications for a tenure-track teaching position in molecular genetics/molecular biology at the rank of assistant professor. Responsibilities include the teaching of an undergraduate course in molecular genetics, a course in the applicants specialty and a third course to be determined by departmental needs and applicants interest. Applicants should either have recently completed the doctorate or have postdoctoral experience. Salary is competitive. The successful candidate must be willing to direct undergraduate research in areas of his own interest. Send letter of application, personal and professional curriculum vitae, and the names of three persons to whom we may write concerning qualifications to: **Dr. Thomas G. Nye, Department of Biology, Washington and Lee University, Lexington, VA 24450.** Closing date for applications is 1 February 1989.

Washington and Lee University is an Equal Opportunity Employer.

POSITIONS OPEN

SENIOR SCIENTIST

Ph.D. in biological science with at least 5 years of experience in cloning and expression in microbial and mammalian systems needed for exciting new technology development. Applicant should have broad interests in genetic engineering applications and be prepared to organize, implement, and oversee a varied research program. This position offers opportunities for travel and interaction with leading biotechnology laboratories. Excellent communication skills and problem-solving capabilities are essential.

Candidates should contact: **Mr. Neil L. Diver, Exogene Corporation, 2585 Nina Street, Pasadena, CA 91107.** Telephone: 818-577-8989.

DEPARTMENT OF SPEECH PATHOLOGY AND AUDIOLOGY THE UNIVERSITY OF ALBERTA

SPEECH-LANGUAGE PATHOLOGIST: A tenure-track position is available 1 July 1988 at the rank of assistant professor. The applicant must hold a Ph.D. degree in speech-language pathology or related discipline and specialize in child language disorders. Specific interest in the language disorders of school-aged children is preferable. Proven research and university teaching ability are required and certification by the American Speech-Language-Hearing Association is desirable. Salary will be commensurate with qualifications (annual minimum of \$32,564).

The deadline for receipt of applications is 15 November 1988. The Department of Speech Pathology and Audiology is planning a major expansion in graduate programs, and will have a significant increase in facilities, particularly for teaching and research, upon renovation of recently allocated space. Please apply by sending curriculum vitae, names of three referees and a statement of teaching and research interests to:

**Martha Piper, Ph.D.
Dean, Faculty of Rehabilitation Medicine
316 Corbett Hall
University of Alberta
Edmonton, Alberta, Canada T6G 2G4**

The University of Alberta is committed to the principle of equity in employment.

TEACHING POSITION—BIOLOGIST. The Department of Biology, Emory University, invites applications for a teaching position at the assistant professor rank for a non-tenure-track, 1½-year term beginning in January, 1989, with a possibility of renewal for up to 3 years. Responsibilities include teaching courses primarily at the introductory biology level and the successful applicant should have experience in teaching large lecture courses. Send curriculum vitae, a statement on your experience and interests in teaching, and have three letters of recommendation sent to: **Dr. Gray F. Crouse, Chairman, Department of Biology, Emory University, Atlanta, GA 30322.** Review of applications will begin immediately and the position will remain open until filled. Emory is an Equal Opportunity/Affirmative Action Employer.

TENURED OR TENURE-TRACK FACULTY POSITIONS

An expanding Department of Biochemistry with an established high quality scientific environment seeks to recruit two faculty at either the senior or junior levels. Applicants must hold the Ph.D. and/or M.D. degree, have at least 2 years of postdoctoral training, and an established record of excellent scientific contributions. Successful candidates will be expected to transfer or establish a vibrant, funded research program and to teach in Medical and Graduate Programs. All fields of biochemistry and molecular biology will be given serious consideration. The Department is particularly interested in further strengthening such areas as tumor biology, signal transduction, physical biochemistry of macromolecules and protein-protein or protein-DNA interactions. Please send curriculum vitae, a brief summary of future research directions, and names of three references to: **Dr. Michael P. Czech, Chairman or Dr. John E. Mole, Search Committee Chairman, Department of Biochemistry, University of Massachusetts Medical Center, 55 Lake Avenue North, Worcester, MA 01655.**

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MACARTHUR FOUNDATION POSTDOCTORAL TRAINEESHIP IN AGING

The MacArthur Foundation Research Program on Successful Aging invites applications from graduates of advanced degree programs to conduct research on a collaborative, interdisciplinary study of aging in six sites. Trainees will work with a team of investigators working on longitudinal studies of elderly and will have a unique opportunity to be part of *interdisciplinary* gerontologic research. While most trainees will be based in laboratories of investigators leading population-based studies, there is also an interest in applicants with a biological or physiological orientation who will serve as a liaison between these studies and other more clinically-oriented and basic biological studies that are part of the research program. The focus of the studies is on the maintenance of physical and cognitive functioning in a psychosocial and physiologic context and on developing new interdisciplinary approaches to larger issues in health and aging.

Positions are available for M.D.'s or Ph.D.'s with an interest in aging, physiology, neuropsychology, endocrinology, epidemiology, basic biologic sciences, biostatistics, psychology, psychiatry, sociology or related fields. Positions are available at Duke University, Harvard University, Yale University, University of Michigan, Pennsylvania State University, and the Karolinska Institute in Stockholm, Sweden. Emphasis will be placed on candidates' abilities to work in an interdisciplinary setting. Positions are available for terms of 1 or 2 years. Most appointments will be made for July 1989; however, some earlier appointments are possible. Salaries range up to \$40,000 commensurate with qualifications and university policy.

Submit curriculum vitae, publications, names of three references, preferences for a specific site and a 2 page statement including areas of expertise, and future research plans to: **Lisa F. Berkman, Ph.D., Department of Epidemiology, Yale School of Medicine, 60 College Street, New Haven, Connecticut 06510. Affirmative Action Employer.**

COLBY COLLEGE DEPARTMENT OF BIOLOGY Physiologist

Responsibilities will include teaching a course in Human Physiology designed for non-major students; preparation and delivery of lectures on Human Physiology; designing and teaching laboratory exercises associated with the course; and evaluation of students' work on written examinations and in the laboratory.

A Doctorate or Master's degree in Biology, Physiology or related discipline is desirable, but senior graduate students with demonstrated teaching abilities and a desire to teach at an excellent undergraduate college will be considered. Salary is dependent on qualifications and experience.

This position will be half-time during the spring semester 1988-89, late January through May, 1989.

Applicants should submit a curriculum vitae, transcripts of undergraduate and graduate studies, and three letters of recommendation by November 7, 1988 to: **Professor Arthur K. Champlin, Chair, Department of Biology, Colby College, Waterville, ME 04901.** Colby is an Affirmative Action/Equal Opportunity Employer and encourages applications from women and minorities.

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RESEARCH SCIENTIST CELLULAR PHYSIOLOGY

Dept. #347

This position requires a Ph.D. in mammalian cellular physiology and/or somatic cell genetics as well as a minimum of 2 years' postdoctoral experience in growth regulation and differentiation of animal cells. Familiarity with culturing various primary and established cell lines as well as experience in cloning and sorting cells and selecting metabolic and drug resistant mutants are essential. Some understanding and experience in cell culture scale-up are desirable.

RESEARCH SCIENTIST GENE REGULATION

Dept. #348

Qualified candidates for this position will have a Ph.D. and a minimum of 2 years' postdoctoral experience in eukaryotic post-transcriptional gene regulation, including protein processing and secretion. Familiarity with glycosylation pathways and signal transport at the molecular level is essential.

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You must have a PhD in Biochemistry, Immunology or a related Life Science, coupled with 2+ years' postdoctoral experience in a relevant field and a strong publication record. A background in immunology, existing models of inflammation (particularly with respect to cytokine involvement) and hands-on experience in molecular biology are preferred.

We offer a comprehensive compensation package including generous benefits, and an atmosphere that encourages excellence. For confidential consideration, please send your resume indicating salary requirements (those without this information will not be acknowledged), to: **Mrs. Eleanor M. Malone, Department P.K., Hoffmann-La Roche Inc., Nutley, New Jersey 07110.** We are an equal opportunity employer.



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POSITIONS OPEN

SUPERVISORY PHYSICAL SCIENTIST—Responsible for developing/managing a QA program for testing of chemical, biological defensive and smoke/obscurant systems. Broad education/experience in physical sciences, engineering, and statistics is essential, as are personnel management and communication skills; familiarity with applied microbiology helpful. A 4-year degree in physical science, engineering or mathematics that included 24 semester hours in physical science plus 3 years of professional experience which equipped the candidate to manage substantial QA programs. *U.S. citizenship and security clearance required.* Salary: \$46,679 to \$60,683. Contact: Ms. Pat Austin, Civilian Personnel Office, Dugway Proving Ground, Dugway, UT 84022-5000. Telephone: 801-831-2181, Monday to Thursday 7:00 a.m. to 5:30 p.m. MDT, for information. *An Equal Opportunity/Affirmative Action Employer.*

TOXICOLOGIST/ ASSISTANT OR ASSOCIATE PROFESSOR

The Primate Research Institute (PRI), New Mexico State University, is looking for a toxicologist, assistant or associate professor. Qualifications: Earned doctorate in toxicology or related field with experience in conduction GLP pharmacokinetics and/or drug safety evaluation studies. Assistant must have at least 1 year of experience; associate professor needs 4 to 5 years of experience in toxicology or related field. The position involves work with a group of scientists interested in toxicology, metabolism and pharmacokinetics of xenobiotics and drugs in non-human primates and rodents. Sufficient time will be made available to develop individual research interest. The position has primary responsibility for toxicology division at PRI and plays a key role in interdisciplinary teams evaluating safety and efficiency of new drugs. Benefits include: Group medical and hospital insurance; group life insurance; state educational retirement; workmen's compensation; annual and sick leave; and unemployment compensation. Salary: \$30,000 to \$40,000. The salary will be competitive and commensurate with experience and the salary structure of the professional field. Opportunity exists to collaborate with on-campus scientists and to teach and interact with graduate students. The institute has 100 plus employees and is located on Holloman Air Force Base, near Alamogordo, New Mexico, at the foot of the Sacramento Mountains. Living costs are among the lowest in the United States. Climate and living conditions are superb, with 350 days of sunshine per year. Staff members can choose to live in any climate between high desert and alpine forest. Deadline for applications is 1 December 1988.

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Offer of employment contingent upon verification of individual's eligibility of employment in the United States.

Send résumé, letter of interest, and names of three references to:

Dr. William C. Hobson, Director
Primate Research Institute
P.O. Box 1027
Holloman AFB, NM 88330-1027

VETERINARY VIROLOGIST

The Department of Pathology and Microbiology, Atlantic Veterinary College, University of Prince Edward Island, invites applications for a tenure-track position in virology. A Ph.D. degree is required and the candidate will have at least 2 years of postdoctoral training. Strong experience in molecular biology and recombinant DNA techniques are required. He/she will conduct research with viruses of veterinary importance, be responsible for graduate courses and in general provide leadership in molecular biology.

Rank and salary will be commensurate with qualifications and experience. *In accordance with Canadian Immigration regulations this advertisement is directed first to Canadian citizens and permanent residents.* Closing date for applications is 1 December 1988. Preferable starting date is 1 July 1989. Please submit a letter of intent, curriculum vitae and the names of three references to: Dr. J. R. Long, Chairman, Department of Pathology and Microbiology, Atlantic Veterinary College, University of Prince Edward Island, 550 University Avenue, Charlottetown, Prince Edward Island C1A 4P3.

COURSE

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Bonnie Cuthbert
Department of Cell Biology
Baylor College of Medicine
Telephone: 713-799-6200
Deadline: 29 January 1989

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GRADUATE STUDENT, PRE-, POST-, AND SENIOR POSTDOCTORAL FELLOWSHIPS in American history and material culture, anthropology, biological sciences, earth sciences, history of art, history of science and technology. Tenable in residence at the Smithsonian and its research facilities. Stipends and tenures vary. Deadline: January 15th annually. Contact: Smithsonian Institution, Office of Fellowships and Grants, 955 L'Enfant Plaza, Suite 7300, Desk N, Washington, DC 20560. Telephone: 202-287-3271. *Awards are based upon merit, without regard to race, color, religion, sex, national origin, age, or condition of handicap of applicant.*

THE UCLA INTERCAMPUS POSTDOCTORAL RESEARCH TRAINING PROGRAM IN MEDICAL GENETICS utilizes the research and clinical resources of its affiliated campuses and teaching hospitals. This program is open to academically oriented applicants with the M.D., Ph.D., D.D.S. or equivalent degrees. A wide variety of research training opportunities in molecular, biochemical, immuno-, cancer, cyto-, somatic cell, population and clinical genetics are available. The program also meets all the requirements of the American Board of Medical Genetics. Clinical genetics fellowships are also available at each of the affiliated hospitals. Application forms are available from: David Rimoin, M.D., Ph.D., Department of Pediatrics, Cedars-Sinai Medical Center, 8700 Beverly Boulevard, Los Angeles, CA 90048.

The University of Southern California, Department of Biomedical Engineering, offers NIH **POSTDOCTORAL** (Ph.D. or M.D.) **FELLOWSHIPS** in cardiopulmonary research. Areas of interest include control mechanisms at rest and during exercise, respiratory and circulatory mechanics, and non-invasive circulatory assist. *Permanent US residency or citizenship required.* Salary range dependent on experience (\$16,000 to \$30,000). Send résumé to: Dr. Fred S. Grodins, BME Department, USC, Los Angeles, CA 90089-1451. *Applications are encouraged from minorities and women. An Equal Opportunity Affirmative Action Employer.*

PREDOCTORAL FELLOWSHIPS IN PHARMACOLOGY—Training available in molecular pharmacology, cardiovascular and neuropsychopharmacology in well funded modern laboratories. Competitive stipends (\$9,500 per year). Attractive setting on the coastal plain of North Carolina. *Federal law requires proper documentation of identity and employability at the time of employment.* It is requested this documentation be included with your application. Contact: Dr. Brian A. McMillen, Department of Pharmacology, School of Medicine, East Carolina University, Greenville, NC 27858. *Affirmative Action/Equal Opportunity Employer.*

RESEARCH IN CHINA

Grants available to Americans in natural sciences and engineering for short-term research in China and to Chinese scientists for scholarly exchange in the United States. Application deadline 15 November 1988. For application write: Visiting Scholar Exchange Program, CSCPRC, National Academy of Sciences, Washington, DC 20418 or call 202-334-2718.

FELLOWSHIPS

RESEARCH FELLOWSHIPS IN GERONTOLOGY—Postdoctoral and predoctoral research fellowships, supported in part by training grants from the National Institute on Aging, are available at The University of Michigan Institute of Gerontology. Predoctoral fellows must also be enrolled in an academic department at The University of Michigan. Stipends, tuition, fees, and travel support will be provided to qualified applicants. Prospective faculty mentors represent the behavioral, biological, clinical and social sciences and the humanities as follows: W. A. Achenbaum, Ph.D.; R. C. Adelman, Ph.D.; D. Aminoff, Ph.D.; D.Sc.; B. J. Cohen, D.V.M., Ph.D.; J. A. Faulkner, Ph.D.; B. E. Fries, Ph.D.; A. Gafni, Ph.D.; J. B. Halter, M.D.; A. R. Herzog, Ph.D.; J. S. House, Ph.D.; N. Krause, Ph.D.; J. Kuwada, Ph.D.; J. Liang, Ph.D.; M. A. Perlmutter, Ph.D.; A. B. Schultz, Ph.D.; D. G. Steel, Ph.D.; M. Supiano, M.D.; L. C. Terry, M.D., Ph.D.; L. M. Verbrugge, Ph.D.; B. Villeponteau, Ph.D.; T. P. White, Ph.D. Candidates should forward a letter of interest, complete curriculum vitae and bibliography, and identification of potential faculty mentor to: Ms. Jane Ketchin, Institute of Gerontology, The University of Michigan, 300 North Ingalls, Ann Arbor, MI 48109-2007. Candidates also should arrange for delivery of official copies of graduate transcripts and at least three letters of recommendation. *The University of Michigan is an Equal Opportunity Employer.*

TRAINEESHIP

PULMONARY RESEARCH TRAINEESHIPS

Brown University announces NIH-Sponsored postdoctoral program for Ph.D.'s and M.D.'s who want careers as independent investigators in problems of lung function and dysfunction. Trainees will spend 2 to 3 years developing their own line of investigation under a Faculty Sponsor, will pursue core and basic science courses relevant to their research, and will have close interactions with an interdisciplinary faculty and co-trainees. Strengths in epidemiology, physiology, experimental pathology, cell biology, and molecular biology. *Applications from members of minority groups strongly encouraged.* Inquire of: Frederic Hoppin, Jr., M.D., Box G, Brown University, Providence, RI 02912. Telephone: 401-722-6000.

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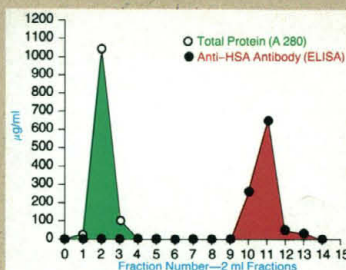
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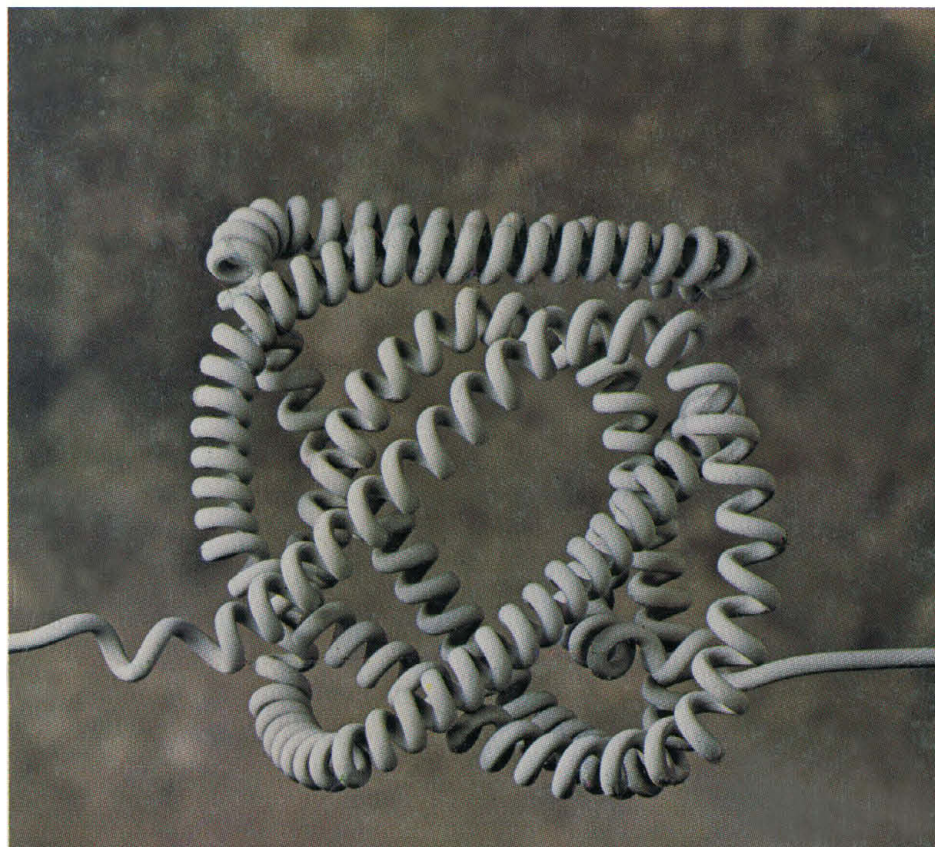
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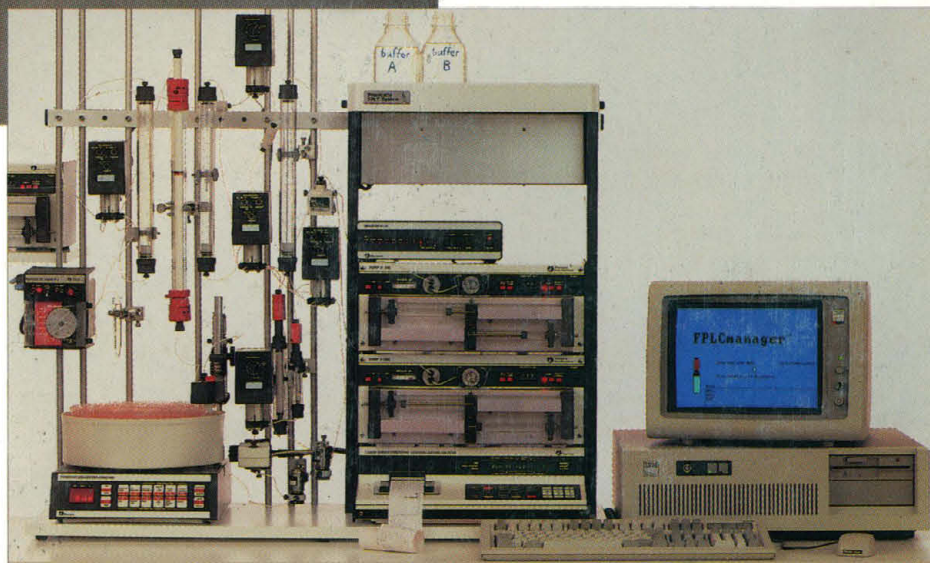
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