

findings from oceanic crust and mantle, continental magmatic arcs, and continental mafic rocks. A list of almost 400 references and an index conclude the volume.—K.L.

Appraising the Ring. Statements in Support of the Superconducting Super Collider. LEON M. LEDERMAN and CHRIS QUIGG, compilers. Universities Research Association, Washington, DC, 1988. xxviii, 171 pp. Paper.

Not about Wagner or hobbits but produced in an elegant format more evocative of belles lettres than of big science, the present volume presents statements of 58 scientists, industry executives, and state governors on the subject of the proposed new facility for the study of elementary particles—thoughts that, in the words of the compilers, “reflect the widespread appreciation that the search for new knowledge both nourishes the human spirit and enriches the future.” The contributors appear in alphabetical order from John Bardeen through Robert Frosch and Rose Mofford to C. N. Yang, and the contributions range in length from two sentences (Bardeen, J. Fred Bucy, George Field, T. D. Lee, Charles Townes) to 12 pages (Mary K. Gaillard and Martin Perl, in two of the more technically oriented contributions). The volume was printed in a limited edition for distribution to members of Congress, science writers, and other parties with a special interest in the issue discussed, and the supply is reportedly exhausted, but librarians and archivists with a concern for items documenting the processes of science policy might wish to undertake the search for a copy. —K.L.

Books Received

Advances in Social Cognition. Vol. 1, A Dual Process Model of Impression Formation. Thomas K. Srull and Robert S. Wyer, Jr., Eds. Erlbaum, Hillsdale, NJ, 1988. xii, 192 pp., illus. \$29.95; paper, \$17.50.

Africanized Honey Bees and Bee Mites. Glen R. Needham et al., Eds. Horwood, Chichester, U.K., and Wiley, New York, 1988. xviii, 572 pp., illus. \$94.95. Ellis Horwood Series in Entomology and Acarology. From a conference, Columbus, OH, March-April 1987.

Aspects of Human Nutrition. Geoffrey H. Bourne, Ed. Karger, Basel, 1988. x, 334 pp., illus. \$198. World Review of Nutrition and Dietetics, vol. 57.

Astronomical Centers of the World. Kevin Krisciunas. Cambridge University Press, New York, 1988. xiv, 320 pp., illus. \$24.95.

Astrophysics of the Sun. Harold Zirin. Cambridge University Press, New York, 1988. x, 433 pp., illus. \$49.50; paper, \$22.95.

Atlas of the Ultraviolet Sky. Richard C. Henry et al. Johns Hopkins University Press, Baltimore, MD, 1988. vi, 457 pp. \$65.

The Behavioural Biology of Aggression. John Archer. Cambridge University Press, New York, 1988. xii, 257 pp., illus. \$59.50; paper, \$16.95. Cambridge Studies in Behavioural Biology.

Bacterial and Bacteriophage Genetics. An Introduction. Edward A. Birge. 2nd ed. Springer-Verlag, New York, 1988. xvi, 414 pp., illus. \$44.50. Springer Series in Microbiology.

Concepts of Ecosystem Ecology. A Comparative View. L. R. Pomeroy and J. J. Alberts, Eds. Springer-Verlag, New York, 1988. xii, 384 pp., illus. \$72. Ecological Studies, vol. 67.

Condensed Matter Theories. Vol. 3. Jouko S. Arponen, R. F. Bishop, and Matti Manninen, Eds. Plenum, New York, 1988. xii, 401 pp., illus. \$89.50. From a workshop, Oulu, Finland, July-Aug. 1987.

Cooling Flows in Clusters and Galaxies. A. C. Fabian, Ed. Kluwer, Norwell, MA, 1988. xiv, 391 pp., illus. \$99. NATO Advanced Science Institutes Series C, vol. 229. From a workshop, Cambridge, U.K., June 1987.

A Course in Number Theory. H. E. Rose. Clarendon (Oxford University Press), New York, 1988. xii, 354 pp. \$59.95; paper, \$32.50.

Drug Education in Schools. An Evaluation of the “Double Take” Video Package. Christine Eiser and J. Richard Eiser. Springer-Verlag, New York, 1988. x, 156 pp., illus. Paper, \$25. Recent Research in Psychology.

Drug-Nutrient Interactions. T. K. Basu. Croom Helm (Routledge, Chapman and Hall), New York, 1988. xiv, 160 pp., illus. \$52.50.

Dynamics of Forest Insect Populations. Patterns, Causes, Implications. Alan A. Berryman, Ed. Plenum, New York, 1988. xx, 603 pp., illus. \$97.50. Population Ecology.

The Early History of the Ancient Near East. 9000–2000 B.C. Hans J. Nissen. University of Chicago Press, Chicago, 1988. xiv, 215 pp., illus. \$34.95. Translated from the German edition (Darmstadt, 1983) by Elizabeth Lutzweiler with Kenneth J. Northcott.

Hearing in Vertebrates. A Psychophysics Databook. Richard R. Fay. Hill-Gay, Winnetka, IL, 1988. vii, 621 pp., illus. \$75.

Hematochromatosis. Lewis R. Weintraub, Corwin Q. Edwards, and Margaret Krikker, Eds. New York Academy of Sciences, New York, 1988. x, 370 pp., illus. Paper, \$93. Annals of the New York Academy of Sciences, vol. 526. From a conference, New York, April 1987.

Hidden Connections, Double Meanings. David Wells. Cambridge University Press, New York, 1988. 164 pp., illus. Paper, \$14.95.

High Energy Astrophysics. Supernovae, Remnants, Active Galaxies, Cosmology. G. Börner, Ed. Springer-Verlag, New York, 1988. x, 281 pp., illus. \$49.50. From a workshop, Tegernsee, F.R.G., July 1987.

International Research in the Antarctic. Richard Fifield. Published for the Scientific Committee on Antarctic Research and the ICSU Press by Oxford University Press, New York, 1988. viii, 146 pp., illus. \$45. An Account of SCAR's activities intended for a wide audience.

Introduction to Multi-Player Differential Games and Their Applications. E. M. Vaisbord and V. I. Zhukovskii. Gordon and Breach, New York, 1987. viii, 581 pp. Paper, \$190. Studies in Cybernetics, vol. 15. Translated from the Russian edition (Moscow, 1980) by Anthony Williams.

Lectures on the Electrical Properties of Materials. L. Solymar and D. Walsh. 4th ed. Oxford University Press, New York, 1988. xiv, 465 pp., illus. \$55; paper, \$27.50.

Liberty Denied. The Current Rise of Censorship in America. Donna A. Demac. PEN American Center, New York, 1988 (distributor, Alpha Book Distributors, New York). xii, 177 pp. Paper, \$6.95.

Microbiology in Action. Biological Nitrogen Fixation with General Aspects of Soil and Food Bacteriology. W. G. Murrell and I. R. Kennedy, Eds. Research Studies Press, Letchworth, U.K., and Wiley, New York, 1988. xx, 356 pp., illus. \$150. From a symposium, Sydney, Australia, 1986.

The Mind. Richard M. Restak. Bantam, New York, 1988. xvi, 328 pp., illus. \$29.95.

Mineral Deposits within the European Community. J. Boissonnas and P. Omenetto, Eds. Springer-Verlag, New York, 1988. xxiv, 558 pp., illus. \$130. Society for Geology Applied to Mineral Deposits Special Publication no. 6.

Models of Achievement. Reflections of Eminent Women in Psychology. Vol. 2. Agnes N. O'Connell and Nancy Felipe Russo, Eds. Erlbaum, Hillsdale, NJ, 1988. xiv, 380 pp., illus. \$49.95; paper, \$17.95.

Modern Hydrology. Raphael G. Kazmann. 3rd ed. National Water Well Association, Dublin, OH, 1988. xxvi, 426 pp., illus. Paper, \$37.50; to NWWA members, \$30.

Molecular Neurobiology of the Olfactory System. Molecular, Membranous, and Cytological Studies. Frank L. Margolis and Thomas V. Getchell, Eds. Plenum, New York, 1988. xviii, 379 pp., illus. \$69.50.

Numerical Methods, with Applications in the Biomedical Sciences. E. H. Twizell. Horwood, Chichester, U.K., and Halsted (Wiley), New York, 1988. 339 pp., illus. \$69.95. Mathematics and Its Applications.

Nutrient Requirements of Dairy Cattle. National Research Council. 6th ed. National Academy Press, Washington, DC, 1988. x, 157 pp., + floppy disk in pocket. Paper, \$14.95.

Observational Astrophysics. Pierre Léna. Springer-Verlag, New York, 1988. xii, 328 pp., illus. \$54. Astronomy and Astrophysics Library. Translated from the French edition (Paris, 1986) by A. R. King.

The Omega Point. The Search for the Missing Mass and the Ultimate Fate of the Universe. John Gribbin. Bantam, New York, 1988. x, 245 pp., illus. Paper, \$8.95.

On the Track of Ice Age Mammals. Antony J. Sutcliffe. Harvard University Press, Cambridge, MA, 1988. 224 pp., illus. Paper, \$12.95. Reprint, 1985 ed.

Oocyte Growth and Maturation. T. A. Dettlaff and S. G. Vassetzky, Eds. Frank Billett, Trans. Ed. Consultants Bureau (Plenum), New York, 1988. xx, 443 pp., illus. \$95. Translated from the Russian.

Order and Chaos in Nonlinear Physical Systems. Stig Lundqvist, Norman H. March, and Mario P. Tosi, Eds. Plenum, New York, 1988. xviii, 469 pp., illus. \$92.50. Physics of Solids and Liquids.

Partial Differential Equations. Theory and Technique. George F. Carrier and Carl E. Pearson. 2nd ed. Academic Press, San Diego, CA, 1988. xii, 340 pp., illus. \$39.95.

A Passion for Science. Lewis Wolpert and Alison Richards. Oxford University Press, New York, 1988. viii, 206 pp., illus. \$21.95. BBC interviews with Abdus Salam, Martin Rees, Michael Berry, Christopher Zeeman, Dorothy Hodgkin, Francis Crick, Sydney Brenner, Gunther Stent, John Maynard Smith, Stephen Jay Gould, Anthony Epstein, Walter Bodmer, and Richard Gregory.

Program Evaluation. A Field Guide for Administrators. Robert L. Schalock with Craig V. D. Thornton. Plenum, New York, 1988. xvi, 269 pp., illus. \$35.

Regulation of Neuroendocrine Aging. Arthur V. Everitt and Judie R. Walton, Eds. Karger, Basel, 1988. viii, 155 pp., illus. \$93.50. Interdisciplinary Topics in Gerontology, vol. 24.

Robert Koch. A Life in Medicine and Bacteriology. Thomas D. Brock. Science Tech, Madison, WI, 1988. x, 365 pp., illus. \$35. Scientific Revolutionaries.

Rock and Soil Rheology. N. Cristescu and H. I. Ene, Eds. Springer-Verlag, New York, 1988. viii, 289 pp., illus. Paper, \$41.80. Lecture Notes in Earth Sciences, vol. 14.

The Triarchic Mind. A New Theory of Human Intelligence. Robert J. Sternberg. Viking, New York, 1988. xiv, 354 pp., illus. \$19.95.

Two-Dimensional Electrophoresis and Immunological Techniques. Bonnie S. Dunbar. Plenum, New York, 1987. xvi, 372 pp., illus. Spiral bound, \$29.50.

Unimodality, Convexity, and Applications. Sudhakar Dharmadhikari and Kumar Joag-dev. Academic Press, San Diego, CA, 1988. xiv, 278 pp. \$64.50. Probability and Mathematical Statistics.

Unnatural Emotions. Everyday Sentiments on a Micronesian Atoll and Their Challenge to Western Theory. Catherine A. Lutz. University of Chicago Press, Chicago, 1988. xii, 273 pp., illus. \$35; paper, \$13.95.

Vascular Differentiation and Plant Growth Regulators. L. W. Roberts, P. B. Gahan, and R. Aloni. Springer-Verlag, New York, 1988. x, 154 pp., illus. \$98. Springer Series in Wood Science.

Vascular Neuroeffector Mechanisms. Receptors, Ion-Channels, Second Messengers and Endogenous Mediators. J. A. Bevan et al., Eds. Published for ICSU Press by IRL, McLean, VA, 1988. xiv, 336 pp., illus. Paper, \$90. ICSU Symposium Series, vol. 10. From a symposium, Melbourne, Australia, Aug.-Sept. 1987.

Vasoactive Intestinal Peptide and Related Peptides. Sami I. Said and Viktor Mutt, Eds. New York Academy of Sciences, New York, 1988. xiv, 691 pp., illus. Paper, \$173. Annals of the New York Academy of Sciences, vol. 527. From a conference, New York, March 1987.

Vasodilatation. Vascular Smooth Muscle, Peptides, Autonomic Nerves, and Endothelium. Paul M. Vanhoutte, Ed. Raven, New York, 1988. xxvi, 572 pp., illus. \$125. Based on a symposium, Rochester, MN, July 1986.

Vasopressin. Cellular and Integrative Functions. Allen W. Cowley, Jr., Jean-Francois Liard, and Dennis A. Ausiello, Eds. Raven, New York, 1988. xxviii, 513 pp., illus. \$75. From a conference, Smugglers' Notch, VT, Aug. 1987.

Products & Materials

Imaging Workstation

The ARGUS 100 is a turn-key digital imaging workstation for biomedical imaging. Interactive menus for image acquisition and processing are controlled through an optical mouse and a keyboard. A camera controller, programmable look-up tables, and spatial filtering matrices aid image manipulation and processing in both pseudo-color and black and white. Photonic Microscopy. Circle 437.

Electrophoretic Power Supplies

MicroPro power supplies have been designed for high-voltage electrophoresis applications. The MicroPro line includes 1000-, 3000-, and 5000-V models. The user can program eight sets of parameters, and operation conditions can be set and stored. The power supply can also be programmed to step between parameters. Other features include voltage, current, and power regulation; load and leak detection; automatic crossover; voltage per hour indicator; digital readout; and a 100-hour timer for overnight separations. HBI, Haake Buchler Instruments. Circle 538.

Immobilized Recombinant Protein G

GammaBind G-Agarose is an immobilized form of recombinant engineered protein G. The product can purify immunoglobulin G antibodies from mammals but does not cross-react with albumin or immunoglobulins M, A, or E. GammaBind G-Agarose is protein engineered to eliminate human serum albumin binding and to resist proteolytic degradation; antibodies purified by affinity chromatography on columns of GammaBind G-Agarose are thus not contaminated with albumin, and the affinity columns last longer. The reagent binds 20 mg of human immunoglobulin G per milliliter of gel. Genex. Circle 540.

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.

Plotting Software

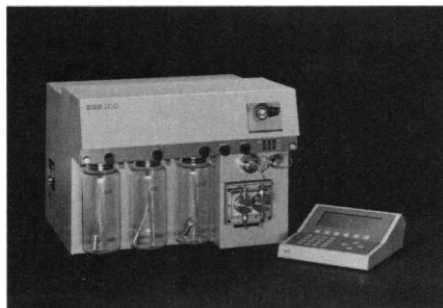
TECPLOT is an interactive plotting program for visualizing technical data in the form of contour lines, color-flooded contours, vector fields, streamlines, and x - y plots. The user can create and display plots from more than one dataset at once and in one or more windows. Datasets may be partitioned into subsets. Menus may be controlled by either mouse or keyboard. The keystrokes used in creating a plot can be recorded and repeated later. To prepare the final plot, the user can reposition elements, change colors, add labels, or change the size. Hard copies can be produced by pen plotters, PostScript-based laser printers, or screen photography. TECPlot operates on the IBM PC family of computers and on Apollo 3000/4000 workstations; the IBM version requires color graphics capability, a hard disk or a high-density drive, and at least 512 kilobytes of random-access memory. Amtec Engineering. Circle 550.

Nucleic Acid Photodocumentation System

The UV/Camera System is a portable system for photographing DNA and RNA gels. The system combines an ultraviolet light source and a camera in a single unit. This design allows gels to be photographed directly and eliminates the need for protective eyewear. Because the system works with Polaroid instant film, no darkroom or separate ultraviolet transilluminator is necessary. Oncor. Circle 548.

Amino Acid Analyzer

The BAS-200 PTH analyzes by chromatography picomole quantities of phenylthiohydantoin amino acids from Edman sequencing of proteins and peptides. The computer-based system operates with nar-



row-bore (0.21-cm) columns. A tested column and documentation come with the BAS-200 PTH. All phenylthiohydantoin derivatives are resolved in 18 min, with a

cycle time of 30 min. The system can detect less than 200 fmol of each compound. Bioanalytical Systems. Circle 537.

Cytometer

The ACAS 570 Interactive Laser Cytometer sorts cells and performs quantitative fluorescence analyses. A focused laser spot permits interactive methods, confocal microscopy, and measurement of pH and of intracellular ions such as calcium. The ACAS 570 has an argon ion laser and a dual photometric detection system for single or simultaneous dual parameter or ratio measurements on a single cell or an entire cell population. Meridian Instruments. Circle 549.

Literature

Technical Brief TB028 describes the protein-binding characteristics of a membrane. Millipore. Circle 468.

Disposable Glass Pipettes is a brochure about graduated chemically resistant sterile disposable glass pipettes. Bellco Biotechnology. Circle 469.

Laboratory and Research Products News is a quarterly newsletter of products and applications for analytical chemistry, biochemistry, and molecular biology. Eastman Kodak. Circle 470.

The *9000 Series PepSynthesizers* brochure describes three peptide synthesizers based on the fluorenylmethyloxycarbonyl active ester synthesis techniques. MilliGen/Bioscience Division of Millipore. Circle 471.

ASYSTANT GPIB, The Scientific Number Cruncher With IEEE-488 Support is a brochure about a data acquisition and analysis personal computer software package. Asyst Software Technologies. Circle 472.

Serum-Free WRC 935 Cell Culture Medium is a brochure that describes a chemically defined nutrient medium for hybridomas and other cell lines. Amicon Division, W.R. Grace. Circle 473.

Software for Automating ELISA Processing Steps is a brochure about a software program that reduces the time required for routine enzyme-linked immunosorbent assays (ELISA). Beckman Instruments. Circle 474.

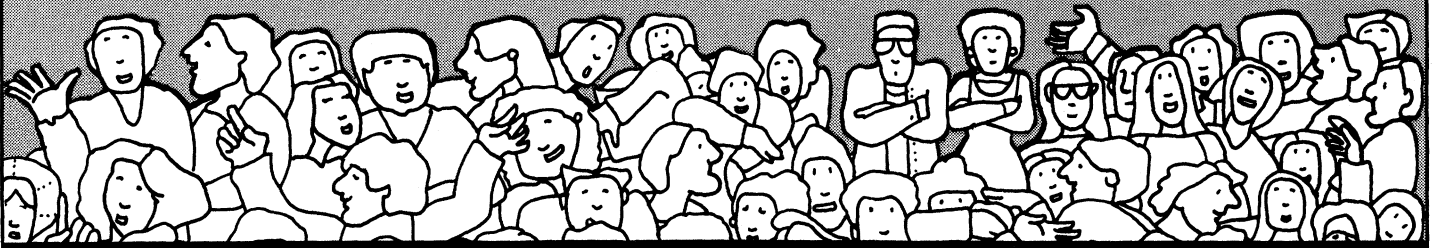
1989-90 Specialty Chemical Catalog contains 161 pages featuring 3000 chemicals, including amino acid derivatives and complex carbohydrates. Spectrum Chemical Manufacturing. Circle 475.

Laser Cavities That Meet the Most Exacting Specifications is a 4-page brochure about laser cavity design services. Labsphere. Circle 566.



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Structure ad copy on a separate page, on lines of 52 characters and spaces. Include any desired heading. Each line of heading, and/or extra line spaces, and all partial lines (including centered reply information) are counted as full lines. Ad titles located within the text are printed in boldface caps and are only 32 characters per line. In ESTIMATING the cost, multiply total lines x \$38.00 = approximate cost of ad. (This is an approximate cost ONLY: Allow for variation between estimated lines and actual typeset lines and the resulting final cost. Purchase orders must allow for some degree of flexibility and/or adjustment.)

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NOTE: Ad cancellations made after Thursday, TWO weeks prior to issue date incur a 10% production charge. Final deadline for cancellations is 12 p.m. Tuesday, ONE week prior to issue date. Cancellations must be in writing.

Send copy for all **Positions Wanted** ads and **Line Classified** ads less than 1/6 page in size (39 lines) to:

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Telephone: 212-730-1050

Blind ad replies should be addressed as follows:

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SCIENCE
1333 H Street, NW
Washington, DC 20005

POSITIONS WANTED

Anatomist/Reproductive Biologist, Ph.D. (1986).

Two years of postdoctoral experience in reproductive biochemistry. Experience in tissue culture, light and electron microscopy, protein purification, column chromatography, SDS-PAGE, western blots, lectins, immunostaining, ovulation induction drugs (clomiphene and pergonal), steroid hormones RIA, seeking a teaching (70%) and collaborative research position (30%) in mid west area. Available in January 1989. Box 190, SCIENCE.

Invertebrate Systematist. Ph.D. D.S.c. applied for. Substantial experience in cnidarian systematics, 30+ papers, currently tenured at highly respected institution. Some teaching experience, excellent references. Seeks opportunity to research and monograph hydromedusan/hyroid fauna of worthwhile area, with or without teaching. Box 191, SCIENCE.

POSITIONS WANTED

Flow Cytometry Expert with experience setting up, managing and operating flow cytometry facility for medical center and biomedical company available for employment. Box 7850, Stanford, CA 94305.

Human Genetics. Ten years of academic experience in cloning, sequencing, recombinant DNA. Includes seven years of human genetics: RFLPS, Linkage analysis, chromosome libraries, neurobiology, psychology. Box 189, SCIENCE.

Japanese Life Sciences Translations: articles, patents, opposition statements, other documents translated from Japanese in cell biology, microbiology, mycology, plant pathology, immunology, pharmacology, and related fields. 1025 Laurel Street #3, Menlo Park, CA 94025. Telephone: 415-321-6317.

Microbiologist, physiologist, Ph.D. (April 1989). Experience in biotechnology and anaerobic microorganism research. Presently working at the Institut Pasteur. Seeking postdoctoral position in molecular biology. Location preference: Northeast USA, (Boston). Box 193, SCIENCE.

Microbiologist, Ph.D. (1982). Six years of teaching and research experience in food and industrial microbiology, seeking a postdoctoral/lectureship position. Box 192, SCIENCE.

Thirty-one-year-old recently graduated scientist (Danish degree of Cand. Scient.) from Institute of Genetics, Copenhagen University, looking for a job as **Molecular Biologist**. Specialized in genetics and molecular biology techniques. Final project involved P-element transformation on *Drosophila melanogaster*. Box 172, SCIENCE.

Plant Pathologist (Ph.D., 1967). Twenty-one years of experience working in the Caribbean region on a wide range of crops, particularly tomato, bean, peanut, pigeon pea, cowpea, kenaf, citrus, yam, papaya. Considerable experience in: systems of fungicide application, bacterial wilt caused by *Ps. solanacearum*, disease diagnosis, teaching as extension agent to postgraduate levels, administration. Seeking position in academic, industry, or consultancy fields. Box 188, SCIENCE.

Retrovirologist, Ph.D. Experienced and published in human immunodeficiency virus and murine retroviruses. Demonstrated ability for independent research and laboratory management. Desires academic/research position. Box 194, SCIENCE.

POSITIONS OPEN

ANATOMY/CELL BIOLOGY

The Department of Anatomy and Cell Biology in the Faculty of Medicine at the University of Alberta invites applications for up to six **FACULTY POSITIONS**. Applicants should have research expertise in cell or developmental biology, cellular neurobiology, or molecular biology. Scientists using innovative methods for analyzing cell structure are encouraged to apply. Applicants should have proven records of research achievement and will be eligible for funding by the Alberta Heritage Foundation for Medical Research. Candidates should be capable of teaching graduate courses in cell or developmental biology, or in medical school courses in histology or neuroanatomy. Appointments will be made at all faculty levels. Rank and salary will be determined according to University of Alberta guidelines. Successful candidates will be encouraged to carry on independent research programs, but will also have the opportunity for collaborative interactions with several multidisciplinary research groups within the University. Deadline for receipt of applications is 1 March 1989.

The University of Alberta is committed to the principle of equity in employment but, in accordance with Canadian immigration requirements, priority will be given to Canadian citizens and permanent residents.

Please submit curriculum vitae, a summary of research interests, and the names of four referees to: **Dr. Richard A. Murphy, Professor and Chairman, Department of Anatomy and Cell Biology, Faculty of Medicine, University of Alberta, Edmonton, Alberta, Canada, T6G 2H7.**

POSITIONS OPEN

ACADEMIC PHYSIOLOGIST

The Department of Anesthesiology of Loyola University Stritch School of Medicine, Maywood, Illinois, is recruiting a physiologist for a faculty position at the assistant professor level to work in a stimulating environment that includes excellent research laboratory. The candidates for this position are expected to have a strong commitment to innovative research in cardiovascular and respiratory physiology and ability to run large animal experiments in collaboration with the department's physician faculty and resident trainees. The salary is competitive and Loyola University is an Equal Opportunity Employer.

Please submit curriculum vitae, reprints, a statement of research interests, and arrange to have three letters of recommendations sent directly to:

Tadikonda L. K. Rao, M.D.
Department of Anesthesiology
Loyola University
2160 South First Avenue
Maywood, IL 60153

AGRO-ECOLOGIST (Rank: Entry-level). Soil ecologist with expertise in microbially mediated nutrient cycling in soil. Will be required to develop a competitive research program on nutrient cycling in soil with emphasis on agroecosystems. Joint appointment in University of Georgia Institute of Ecology and Agronomy Department. Candidate will participate in graduate courses/seminars. Starting date is September 1989. Application deadline is 15 February 1989. Send letter of application, curriculum vitae, graduate transcripts, and names and addresses of three references to: **Chair, Agro-Ecologist Search Committee, Institute of Ecology, University of Georgia, Athens, GA 30602.** The University of Georgia is an Equal Opportunity/Affirmative Action Employer.

ASSISTANT PROFESSOR. Position available in Department of Surgery for a Ph.D. biochemist, cell physiologist with research experience including background in cell culture techniques. Candidate should possess interest in cancer cachexia and will be expected to pursue grant-supportable research. Submit curriculum vitae, statement of research interest and three references to: **Dennis F. Devereux, M.D., Division of General Surgery, Section of Surgical Oncology, University of Medicine and Dentistry of New Jersey—Robert Wood Johnson Medical School, CN 19, New Brunswick, NJ 08903-0019.** The UMDNJ is an Affirmative Action/Equal Employment Opportunity Employer. M/F/H/V.

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 6 January 1989. Equal Opportunity/Affirmative Action Employer.

Concordia University, Department of Biology, invites applicants for a tenure-track position in molecular biology, with a preference for candidates in plant molecular biology, at the **ASSISTANT PROFESSOR** level. The successful candidate will have had at least 2 years of postdoctoral experience and will be expected to develop an independent research program. Duties will include developing a course in biotechnology, participation in undergraduate and graduate teaching and supervision of graduate students. Applications are considered until the position is filled, and appointment will be effective September 1989. Interested candidates should send their curriculum vitae, a brief description of their research interests and the names and addresses of three referees to: **Dr. E. J. Maly, Chairman, Biology Department, Concordia University, 1455 de Maisonneuve Boulevard West, Montreal, Quebec, H3G 1M8.** In accordance with Canadian Immigration requirements, this announcement is directed to Canadian citizens and permanent residents. Subject to final budgetary approval.

POSITIONS OPEN

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The Library of Congress, Congressional Research Service, Science Policy Research Division is seeking a Social Science Analyst, Physical Science Analyst, or Engineer.

Salary levels range from a GS-9, GS-11 \$22,907 to \$36,032 for Social or Physical Science Analyst, and GS-9, GS-11 \$29,199 to \$39,537. The position offers non-competitive promotion potential to GS-15 depending solely on demonstration of ability to perform at higher levels.

Candidates will prepare written reports and analyses for Members and committees of Congress on policy issues within the field of computer, information, or telecommunication technology policy. Qualified individual for the GS-9 position, 2 years of specialized experience and 3 years of specialized experience for the GS-11 position that demonstrated computer knowledge, information, or telecommunications technology policy. The minimum requirement is a bachelor's degree in social science, engineering or physical science. Graduate education may be substituted for some or all of the specialized experience.

Applicants must call the Library of Congress Employment Office at 202-707-5627 and request a copy of Vacancy Announcement #80657 and an application for Federal Employment (SF-171). A writing sample and course listing must be submitted with the application. Applicants are encouraged to respond to the Quality Ranking Factors listed on the Vacancy Announcement. Applications must be received no later than 16 January 1989 by: **The Library of Congress, Recruitment and Placement Office, Department E, 101 Independence Avenue, S.E. LM-107, Washington, DC 20540.** *The Library of Congress is an Equal Opportunity Employer. Civil Service Status not required; U.S. citizenship required.*

ASSISTANT CURATOR VERTEBRATE PALEONTOLOGY AMERICAN MUSEUM OF NATURAL HISTORY

The Department of Vertebrate Paleontology invites applications from Ph.D.s. in vertebrate paleontology with specialization in non-mammalian tetrapods for an entry-level, tenure-track curatorial position. Applicant must have experience in collection-based research in systematics and comparative morphology as well as proficiency in related earth and biological sciences.

The successful candidate will be expected to develop a strong research program and participate in curation, maintenance, and growth of collections of fossil reptiles, amphibians, and birds. Active involvement in the Department's exhibition, public education, and graduate teaching programs is also expected. Other responsibilities will include participation in departmental and museum administrative activities.

Salary will be commensurate with qualifications and experience. Full Museum benefits apply. Interested applicants must submit by 15 February 1989: a letter of application, curriculum vitae, a brief statement of research objectives, and names and addresses of at least three references. Submit to:

Dr. Michael J. Novacek
Chairman, Search Committee
Department of Vertebrate Paleontology
American Museum of Natural History
Central Park West at 79th Street
New York, NY 10024-5192
An Equal Opportunity Employer.

DEPARTMENT OF BIOLOGY CASE WESTERN RESERVE UNIVERSITY

A tenure-track position at the **ASSISTANT PROFESSOR** level is available in the area of

CELL, MOLECULAR BIOLOGY

Applicants will be considered with research interests in plant or animal systems, who have a strong commitment to research and undergraduate and graduate education. Interested persons should submit curriculum vitae plus a statement of current research interests, and have three letters of recommendation sent to: **Dr. Norman B. Rushforth, Chairman, Department of Biology, Case Western Reserve University, Cleveland, OH 44106.** *Case Western Reserve University is an Equal Opportunity/Affirmative Action Employer.*

POSITIONS OPEN

AQUATIC BIOLOGIST: Teaching responsibilities to include general biology and area of specialty. Research experience in freshwater or estuarine ecology.

VERTEBRATE ZOOLOGIST: Teaching responsibilities to include undergraduate embryology, anatomy, and general biology. Research area open.

TWO TENURE-TRACK, ASSISTANT PROFESSOR positions beginning fall 1989.

Other qualifications: Ph.D. in discipline completed by starting date; postdoctoral experience preferred. Training or experience in position area and commitment to quality teaching and research. Send, postmarked by 17 January 1989, curriculum vitae, statements of personal teaching philosophy and research interests, transcripts of all college work, and names of three references to: **Chair of (specify position) Search, Department of Biology, Georgia Southern College, Statesboro, GA 30460-8042.** *Georgia Southern is an Affirmative Action/Equal Opportunity Employer, which invites and encourages applications from women and minorities.*

The Physics Department of Tulane University invites applications for a tenure-track **ASSISTANT PROFESSOR** faculty position to start in August 1989 in biophysics. Candidates are sought with a record of research achievement and strong aptitude for teaching at undergraduate and graduate levels. Applicants should provide curriculum vitae, a statement of research interests, and plans, and have three letters of reference sent prior to 31 January 1989 to: **Dr. G. Rosensteel, Chair, Physics Department, Tulane University, New Orleans, LA 70118.** *Tulane University is an Equal Opportunity/Affirmative Action Employer.*

ASSISTANT PROFESSOR JOHNS HOPKINS UNIVERSITY CELL BIOLOGIST

The Department of Biology of the School of Arts and Sciences invites applications for a tenure-track faculty position. We are searching for an individual who will establish an independent research program in the broadly defined area of cell biology and who will participate in undergraduate teaching and in our graduate training program.

The Department has 24 full-time and 7 part-time faculty members on the Homewood campus. The full-time faculty are located in a new building with outstanding facilities and spacious labs. The part-time faculty are members of the Carnegie Institution which is located in a nearby building. The research of about half the faculty is related to various aspects of cell biology.

Please send curriculum vitae, a statement of research interests, and three letters of reference by 15 January 1989 to:

Chair, Cell Biology Search Committee
Department of Biology
Johns Hopkins University
Baltimore, MD 21218

The Johns Hopkins University is an Affirmative Action/Equal Opportunity Employer.

ASSISTANT PROFESSOR—The Lung Biology Center at the University of California, San Francisco, is seeking a cell and molecular biologist to lead an independent research program examining the molecular biology of cell surface adhesion, with special reference to molecules potentially relevant to lung injury and repair. This faculty member will also be expected to take part in the regular teaching activities of the departments of Medicine and Pharmacology.

Candidates must have a Ph.D. degree, and at least 4 years of postdoctoral research experience in adhesion receptor biology. The annual salary will be \$50,000 to \$60,000 depending upon experience.

Please send résumé and the names and addresses of four references to: **Dean Sheppard, Director, Lung Biology Center, Building 1, Room 150, San Francisco General Hospital, 1001 Potrero Avenue, San Francisco, CA 94110.**

Deadline for receipt of application is 10 January 1989. *The University of California, San Francisco, is an Equal Opportunity/Affirmative Action Employer. Women and minorities are encouraged to apply.*

POSITIONS OPEN

ASSISTANT PROFESSOR MOLECULAR VIROLOGY

The Department of Ophthalmology, Baylor College of Medicine, seeks an innovative scientist to develop an independent research program on herpes virus infections of the eye. Joint faculty appointment is also available in the Department of Molecular Virology. Applicants for this tenure-track position should have a Ph.D. with at least 2 years of productive postdoctoral experience in molecular virology. Negotiable starting date. Send curriculum vitae, names of at least three references, and a statement of research interests to: **Dr. K. R. Wilhelmus, Chairperson—Search Committee for Molecular Virologist Position, Department of Ophthalmology, Cullen Eye Institute, Baylor College of Medicine, One Baylor Plaza (NC200), Houston, TX 77030.** *Equal Opportunity Employer.*

ASSISTANT PROFESSOR OF BIOCHEMISTRY AND MOLECULAR BIOLOGY

The Department of Biochemistry and Molecular Biology, Louisiana State University School of Medicine in Shreveport invites applicants for two tenure-track positions at the assistant professor level. We are seeking candidates with a strong background in molecular biology, molecular genetics, protein biochemistry and physical biochemistry. We especially encourage applicants whose research interests are focused in mammalian and yeast cell systems; however, outstanding candidates in other areas of molecular biology and biochemistry will definitely be considered. The Department currently has well-funded research programs studying gene expression and regulation in prokaryotic and eucaryotic systems, yeast genetics, molecular virology and protein chemistry. Letters of application, including curriculum vitae, a statement of future research interests as well as three letters of reference should be sent by 15 January 1989 to: **Dr. Richard J. Courtney, Chairman, Department of Biochemistry and Molecular Biology, L.S.U. Medical Center, 1501 Kings Highway, Shreveport, LA 71130.** *An Affirmative Action/Equal Opportunity Employer.*

ASSISTANT PROFESSOR OF MICROBIOLOGY—MOLECULAR VIROLOGY. Tenure-track position is available immediately for an animal virologist (Ph.D. or M.D.) with training and research interest in molecular genetics, especially in using viruses as gene vectors. The appointee is expected to establish an independent research program within an expanding academic department with research activities in molecular and cellular immunology, immunopathology of viral infections including HIV, and pathogenesis of rickettsial and parasitic diseases. Send curriculum vitae, description of research interests, list of publications, and names and addresses of references to: **Dr. Gerald Cole, Department of Microbiology and Immunology, University of Maryland School of Medicine, 660 West Redwood Street, Baltimore, MD 21201.**

ASSISTANT PROFESSOR OF PHYSIOLOGY

The Department of Physiology is seeking candidates for a faculty (12-month, tenure-track) position at the assistant professor level. The Department has an orientation in the area of cardiopulmonary physiology. We seek an individual whose research interests relate to the microcirculation or vascular endothelial cell function, but encourage applications from individuals in other areas of cardiovascular or pulmonary physiology as well. Requirements include Ph.D. or M.D., completion of 2 years of postdoctoral training, a sound background in general physiology, and the ability to develop own research program. Will be responsible for teaching gastrointestinal and portions of cardiovascular physiology in the Medical Physiology Course. Opportunities exist for collaborative research and participation in graduate education. Submit curriculum vitae, statement of research interests, and names of three references by 15 January 1989 to: **Dr. Michael B. Maron, c/o The Office of Human Resources, Northeastern Ohio Universities College of Medicine, Rootstown, OH 44272.** *An Affirmative Action/Equal Opportunity Employer.*

POSITIONS OPEN

RAMAPO COLLEGE OF NEW JERSEY

Ramapo College of New Jersey, a 4-year undergraduate college of liberal arts, sciences, business and social work, enrolls 4,000 students in academic programs which have a strong interdisciplinary orientation. Its 357-acre, barrier-free campus is located approximately 25 miles northwest of New York City. The college gives priority to excellence in teaching and expects scholarship. All faculty participate in student advising, governance committees, student clubs, and college-related activities.

#283 ASSISTANT PROFESSOR IN CHEMISTRY: A tenure-track position is available in the School of Theoretical and Applied Science at Ramapo College of New Jersey commencing fall 1989. Applicants must have a Ph.D. in chemistry with expertise in analytical/instrumental chemistry and a knowledge of environmental analysis. The chemistry program is equipped with state-of-the-art instrumentation. *Applications from minorities and women are particularly encouraged.* Applications should include curriculum vitae, a list of publications, and the names, addresses, and telephone numbers of three references. Submit application by 23 January 1989 to: Ramapo College of New Jersey, Affirmative Action Office, 505 Ramapo Valley Road, Mahwah, NJ 07430.

Ramapo College is an Affirmative Action/Equal Opportunity Employer.

UNIVERSITY OF CALIFORNIA, SAN FRANCISCO DEPARTMENT OF LABORATORY MEDICINE

Applications are being accepted for an **ASSISTANT RESEARCH MOLECULAR BIOLOGIST** (\$36,600 to \$45,700) supported by the UCSF Transfusion Research Program. Starting date is winter 1988/1989. Applicant must be a Ph.D.-level scientist with experience with molecular biology techniques. Applicants should send curriculum vitae plus list of three references to:

Girish N. Vyas, Ph.D.
University of California, San Francisco
San Francisco, CA 94143-0134

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

ASSISTANT/ASSOCIATE PROFESSOR OF ANATOMY

Applications are invited to fill a tenure-track appointment at the rank of an assistant or associate professor beginning 1 July 1989.

Candidates should have a D.D.S./D.M.D. or Ph.D. degree with teaching experience in histology, in addition to at least one other area (neuroanatomy, embryology). The teaching responsibility will be to dental, dental hygiene, and postgraduate diploma students in dentistry. The successful applicant is expected to develop a productive research program.

Both women and men are encouraged to apply. In accordance with Canadian Immigration, priority will be given to Canadian citizens or permanent residents.

Applicants should submit their curriculum vitae, an outline of their research goals, and arrange for three letters of reference to be sent to: **Dr. G. H. Bowden, Professor and Head, Department of Oral Biology, Faculty of Dentistry, University of Manitoba, 780 Bannatyne Avenue, Winnipeg, Manitoba, Canada, R3F 0W2.** Deadline for applications is 1 March 1989.

ASSISTANT/ASSOCIATE PROFESSOR DEPARTMENT OF GENETICS

The Department of Genetics, University of Washington, seeks candidates for a tenure-track appointment at the rank of assistant or associate professor, to begin in 1989 or 1990. The successful applicant will have a notable record of achievement in basic research and a strong commitment to both undergraduate and graduate education. Areas of particular interest to the Department include neurogenetics, mammalian genetics and plant molecular genetics. Applicants should arrange to have three letters of recommendation sent and should submit curriculum vitae and a brief description of research interests by 1 March 1989, to: **Search Committee, Department of Genetics, SK-50, University of Washington, Seattle, WA 98195.** *The University of Washington is an Equal Opportunity/Affirmative Action Employer.*

POSITIONS OPEN

ASSISTANT PROFESSOR EVOLUTIONARY BIOLOGY

A tenure-track position is available in the newly-organized Department of Ecology and Evolutionary Biology at Rice University for an evolutionary biologist with strengths in both theoretical and empirical investigations of field problems. The successful applicant will be expected to develop a strong externally-funded research program and to participate in undergraduate and graduate instruction. An interest in interacting with faculty members outside the applicant's specialty is highly desirable. Interests in the department include global ecology, population and community ecology, and evolution of social behavior. Postdoctoral experience is required. A résumé, a brief outline of research plans, and three letters of recommendation should be sent to: **P. A. Harcombe, Chairman, Department of Ecology and Evolutionary Biology, Rice University, P.O. Box 1892, Houston TX 77251.** Applications should be received by 15 January 1989. *Rice University is an Equal Opportunity/Affirmative Action Employer.*

ASSISTANT PROFESSOR OF NUTRITION.

Applications are invited for a 12-month tenure-track position in the Food Science and Human Nutrition Department and the Pew Center for Nutritional Sciences. The successful applicant will have an earned doctorate in nutrition, molecular biology, biochemistry or other appropriate field and have the potential to develop an independent research program with extramural grant funding. The position will involve teaching and directing graduate research programs. Applications, including curriculum vitae, and a brief statement of at least three references should be sent to: **Dr. L. B. Bailey, Chairperson, Search and Screen Committee, University of Florida, Food Science and Human Nutrition Department, Gainesville, FL 32611; Telephone: 904-392-1991.** *The University of Florida is an Equal Opportunity/Affirmative Action Employer.* Deadline date: 1 March 1989.

ASSISTANT PROFESSOR— MOLECULAR VIROLOGY

The Department of Microbiology at the University of Texas Southwestern Medical Center invites applications for an assistant professor position (tenure-track). The successful candidate will be expected to establish an independent research program. Candidates committed to investigation in oncogenic viruses or human retroviruses are preferred. Excellent departmental facilities include a to-be-constructed P3 laboratory. Significant opportunities exist within the department for collaborative research in molecular biology, immunology and oncogenic viruses and outside the department with a Hughes Institute, Cancer Center, and Center for Diabetes Research. Send curriculum vitae, names of three references, and a brief statement of research plans to: **Jonathan W. Uhr, M.D., Department of Microbiology, University of Texas Southwestern Medical Center, 5323 Harry Hines Boulevard, Dallas, TX 75235-9048.** *An Affirmative Action/Equal Opportunity Employer.*

ASSOCIATE RESEARCH SCIENTIST. Perform research, employing both isothermal microcalorimetry and differential scanning microcalorimetry, on the thermodynamics of biochemical processes. Included in the biochemical processes to be studied will be: (i) The unfolding of proteins, and the effects of single and multiple mutations on the stability and unfolding of proteins; (ii) the interactions of proteins with lipids, nucleic acids, and other proteins, and the effects of mutations on these interactions; (iii) the interactions of various drugs, such as adriamycin and other anti-cancer drugs, and other added substances on lipids in the form of model membranes. Requires a Ph.D. in chemistry. No specific experience required. Requires detailed knowledge of the principles of thermodynamics, and a broad knowledge of biochemistry. This requirement may be satisfied with evidence of completion of three university or college level courses or specific advanced research project work in each of these disciplines. Also requires 2 years of doctoral training in calorimetric methods and procedures. Monday to Friday, 9:00 a.m. to 5:00 p.m.; \$21,000 per annum. Please send résumé to: **Job Service Technical Unit, Connecticut Department of Labor, 200 Folly Brook Boulevard, Wethersfield, CT 06109.** Refer to Job Order #3034978.

POSITIONS OPEN

HARVARD UNIVERSITY ASSISTANT PROFESSOR CELLULAR AND DEVELOPMENTAL BIOLOGY (CDB)

The Department of Cellular and Developmental Biology intends to make an appointment at the assistant professor level effective September 1990 or earlier. Our department covers a broad range of topics in cellular biology, developmental biology and molecular genetics. We are seeking outstanding candidates in any of these fields. We are particularly interested in possible appointments in the areas of vertebrate development, neurobiology, and plant molecular biology. However, we will consider exceptional applicants in other fields as well. *We encourage applications from women and minority groups.* Applications should include curriculum vitae, reprints of publications, and a statement of present and future research plans. Complete applications and three letters of recommendation, solicited by the applicant, should be received no later than 1 February 1989 by:

Diane Baldwin, Administrator
CDB Search Committee
Cellular and Developmental Biology
The Biological Laboratories
Harvard University
16 Divinity Avenue
Cambridge, MA 02138
Telephone: 617-495-2327

Harvard University is an Affirmative Action/Equal Opportunity Employer.

DEPARTMENT OF ANATOMY

The Department of Anatomy at the Northeastern Ohio Universities College of Medicine invites applications for a tenure-track position at the **ASSISTANT OR ASSOCIATE PROFESSOR** level. Individuals with research experience and expertise in molecular and cell biology are encouraged to apply. Current departmental research interests include muscle biology and neuroendocrinology. Teaching responsibilities are in gross anatomy. The successful candidate should have i) teaching experience in gross anatomy; ii) publications; and iii) a demonstrable potential for, or a proven record of, extramural funding. The Department is well-equipped and there is excellent administrative support for research and teaching. Send curriculum vitae, bibliography, statement of teaching and research goals, research funding (past and present) and the names of at least three references no later than 27 January 1989 to: **Norman Taslitz, Ph.D., c/o The Office of Human Resources, Northeastern Ohio Universities College of Medicine, Rootstown, OH 44272.**

An Equal Opportunity/Affirmative Action Employer.

ASSOCIATE OR FULL PROFESSOR MOLECULAR AND CELLULAR IMMUNOLOGY UNIVERSITY OF CALIFORNIA, BERKELEY

The University of California at Berkeley is seeking, pending budgetary approval, an established immunologist to join the Division of Immunology in the newly formed Department of Cell and Molecular Biology. Qualifications include: (i) an earned doctorate in immunology or related field, (ii) an ongoing and outstanding research program in molecular and cellular immunology, (iii) effective communication skills, and (iv) demonstrated management capabilities. Duties include participation in graduate and undergraduate instruction in immunology, maintenance of a strong independent research program to provide training for graduate students and postdoctoral fellows, and involvement in the administration of the newly formed Division of Immunology. Applications/nominations along with curriculum vitae, statement of research interests and representative reprints, and the names of three references should be sent by 1 January 1989 to:

Dr. Marian E. Koshland
Chairperson, Search Committee
Department of Microbiology and Immunology
University of California
Berkeley, CA 94720

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

Research & Engineering Opportunities

Physio-Control, a world leading manufacturer of biomedical instrumentation, is looking for outstanding professionals in the following research and engineering disciplines to join our team.

Research Scientist

You'll be accountable for data base design, graphics software design for data annotation, statistical analysis and biomedical signal processing. An MSEE (Ph.D. preferred) with a minimum of 5 years of related experience required. Artificial intelligence/neural experience is highly desirable.

Physiologist

We're seeking a Physiologist with specialization in the cardiovascular system. A Ph.D. in physiology with undergraduate education in engineering or physics is required. The successful candidate will have a history of medical research publishing in the cardiovascular area. A minimum five years' experience in the field and a demonstrated ability to teach physiology is necessary.

Physio-Control offers a 4-day workweek, immediate medical/dental coverage, company matched savings plan, bonus plan, and much more. For immediate consideration, send resume and salary history in confidence to: **Physio-Control, Human Resources Department, 11811 Willows Road, P.O. Box 97006, Redmond, WA 98073-9706.** EOE.

**PHYSIO
CONTROL**

AUSTRALIA

CHIEF OF DIVISION DIVISION OF CHEMICALS AND POLYMERS

Minimum \$75K plus benefits.

Dr D.H. Solomon, FAA, FTS, the Foundation Chief of the Division, has indicated his intention to retire from his position following the appointment of his successor.

We are therefore seeking a scientist with a commitment to research management, a distinguished record of research achievement and preferably with a knowledge of the Australian chemicals and plastics industry to lead and manage the Division of Chemicals and Polymers.

The Division's objective is to develop new technologies aimed at making the Australian chemical and plastics industry competitive in domestic and international markets, and to provide support for Australian industries concerned with water purification. The Division is in the process of moving to a new laboratory at Clayton, Victoria. It is well equipped with modern spectroscopic and computer graphics facilities and it has recently spent approximately \$1 million in building up its chemical processing and instrumental capabilities. The total staff of the Division is 171 of whom 69 are professional scientists, and the budget in 1988/89 is \$10M.

The Chief will be responsible for leadership, scientific direction and integration of the Division's research programs, the effective management of the Division's operations, and for the commercialisation of research with Australian industry.

We invite applications for this position, and would also like to hear from people in this field who may wish to suggest possible candidates.

Further information on this appointment can be obtained from Dr C.M. Adam, Director of the Institute of Industrial Technologies, who can be contacted in Melbourne on telephone 61 3 542 2897.

Applications (including the names of at least two professional referees) should be addressed to Dr J.R. Yates, Manager (Human Resources and Finance), whose postal address is:

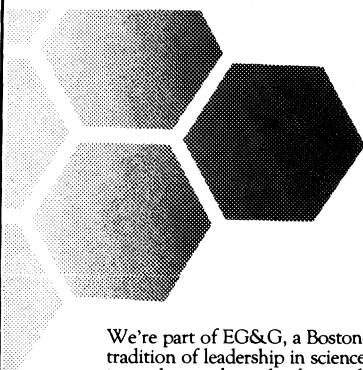
**CSIRO
Institute of Industrial Technologies
PO Box 225
DICKSON ACT 2602
AUSTRALIA**

Closing date for applications is 31 December 1988.



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EG&G BIOMOLECULAR



Opportunities in Automated DNA Sequencing Instrumentation

We're part of EG&G, a Boston-based Fortune 500 Company with a 40-year tradition of leadership in science and technology. We're looking for people interested in working independently in a dynamic, people-oriented environment. We have openings for:

TRAINING MANAGER: DNA SEQUENCING

You will develop and implement customer training programs for our automated DNA sequencer, and provide technical support to customers and sales/marketing staff. You'll work closely with customers and scientific advisors to identify new product opportunities. We require an advanced life sciences degree plus DNA sequencing and molecular biology lab experience.

SENIOR LABORATORY TECHNICIAN

This person will conduct research and development activities in our molecular biology lab. We require an MS in Molecular Biology or equivalent plus 3 years of experience in a DNA research lab, preferably in an industrial environment.

Become part of the EG&G tradition. Send a resume with salary requirements to: Christine Zielinski, EG&G Instruments Group, 40 William St., Wellesley, MA 02181.

An equal employment opportunity employer in both policy and practice.

POSITIONS OPEN

ASSISTANT/ASSOCIATE MEMBER—Virginia Mason Research Center. Position available July 1989 to develop independent laboratory in molecular, cellular, or biochemical aspects of autoimmune disease, with current or potential application to studies of type I diabetes. Close interactions with existing programs in basic and clinical immunology and clinical endocrinology at Virginia Mason Medical Center and the University of Washington. Contact: **Gerald T. Nepom, M.D., Ph.D., Director, Diabetes Research Program, Virginia Mason Research Center, 1000 Seneca Street, Seattle, WA 98101.** VMRC is an Affirmative Action/Equal Opportunity Employer.

ASSOCIATE VICE PRESIDENT FOR RESEARCH AND DEAN OF THE GRADUATE SCHOOL

The University of Nevada—Reno invites nominations and applications for the position Associate Vice President for Research and Dean of the Graduate School. Primary responsibilities include: development of UNR's research capabilities, especially in the acquisition of external grants and contracts; development of research support services; and administration of research programs and the Graduate School.

Qualifications include: an earned doctorate; tenurable as a professor in a university department; possess a distinguished personal record in academic research and graduate education; interpersonal skills; and a demonstrable knowledge of external funding agencies.

Salary is negotiable commensurate with qualifications and experience.

Deadline for receipt of application is 1 February 1989 or until the position is filled. To apply please send a letter of interest, curriculum vitae, and names, addresses, and telephone number of five references to:

**Dean Jon Epps, Chair
Associate Vice President and
Graduate Dean Search Committee
Office of Academic Affairs
University of Nevada—Reno
Reno, NV 89557
Telephone: 702-784-1740**

*An Equal Opportunity/Affirmative Action Institution
UNR employs only U.S. citizens and aliens lawfully
authorized to work in the U.S.*

DREYFUS TEACHING/RESEARCH FELLOWSHIP AT REED COLLEGE

Applications are invited from recent Ph.D. recipients in the area of **bioorganic chemistry** for a 1-year 50% teaching/50% research fellowship opportunity for the 1989 to 1990 academic year plus one summer; the appointment also carries the potential of extension an additional year as a sabbatical/leave replacement. The successful Fellow will participate in the funded research program of the "Mentor"—design, synthesis, and evaluation of mechanism-based enzyme inhibitors; the Fellow will also participate in the teaching of general chemistry and an upper division biochemistry course. Reed College enjoys a tradition of excellence in research; recent acquisitions of instrumentation include GC/MS, 300 MHz multinuclear NMR, and FT-IR. Applicants with a commitment to excellence in teaching and research should send curriculum vitae, transcripts, a statement of research and career goals, and arrange to have at least two letters of references sent by 3 February 1989, to: **Professor Ronald W. McClard, Department of Chemistry, Reed College, 3203 SE Woodstock Boulevard, Portland, OR 97202-8199.** Reed College is an Equal Opportunity/Affirmative Action Employer.

BIOLOGY: FACULTY POSITION

Developmental/Cell Biologist. Tenure-track faculty position at assistant professor rank. Conversant with methods of molecular biology, Ph.D. required. Seek dynamic teacher with ongoing research interest. Teach courses such as embryology, comparative vertebrate anatomy. *Women and minority candidates are encouraged to apply.* Salary competitive. Send curriculum vitae, names of three references by 20 January 1989 to: **Dr. George Boone, Chair, Department of Biology, Susquehanna University, Selinsgrove, PA 17870.** Affirmative Action/Equal Employment Opportunity.

POSITIONS OPEN

BIOLOGICAL SCIENCE EDUCATION

The Math, Science, and Technology Cluster, Department of Learning and Teaching, Graduate School of Education, Rutgers, The State University of New Jersey is conducting a search for a **FACULTY MEMBER** with a strong background in the biological sciences. This position offers the opportunity to teach graduate level courses to teachers of science primarily at the precollege level. This includes advising of graduate students, supervision of field studies, and direction of student theses and dissertations. An active research program within the area of science teaching and knowledge dissemination will be emphasized along with major responsibilities for program development. Rank: Open. Doctorate required. This is an academic year, tenure-track position. Salary competitive and commensurate with academic background and experience. Send application materials including curriculum vitae, transcripts, and three letters of recommendation before 15 January 1989 to: **Search Committee, Biological Science Education, Rutgers University, Graduate School of Education, 10 Seminary Place, New Brunswick, NJ 08903.** Rutgers University is an Affirmative Action/Equal Opportunity Employer. This position is contingent on available funding.

COLLEGE OF THE ATLANTIC BOTANY

College of the Atlantic is a small, private nondepartmental college offering a Bachelor of Arts in Human Ecology. The College emphasizes interdisciplinary study, self-governance, team-teaching and curricular innovations.

The College is seeking a full-time **FACULTY MEMBER** in botany to begin in fall 1989. The successful applicant will teach annual courses in sustainable agriculture, horticulture, global issues in food and agriculture and occasional courses in several of the following areas: plant physiology, plant pathology, soil science, entomology, and agricultural economics. Responsibilities would include developing a program in applied biology related to other programs in the curriculum (e.g. ecology, public policy, landscape design) and supervising the college's greenhouse and living plant collection.

Teaching experience and a doctorate are preferred. Send a letter of application, curriculum vitae, and three letters of references to: **Faculty Search Committee, College of the Atlantic, Bar Harbor, ME 04609.** Preference may be given to applications received before 16 January 1989.

*College of the Atlantic is an
Equal Opportunity/Affirmative Action Employer.*

CELL BIOLOGY assistant professor, tenure-track, to start September 1989. Ph.D., vigorous research program, commitment to undergraduate teaching required. Subdiscipline open; neurobiology, anatomy, histology experience helpful. Some start-up funds available. Open until filled, screening starts 2 January 1989. Send cover letter, curriculum vitae to: **Dr. S. L. Beck, Chair, Department of Biological Sciences, DePaul University, Chicago, IL 60614.**

The Marshall University Biology Department invites applications for two 9-month, tenure-track positions beginning fall 1989. **CELL/MOLECULAR BIOLOGIST:** Teaching responsibilities include cell biology, introductory biology and the opportunity to develop an advanced cell biology course. **ANIMAL PHYSIOLOGIST/DEVELOPMENTAL BIOLOGIST:** Teaching duties include sophomore course with laboratory in human physiology, introductory biology; others dependent upon specialization and need. Successful candidates are expected to conduct research and participate in graduate program. Ph.D. required. Salary dependent upon qualifications. Send curriculum vitae, research interests, transcripts, and names and addresses of three references by 31 January 1989 to: **Chair, Biology Department, Marshall University, Huntington, WV 25701.** Equal Opportunity Employer/Affirmative Action; minorities and women encouraged to apply.

CONSULTING—Technical and management consulting firm offering assistance in analysis of data and communication of findings to government and others, seeks Ph.D. or M.S. with equivalent experience in biological, biochemical science, pharmacology or toxicology to participate in projects and grow into the consulting business. Please reply: **Box 195, SCIENCE.**

POSITIONS OPEN

BIOLOGY: Tenure-track position as **ASSISTANT PROFESSOR OF BIOLOGY** beginning August 1989 at the University of Southern Indiana. Individual will teach undergraduate courses in medical bacteriology and/or some combination of human anatomy, physiology, or nutrition. Ph.D. required. Summer teaching may be available. Submit letter of application and curriculum vitae with the names and addresses of three references by 31 January 1989 to: **Jackson Marr, Chair, Biology Department, University of Southern Indiana, 8600 University Boulevard, Evansville, IN 47712.** Affirmative Action/Equal Opportunity Employer.

COMPUTER SIMULATION/TOXICOLOGY

Position available immediately for Ph.D. (or equivalent) to develop biologically based computer simulation models. Models currently under development include: physiologically based pharmacokinetics, biochemical mechanisms of toxicity, and chemical carcinogenesis. Solid background in chemistry/biochemistry/biology, with interest in applying these skills to computer simulation, desired. Simulation model development will complement ongoing and proposed laboratory studies. Publication of all results and presentation at national meetings strongly encouraged.

Title and salary will be commensurate with background and experience. Interested individuals should send curriculum vitae, together with name and addresses of three references, to:

**Ms. Lois Doncaster
Human Resources
NSI Technology Services Corporation
Environmental Sciences
101 Woodman Drive, Suite 12
Dayton, OH 45431**

*NSI Technology Services Corporation
is an Equal Opportunity Employer.*

DIRECTOR, DIABETES RESEARCH INSTITUTE DIABETES CENTER OF EASTERN VIRGINIA (DCEV) EASTERN VIRGINIA MEDICAL SCHOOL POSITION REOPENED AND REDEFINED

Eastern Virginia Medical School announces the re-opening of the search for the Director of the Diabetes Research Institute of the Diabetes Center of Eastern Virginia (DCEV).

The DCEV is a comprehensive program of the Department of Internal Medicine of Eastern Virginia Medical School that integrates research, education, and clinical care. The role of the Diabetes Research Institute within the DCEV is to develop and conduct major research activities.

The Director must have a Ph.D. or M.D. and be a leader in the field of diabetes research with expertise in molecular biology, cellular biology, receptors, second messengers, or immunology. The successful candidate must demonstrate ability to obtain extramural funding as well as the potential to continue growth over the next 10 years.

The Director of the Diabetes Research Institute will be expected to recruit a team of prominent scientists and develop a comprehensive program in diabetes research. The Director also will function as a member of the DCEV executive management team.

Salary is competitive; full faculty status and benefits are available.

Significant financial support to establish the Research Institute has been raised through aggressive local and national fund-raising efforts.

Interested candidates should reply 1 March 1989, but the position will remain open until filled. Please forward curriculum vitae and the names of three individuals to be used as references to:

**Michael J. Dimino, Ph.D.
Associate Dean for Research and Academic Planning
Chairman, Search Committee
Eastern Virginia Medical School
P.O. Box 980
Norfolk, VA 23501**

The Medical College of Hampton Roads is an Affirmative Action/Equal Opportunity Employer.



NATIONAL UNIVERSITY OF SINGAPORE INSTITUTE OF MOLECULAR & CELL BIOLOGY

Applications are invited for appointment as Postdoctoral Fellows in the Institute of Molecular and Cell Biology.

The Institute was recently established to undertake basic biomedical and biotechnological research. It will also provide training at pre- and post-doctoral levels. The Institute has three principal research areas related to Cell Regulation, Infectious and Genetic Diseases and Molecular and Cell Biology of Plants.

The Institute, which is adjacent to the University's biomedical complex and the National University Hospital, has 19 laboratory modules of 500 square feet each.

Successful candidates will be pursuing research in one of the following areas: Human Papilloma Virus, Molecular Immunology, Molecular Biology of Stress, Molecular Neurobiology, Protein Engineering, Plant Molecular Biology as well as Biochemical and Cellular Basis of Cell Regulation.

Salary will be commensurate with experience; leave, medical and other benefits will be provided. Applicants should send their curriculum vitae and names and addresses of 3 referees to the:

**Director
Personnel Department
National University of Singapore
10 Kent Ridge Crescent
Singapore 0511**

Enquiries may also be sent through BITNET to:
PERSDEPT @ NUSVM

LOOKING FOR A CAREER CHANGE?

An editorial position at *Science* is available for a PhD biomedical scientist with a broad range of interests and research experience in one or more of the following areas: molecular pharmacology and physiology, pre-clinical sciences, structural biology, or eucaryotic molecular biology. We are seeking someone with at least two or three years of post-doctoral experience in quantitative aspects of the life sciences and publications in the refereed literature. Editors have varied responsibilities in manuscript selection ranging from solicitation to editing for clarity. Previous editorial experience is not required. This is a full-time position in our Washington offices.

Please send resume and list of publications with cover letter and salary requirements to:

**Mr. Gregory Stokes
AAAS
1333 H Street, NW
Washington, DC 20005**

EOE

CHIEF, CLINICAL IMMUNOLOGY BRANCH

The Allergy, Immunology and Transplantation Program (AITP) of the National Institute of Allergy and Infectious Diseases, NIH, is currently recruiting for Chief of the Clinical Immunology Branch. The incumbent plans and conducts the NIAID's research and training grants, fellowships and career award programs in this area; coordinates various support programs and develops priorities within this scientific area; reviews and presents to the National Advisory Allergy and Infectious Diseases Council applications in this program area; and develops and maintains liaison with appropriate departments of universities, other institutions, other components of the NIH and DHHS, advisory bodies and other organizations.

Applicants for this position should possess the M.D. degree as well as research and grant experience and should have a track record demonstrating the ability to obtain research support.

Applicants for the Branch Chief position must qualify for a GS-14/15 rating with salary range of \$46,679 to \$71,377 or an appointment in the USPHS Commissioned Corps; salary to be consistent with appropriate rank. Physician's Comparability Pay up to \$20,000 may be payable, also. U.S. citizenship required..

For further information about these positions, please write directly to:

**Dr. Robert A Goldstein, Acting Director, AITP
NIAID, Building 31, Room 7A-52
National Institutes of Health
9000 Rockville Pike
Bethesda, MD 20892**



NIH IS AN EQUAL OPPORTUNITY EMPLOYER

GROUP LEADER Analytical Methods Development

The Dade Division of the Fortune 75 Baxter Healthcare Corporation is a leading supplier of diagnostic products and instrumentation for clinical laboratories. We are enjoying continued growth and our expansion at facilities in the U.S., Europe and Puerto Rico has created an exciting opportunity to join our outstanding scientific/technical team.

The selected candidate will establish and lead a group responsible for developing, validating, and implementing precise and accurate methods of analysis for our raw material chemicals, in-process materials and products. The incumbent will have responsibility for hiring and training employees, selecting instrumentation, and establishing a rapport with our suppliers on the technical aspects of our materials. The preferred technical background includes a Ph.D. in Chemistry with at least 5 years medical products experience, 2 years at the supervisory level.

For consideration, please send your resume along with salary history in confidence to: **Professional Staffing, Baxter Healthcare Corporation, Dade Division, P.O. Box 520672, Miami, FL 33152.** Equal Opportunity Employer.

Dade Division

Baxter

POSITIONS OPEN

CHAIR— MICROBIOLOGY AND IMMUNOLOGY

The Oregon Health Sciences University School of Medicine is seeking applicants for the position of Chair of the Department of Microbiology and Immunology. The faculty of this university-based department are engaged in research and in the instruction of medical students, graduate students and fellows. The position requires strong scientific, organizational and administrative skills. Submit curriculum vitae and references to: **Bruce Magun, Ph.D., Chairman, Microbiology Search Committee, L 215, Oregon Health Sciences University, Portland, OR 97201. An Affirmative Action/Equal Opportunity Employer.**

CHAIRPERSON, DEPARTMENT OF STOMATOLOGY UNIVERSITY OF CALIFORNIA, SAN FRANCISCO SCHOOL OF DENTISTRY

Full-time position as Chairperson of the Department of Stomatology which includes programs in oral biology, oral medicine, oral pathology, periodontology, and oral radiology. Responsibilities include providing academic and administrative leadership in research, teaching, patient care and community and university service for undergraduates, predoctoral and postdoctoral students, and faculty. Demonstrated administrative experience and academic qualifications (D.D.S., M.D., Ph.D. or equivalent degree) for a senior professorial rank are required. Salary commensurate with qualifications and experience. *Applications from women and minorities are encouraged. The University of California, San Francisco is an Equal Opportunity, Affirmative Action Employer.*

Please send curriculum vitae and the names of three individuals familiar with your work to: **Dr. Leonard B. Kaban, Chair, Search Committee, In care of: Office of the Dean, School of Dentistry, Box 0430, UCSF, San Francisco, CA 94143.** Applications should be submitted by 28 February 1989.

U.S. ARMY CHEMICAL RESEARCH, DEVELOPMENT AND ENGINEERING CENTER RESEARCH DIRECTORATE Edgewood Area

**Aberdeen Proving Ground, MD 21010-5423
CHIEF SCIENTIST**

Rating and salary range: GM-15, \$54,907 to \$71,377 per annum

The Chief Scientist is responsible for the development and coordination of the center's multi- and interdisciplinary research program in chemistry, physics, toxicology and biotechnology, and serves as interface with academia, industry, and other government laboratories. A Ph.D. or equivalent in the physical or life sciences is desired, and demonstrated experience in the performance and management of basic research programs.

Please send résumé to: **Civilian Personnel Office, Recruitment and Placement Division (Attention: Beverly Budnick), Aberdeen Proving Ground, MD 21005-5001.**

An Equal Opportunity Employer.

DIRECTOR, RADIOIMMUNOASSAY CORE, Diabetes Endocrinology Research Center, University of Washington Division of Endocrinology/Metabolism, Seattle, Washington. This is a research faculty position with rank dependent upon experience. The applicant should have a Ph.D. degree and a strong background in peptide chemistry and development of hormone radioimmunoassays. The major responsibility will be directing the Core laboratory which processes routine radioimmunoassays, and development of new assays as required by the Affiliate Investigators of the Center. Approximately 50% of time will be available for independent research, and independent grant support is highly desirable. Training, expertise, interest and capability in diabetes, endocrinology and metabolism research is desired. For further information please contact: **Dr. Leslie J. Klaff, Acting Director, Radioimmunoassay Core, Diabetes Endocrinology Research Center, Quarters 8, Pacific Medical Center, 1200-12th Avenue South, Seattle, WA 98144; Telephone: 206-543-6481.** *The University of Washington is an Equal Opportunity Employer.*

POSITIONS OPEN

DEAN

Salisbury State University invites applications and nominations for the position of Dean, Henson School of Science and Technology. The School is endowed by R. A. Henson, founder of Henson Aviation.

The position begins 1 July 1989. The deadline for applications is 31 January 1989. *Salisbury State University is an Equal Opportunity/Affirmative Action Employer. Qualified women, minorities, and the disabled are encouraged to apply.*

For a complete announcement write: **Dr. B. A. Fusaro, Department of Math Sciences, Salisbury State University, Salisbury, MD 21801.**

The Environmental Protection Agency laboratory at Corvallis, Oregon is seeking applicants for two positions:

DEPUTY LABORATORY DIRECTOR

ERL-Corvallis conducts in-house and extramural research on the effects of pollutants and other human stresses on inland ecological systems, including plant and wildlife populations, soils, forests, watersheds, wetlands and regional ecological landscapes. Currently under investigation at the Laboratory are the effects of acidic deposition, global climate change, stratospheric ozone depletion, tropospheric ozone, toxic chemicals, genetically-engineered organisms, wetlands loss and hazardous waste disposal. The Deputy Director shares the management of the Laboratory with the Laboratory Director as well as being responsible for specific Laboratory operations. This is a permanent appointment which is designed as a career development assignment. The individual selected can expect, after approximately two years, reassignment to another research management position, possibly at another geographical location.

Requirements include significant research program management experience in the environmental sciences. The position is available immediately with a salary of \$54,907 per year in Corvallis, Oregon. *Applicants must be U.S. citizens.*

CHIEF, WATERSHED BRANCH

The Watershed Branch of ERL-Corvallis conducts in-house and extramural research on the effects of pollutants and other human stresses on aquatic ecological systems, primarily as these systems are influenced by interaction with the terrestrial environment. Currently under investigation are the effects of acidic deposition, pollutant dynamics in watersheds, regional analysis of aquatic ecosystems, effects of wetland loss or degradation, and wetland mitigation. The Branch Chief reports to the Laboratory Director and is responsible for directly supervising all activities of the Watershed Branch. This is a permanent EPA position.

Requirements include significant research program management experience and scientific expertise in aquatic, wetlands, or landscape ecology. The position is available immediately with a salary of \$54,907 per year in Corvallis, Oregon. *Applicants must be U.S. citizens.*

Further information for either of these positions may be obtained by contacting: **Dr. Tom Murphy at 503-757-4601.** To obtain application forms, please write to: **U.S. EPA, Personnel Office at Las Vegas, P.O. Box 98516, Las Vegas, NV 89193-9616, Attention: Nancy Mullins,** no later than 31 January 1989.

EPA is an Equal Opportunity Employer.

DIRECTOR, WISCONSIN REGIONAL PRIMATE CENTER

The University of Wisconsin-Madison announces a search for Director of the Wisconsin Regional Primate Center. The Director will be expected to lead development of strong research programs involving University Faculty and Staff and outstanding visiting researchers in important biomedical areas in which the non-human primate offers unique opportunities for metabolic, developmental, reproductive and behavioral research relevant to the health of man and other primates. The Director will also hold a tenured professorship in an appropriate academic department and will have the opportunity to continue his/her research and graduate student/postdoctoral training. Applicants should supply a full curriculum vitae, a statement of research interests and names of three references no later than 1 February 1989. Starting date is flexible with September 1989 targeted but negotiable. Address correspondence to: **Primate Director Search Committee, 333 Bascom Hill, University of Wisconsin-Madison, Madison, WI 53706.** *The University is an Equal Opportunity/Affirmative Action Employer.*

POSITIONS OPEN



DIRECTOR OF RESEARCH AND DEVELOPMENT

A progressive and rapidly growing biomedical company located in the southeastern United States is searching for an individual to lead the Company's product development programs in diagnostics, immunoliposomes and therapeutic drug delivery technologies. The position reports to the President and requires:

(i) Demonstrated success as an R&D executive in a pharmaceutical and/or biotechnology environment with significant experience and knowledge in the areas of recombinant DNA technology, drug formulation and drug delivery technologies (specifically in the autoimmune diseases and anti-cancer areas) in addition to FDA and regulatory matters.

(ii) A Ph.D. in biochemistry (pharmacology, toxicology, chemistry, microbiology, pharmaceutical chemistry or related areas).

The Company offers an outstanding growth opportunity with a competitive salary, stock options and benefits package. Please forward your résumé and salary history in confidence to:

**President
LipoGen, Inc.
10515 Research Drive
Knoxville, TN 37932**

UNIVERSITY OF PITTSBURGH DIRECTOR OF THE UNIVERSITY LIBRARY SYSTEM

The University of Pittsburgh invites nominations and applications for the position of Director of the University Library System. The University Library System includes 18 libraries plus 7 affiliated libraries. The Director is the chief spokesperson for general University library needs, planning, policies and procedures, and coordinates the activities of all University libraries through the Coordinating Committee for University Libraries. The combined libraries represent a total collection of 3,003,631 volumes and 2,258,240 microforms, and are staffed by 93 professional librarians. The libraries serve 34,000 graduate and undergraduate students and 2,540 faculty.

Qualifications for this position include:

- A clear understanding of the role of an academic research library, the possibilities of resource sharing, and the issues facing research librarianship and higher education in general;
- Ability to establish and maintain effective communications and relationships with library staff, faculty, administrators and students;
- Knowledge of library automation and new library technologies;
- Appropriate library administrative experience and educational background.

Salary is commensurate with experience. Nominations and/or applications, including current résumés and references, should be submitted no later than 15 January 1989 to: **Dr. Donald M. Henderson, Vice Provost, University of Pittsburgh, 826 Cathedral of Learning, Pittsburgh, PA 15260.**

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

ENDOCRINOLOGY AND METABOLISM—

Two positions (Ph.D. or M.D.) to join a multidisciplinary research group in diabetes and obesity are available immediately. Interest could include in vitro metabolism in human hepatocytes, adipocytes and muscle fibers; insulin signals; insulin receptors' structure and function; assessment in vivo insulin action and metabolism in man using isotopes; application of molecular genetic techniques to the etiology and pathogenesis of diabetes. Please send curriculum vitae to: **Jose F. Caro, M.D., Department of Medicine/Endocrinology, 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. It is requested this documentation be included with your application.*

Our Worldwide Influence Starts With Advanced Research

G.D. Searle is recognized worldwide for high caliber professionals and respected products. With research as a top priority in our ongoing commitment to increased growth and industry influence, we now offer exceptional opportunity within our Central Nervous System Drug Research area.

ASSOCIATE DIRECTOR—NEUROPHARMACOLOGY

The successful candidate will manage, coordinate and provide scientific leadership to a strong, multidisciplinary group of scientists, and should have experience and expertise in neurochemical research and behavioral research, as well as analgesic testing. Within this important scientific management position, the qualified individual will contribute to the choosing of research directions, in addition to managing related activities. The position involves close liaison and cooperative activities with colleagues in chemistry and molecular biology. We seek a productive individual with a strong scientific reputation and a significant record of supervisory, as well as research achievement. The player-manager concept is encouraged, and therefore, the successful candidate could maintain a laboratory with postdoctoral assistance. We require a Ph.D. in Neuropharmacology or related discipline and postdoctoral training.

RESEARCH SCIENTIST—NEUROPHARMACOLOGY

While playing an important role in drug discovery, the selected candidate will supervise several junior scientists and have the opportunity to work with other CNSDR biologists, chemists, molecular biologists, development scientists, and clinicians. We seek a productive Ph.D. scientist with postdoctoral experience and knowledge of neuroscience/neuropharmacology. Several years of research experience and a publication record in a number of related neuropharmacological areas, including opioid/non-opioid analgesic research are essential.

G.D. Searle provides a stimulating scientific environment, with career challenges to match your abilities. In addition, we offer excellent compensation and benefits. For consideration, send your resume to: **G.D. Searle & Co., Human Resources Dept. HY2, 4901 Searle Parkway, Skokie, IL 60077.** Equal Opportunity Employer M/F.

SEARLE

Postdoctoral Scientist Molecular Genetics/ Respiratory Pharmacology

Smith Kline & French Laboratories, a leader in pharmaceutical research, is seeking additional Postdoctoral Scientists to expand its current research programs. These are excellent opportunities for innovative interdisciplinary research in our new and superbly equipped Research and Development Center in suburban Philadelphia near Valley Forge, PA.

We offer an excellent compensation, benefits, and relocation package as well as opportunities for personal and professional growth. Publication of research results is encouraged and supported.

Molecular Genetics

The Department of Molecular Genetics is seeking outstanding Ph.D. scientists to pursue research on the molecular genetics of yeast (*S. cerevisiae* and *C. albicans*).

THE SUCCESSFUL CANDIDATE WILL HAVE:

- Ph.D. in Biological Science.
- Experience in recombinant DNA techniques.
- Experience in molecular genetics of yeast and protein purification is highly desirable.

Please refer to job # S0065.

Respiratory Pharmacology

The Department of Pharmacology is seeking outstanding Ph.D. scientists to pursue research on cellular mechanisms of pulmonary inflammation.

THE SUCCESSFUL CANDIDATE WILL HAVE:

- Ph.D. in Pharmacology, Immunology or Biochemistry.
- Experience with second messenger and/or signal transduction mechanisms.
- Knowledge of biochemical regulation of inflammatory cell function highly desirable.

Please refer to job # S0066.

For confidential review, qualified candidates should forward your C.V. and names of three references to Barbara J. Schwartz, Job # _____, Employment Administrator, Smith Kline & French Laboratories, P.O. Box 1539, King of Prussia, PA. 19406-0939. We are an Equal Opportunity Employer. M/F/H/V.

SK&F

A SmithKline Beckman Company

POSITIONS OPEN

DIRECTOR OF CLINICAL OPERATIONS

OCLASSEN PHARMACEUTICALS, a leading edge company, developing new drugs in the areas of dermatology and virology, seeks a director of clinical operations.

The successful candidate's responsibilities will include: designing clinical research programs, overseeing protocol and case report form development, evaluation and selection of investigators, data base construction and final medical/statistical report generation.

The ideal candidate will have a minimum of 5 years of clinical research experience in the pharmaceutical industry, strong knowledge of FDA requirements for clinical trials with a project management focus and excellent verbal and written communication skills. A background in dermatology or infectious diseases is a plus. M.D., Ph.D., or Pharm D. ideal.

This is your opportunity to receive a competitive base salary and equity participation with a company whose top management has an outstanding record for developing and profitably marketing dermatology and antiviral products. For immediate consideration, please call or send your résumé to: Oclassen Pharmaceuticals, c/o Sullivan Research West, 353 Molimo Drive, San Francisco, CA 94127-1619. Telephone: 415-587-2904. *Equal Opportunity Employer.*

EDUCATION—BIOCHEMIST—West Chester University's ACS-approved chemistry department invites applications for a tenure-track assistant professor position to begin September 1989. Ph.D. in biochemistry required and postdoctoral experience preferred; all areas of research in biochemistry will be considered. Preference will be given to candidates with a background in molecular biology. Commitment to Master's and undergraduate level teaching and research required. Send curriculum vitae, undergraduate and graduate transcripts, a detailed outline of research interests and teaching philosophy, and three letters of recommendation postmarked by 16 January 1989 to: Dr. Jamal Ghoroghchian, Chemistry Department, West Chester University, West Chester, PA 19383. *Affirmative Action/Equal Opportunity Employer. Women and minorities are encouraged to apply.*

PENN STATE FACULTY POSITION PROTEIN X-RAY CRYSTALLOGRAPHY

Applications are invited for a tenure-track faculty position at any level in protein x-ray crystallography. The position will be available in either the Department of Chemistry, the Department of Molecular and Cell Biology, or as a joint appointment in these departments or with Penn State's Biotechnology Institute. Applicants, with a Ph.D. degree, should have the background, motivation, and ability to develop vigorous, productive research programs and to be excellent teachers. Include a detailed curriculum vitae, statement of research interests, and up to three recent reprints, and have three letters of reference sent directly to: The Search Committee, Department of Chemistry, 152 Davey Laboratory, Box SM, University Park, PA 16802. Deadline for receipt of applications is 15 March 1989, or until a suitable candidate is identified. *An Affirmative Action/Equal Opportunity Employer. Women and minorities encouraged to apply.*

FACULTY POSITIONS IN MOLECULAR GENETICS. Applications are invited for several tenure-track faculty positions in an interdisciplinary Program in Molecular Genetics at the Wake Forest University Medical Center. Preference will be given to candidates whose research interests lie in the general areas of regulation of gene expression and genetic approaches to studying protein structure/function relationships. Opportunities exist for interaction with ongoing research programs in protein structure, membrane biology, immune regulation, neuroscience, developmental biology, lipoprotein and arterial wall metabolism, cancer, inflammation, aging, diabetes mellitus, and pathogenesis by infectious agents. Academic rank for these appointments will be commensurate with the experience of the candidate. Send curriculum vitae, summary of research interests, and names of three references to: Dr. Moseley Waite, Chairman, Molecular Genetics Steering Committee, Wake Forest University Medical Center, Winston-Salem, NC 27103.

Equal Opportunity/Affirmative Action Employer.

POSITIONS OPEN

ELECTRON MICROSCOPIST for Cancer Center core facility with transmission and scanning electron microscopes. Should have experience with fixation, embedding and sectioning techniques and with procedures for visualization of nucleic acids. Send résumé and names of references to: Dr. B. F. Erlanger or Dr. Samuel Silverstein, c/o Department of Microbiology, Columbia University, 701 West 168th Street, New York, NY 10032.

Emory University, Department of Radiology, seeks a Ph.D. or M.D. with either NMR spectroscopy or imaging experience for a full-time **FACULTY POSITION**. The candidate must be able to originate fundable research projects using NMR and collaborate with other faculty members (in or out of radiology) on NMR research. Knowledge of spin behavior is essential, and medicine, biology, or biochemistry, analog electronics, and computer science are useful skills.

Two 1-meter clinical imagers operating at 0.5 and 1.5 T and a 30-cm 200-MHz instrument, all fully programmable, will be available. The department is part of an 800-bed tertiary care complex giving ample opportunity for collaborations requiring clinical material. Seven Ph.D. scientists in the radiology department are currently involved full-time in NMR. Qualified candidates please contact:

**Dr. Thomas Dixon, Director
Frits Philips Magnetic Resonance
Research Center
419 Woodruff Memorial Building
Emory University
Atlanta, GA 30322**

Emory University is an Equal Opportunity/Affirmative Action Employer.

FACULTY POSITION IN IMMUNOLOGY ASSISTANT PROFESSOR, TENURE-TRACK

Requires postdoctoral experience and demonstrated research capability. Will be expected to establish an independent, externally-funded research program focusing on a significant problem in immunology, using molecular or genetic approaches. Teaching responsibilities might include an undergraduate/graduate course in immunology or a graduate-level course in area of interest. Position available for fall 1989. Send curriculum vitae, statement of current and future research interests, and three letters of reference to: Dr. Dwane Wylie, Immunology Search Committee, School of Biological Sciences, University of Nebraska—Lincoln, Lincoln, NE 68588-0118. Applications will be reviewed 30 January 1989, but will be accepted until a suitable candidate is found.

Affirmative Action/Equal Opportunity Employer.

FACULTY POSITION IN MUTAGENESIS/CARCINOGENESIS/GENETIC TOXICOLOGY at Oregon State University. The Oregon State University Environmental Health Sciences Center and Department of Agricultural Chemistry jointly seek an individual with postdoctoral experience to fill an assistant professor position available July 1989. The primary responsibility will be to develop a strong research program focused on mechanistic aspects of mutagenesis and carcinogenesis, preferably using the approaches of molecular biology. Emphasis on mammalian processes is desirable, but not mandatory. Interaction with molecular biologists and other faculty in the Department of Agricultural Chemistry and the Center for Gene Research, and with the faculties of the Environmental Health Sciences Center and the graduate Toxicology Program is encouraged. There will be ample opportunities to supervise Ph.D. students and to participate in graduate and undergraduate education, but no formal teaching requirements for 3 years. Send curriculum vitae, a description of research interests, and a list of at least three references by 1 February 1989 to: Genotoxicology Search Committee, Department of Agricultural Chemistry, Oregon State University, Corvallis, OR 97331.

Oregon State University is an Affirmative Action/Equal Opportunity Employer and complies with Section 504 of The Rehabilitation Act of 1973. OSU has a policy of being responsive to the needs of dual-career couples.

POSITIONS OPEN

FACULTY POSITION IN BIOCHEMISTRY AT THE UNIVERSITY OF NEBRASKA MEDICAL CENTER

The Department of Biochemistry of the University of Nebraska Medical Center at Omaha is seeking a qualified individual to fill a tenure-leading assistant professor position. All applicants should hold a Ph.D. in biochemistry or a related discipline and should have postdoctoral experience in structural biology. Salary will be commensurate with education and experience. The successful applicant will be expected to develop an independently-funded research program in the areas of protein structure and contribute to building a strong graduate educational program. Please forward curriculum vitae, a statement of research goals, and three letters of recommendation by 31 December 1988, to: Dr. Edward Bresnick, Department of Biochemistry, The University of Nebraska Medical Center, 42nd and Dewey Avenue, Omaha, NE 68105. Please refer to Position No. 8-6169. *The University of Nebraska is an Affirmative Action/Equal Opportunity Employer.*

FACULTY POSITIONS IN MOLECULAR AND CELL PATHOBIOLOGY: The Department of Pathology at The University of Texas Health Science Center at San Antonio is opening a search for several full-time tenure-track faculty members interested in experimental pathology and teaching. We wish to expand in the areas of molecular and cellular approaches to studies of carcinogenesis and the regulation of cell growth and differentiation. Candidates will be considered for both junior and senior faculty appointments. Faculty rank will be commensurate with prior academic experience and accomplishments. The Department is fully integrated, comprising anatomic, clinical and experimental pathology divisions with major responsibilities in patient care and the teaching of medical, graduate, dental and allied health professionals. Currently, the major areas of experimental pathology research in the department include renal and cardiovascular injury, atherogenesis, mediators of inflammation, pulmonary disease and membrane protein biosynthesis. Applicants should have a doctoral degree in biomedical sciences (M.D., Ph.D., D.V.M., D.D.S.) with a demonstrated ability or potential to develop an independent investigative career and be interested in actively participating in the teaching and/or clinical programs within the department or in graduate programs of other departments within the Graduate School of Biomedical Sciences. Submit curriculum vitae and references to: David S. Papermaster, M.D., Professor and Chairman, Department of Pathology, The University of Texas Health Science Center at San Antonio, San Antonio, TX 78284-7750. Telephone: 512-567-4000. *An Equal Opportunity/Affirmative Action Employer.*

FRUIT ENTOMOLOGIST

Applications and nominations are invited for a tenure-track assistant professor, associate professor or professor position in tree fruit entomology in the Department of Entomology at Michigan State University. The position is responsible for research and extension programs on the biology and management of insect pests of tree fruit, and Coordinator of the Trevor Nichols Research Station. Involvement with ongoing interdisciplinary projects at the MSU campus and research stations throughout Michigan is encouraged. Solicitation of external resources for research and graduate student support is expected. Teaching opportunities in courses such as agricultural entomology and other areas of the individual's choosing are possible.

Qualifications: Ph.D. in entomology with emphasis in fruit insect pest management or applied ecology. Strong interest in working with Cooperative Extension Service agents, growers, private industry, and other disciplines for development of tree fruit insect management programs. Experience in tree fruit and extension desirable, but not required.

Send résumé, reprints, statement of career goals, and three letters of recommendation to: Dr. G. W. Bird, Chair of Search Committee, Department of Entomology, Michigan State University, East Lansing, MI 48824-1115. Screening of applicants will begin in mid-December 1988. Preferred starting date: March 1989.

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

POSTDOCTORAL POSITIONS

TWO POSTDOCTORAL POSITIONS (M.D. OR Ph.D.) are available in the National Institutes of Arthritis, Musculoskeletal and Skin Diseases, National Institutes of Health, Public Health Service, to investigate gene expression during repair of bone and cartilaginous tissues. Studies will evaluate mRNA expression for structural and regulatory genes in models of normal or impaired healing, correlate observations with histological events, and explore the effect of exogenous growth factor administration on the repair process. The applicant should have a background in biochemistry, molecular biology, or orthopedics. Starting date is flexible. Salary is \$20,000 to \$50,744 per annum depending on experience. Send curriculum vitae and three letters of reference to: Mark E. Bolander, M.D., Orthopaedic Research Unit, Bldg. 30, Rm. 414, 9000 Rockville Pike, Bethesda, MD 20892. US Citizenship required.



AN EQUAL OPPORTUNITY EMPLOYER

Assay Development Scientist

Baxter Healthcare Corporation, MicroScan Division, develops and manufactures computer controlled electronic instrumentation and disposables used in the clinical laboratory. Research involves systems dealing with rapid identification and susceptibility testing.

We are seeking an individual with a Ph.D. in Microbiology, Molecular Biology, Chemistry or a related field with required exposure to nucleic acid assay development and sample processing.

Baxter Healthcare Corporation, MicroScan Division, is a leader in the healthcare industry and we offer excellent salaries and benefits to the individuals who qualify for our positions. If you feel that you have the skills we need, send your resume, stating current salary, to: **Vice President of Human Resources, Baxter Healthcare Corporation, MicroScan Division, 1584 Enterprise Blvd., West Sacramento, California 95691.** We are an equal opportunity employer m/f/h/v.

MicroScan Division

Baxter

Plant Scientist

Applications are invited for a staff position in the area of plant cell biology, molecular biology or genetics. Applicants should have a Ph.D. or equivalent degree and relevant postdoctoral training. The selected candidate will be expected to develop an independent and creative program on a biologically important topic relevant to higher plants.

Protein Biochemist

Applications are invited for a staff position in the area of protein biochemistry, structure and function. Applicants should have a Ph.D. or equivalent degree, relevant postdoctoral training and research interests that complement existing programs. The selected candidate will assume the direction of an operational facility for protein microsequencing.

- The Biology Department has strong programs in molecular genetics, structural biology, DNA damage and repair, virology, and plant molecular biology.
- Offers include excellent start up funding and facilities, a competitive salary, and a comprehensive benefits package.

Those responding should indicate the position desired and submit a curriculum vitae, a list of at least three professional references, and a brief statement of research interests to: H.Z. Kondratuk, Biology Department, Brookhaven National Laboratory, Associated Universities, Inc., Upton, L.I., New York 11973. Deadline for applications is January 15, 1989. Equal Opportunity Employer m/f.

bnl BROOKHAVEN
au NATIONAL LABORATORY
ASSOCIATED UNIVERSITIES INC.

AUSTRALIA

CHIEF OF DIVISION

DIVISION OF MATERIALS
SCIENCE AND TECHNOLOGY

Minimum \$A75K plus benefits

Following the appointment of the Foundation Chief, Dr C.M. Adam, to the position of Director, Institute of Industrial Technologies, we are seeking a scientist with a commitment to research management, a distinguished record of research achievement, and preferably with knowledge of the Australian materials manufacturing and processing industries, to lead and manage the Division of Materials Science and Technology.

The Division's objective is to aid the creation or further development of industries based on materials science and technology. The Division has a strong core of research in the strategic areas of ceramics, alloys, catalysis, solid state science, and scientific instrumentation. It collaborates with industry in the development and commercialisation of its work.

The Division has 160 staff of whom 86 are professional scientists or engineers, with a budget in 1988/89 of \$12M. The Division has a well equipped laboratory located in Clayton, Victoria. Its equipment includes a Bruker MSL 400 NMR spectrometer, various electron spectroscopic instruments, high resolution electron microscopy, advanced X-ray equipment, a laboratory scale HIP facility and a modern workshop.

The Chief will be responsible for the leadership, scientific direction and integration of the Division's research programs, the effective management of the Division's operations, and for the transfer of research results to industry.

We invite applications for this position, and would also like to hear from people in this field who may wish to suggest possible candidates.

Further information on this appointment can be obtained from Dr C.M. Adam, who can be contacted in Melbourne on telephone 61 3 542 2897.

Applications (including the names of at least two professional referees) should be addressed to Dr J.R. Yates, Manager (Human Resources and Finance), whose postal address is:

CSIRO
Institute of Industrial Technologies
PO Box 225
DICKSON ACT 2602
AUSTRALIA

Closing date for applications is 31 December 1988.

CSIRO IS AN EQUAL OPPORTUNITY EMPLOYER



POSITIONS OPEN

MAYO CLINIC FACULTY POSITIONS IN CANCER RESEARCH

The Department of Oncology invites applications for two faculty members open at any rank. Candidates with expertise in cell molecular biology, biophysics, or immunopathology interested in working in a multidisciplinary program directed toward the molecular characterization, detection, and control of human cancers. Joint appointments in other departments as appropriate. Please send curriculum vitae and names and addresses of three references to: **Dr. Matthew M. Ames, Oncology Search Committee, Department of Oncology, Mayo Clinic, Guggenheim 4, Rochester, MN 55905. An Equal Opportunity/Affirmative Action Institution.**

FOSSIL ENERGY POSTGRADUATE RESEARCH PROGRAM—Opportunities at Energy Technology Centers in Morgantown (West Virginia) and Pittsburgh. Available research positions in the areas of physical sciences, engineering, and microbiology available. Degree within last 3 years required as is U.S. citizenship or PRA status. Contact: **Fossil Energy Postgraduate Program, University Programs Division, Oak Ridge Associated Universities, Box 117, Oak Ridge, TN 37831-0117. Telephone: 615-576-3456.**

GEOTECHNICAL ENGINEER

Position involves soil foundation investigations, computer analysis of slope stability problems (writing/running programs in Fortran), remedial solutions to settlements and seepage problems; particular emphasis is placed on offshore foundation design and analysis of properties of offshore sediments, design and analysis of offshore breakwaters and embankments, laboratory testing and classification of soil samples; triaxial and consolidation testing; construction monitoring and observation; field inspection and report writing; client meetings and marketing; marketing analysis and report writing. Requires Master's in engineering with a major in geotechnical engineering. Experience not required but must have had a course in foundation for ocean structures, offshore soil mechanics, physical oceanography, and finite element analysis. Must have Master's research or thesis on triaxial testing (monotonic and cyclic loading). Salary: \$27,560 per year, 40 hours per week, 2 to 4 hours per week overtime (salaried position-exempt from overtime pay), 7 a.m. to 3:30 p.m., Monday to Friday. Send résumé to: **Illinois Department of Employment Security, 401 South State Street, 3-South, Chicago, IL 60605. Attention: Robert Felton, Ref.#8270-F. An Employer Paid Ad.**

HEAD OF THE DEPARTMENT OF BIOLOGICAL SCIENCES. Clemson University invites applications and nominations for the position of HEAD. Candidates must have a record of proven research, national/international scholarly achievement, leadership and administrative skills, and commitment to excellence in education. A faculty of 27 has research programs in ecology, behavior and systematics; organismal biology and physiology; and biochemistry and molecular biology. Sixty-five students are enrolled in Ph.D. and M.S. programs. Clemson, the land-grant university of South Carolina, offers an exceptional environment for working and living. Requests for additional information, nominations, or applications (including curriculum vitae and names, addresses, and telephone numbers of four references) should be sent to **Dr. Sidney A. Gauthreaux, Department of Biological Sciences, Clemson University, Clemson, SC 29634** by 15 February 1989. *Clemson University is an Affirmative Action/Equal Opportunity Employer.*

HUMAN BEHAVIORAL PHARMACOLOGY

Postdoctoral research fellowship available for laboratory studies in human behavioral pharmacology at Johns Hopkins Medical School. Studies of benzodiazepine and caffeine pharmacology, drug discrimination, drug self-administration and performance effects. Suitable for pharmacologist, psychologist or psychiatrist. Two-year duration. Standard USPHS stipend: \$17,000 and up. Send curriculum vitae and letter of interest to: **Roland R. Griffiths, Ph.D., D-5-West, Psychiatry, Johns Hopkins/Key Medical Center, 4940 Eastern Avenue, Baltimore, MD 21224.**

POSITIONS OPEN

HEAD, DEPARTMENT OF BIOLOGY

The University of Northern Iowa seeks a biologist with a demonstrated record of academic leadership and scholarly activity who will provide dynamic leadership in the Department. The successful applicant must hold an earned Ph.D., merit appointment as a tenured full professor in the Department, possess excellent communication skills, and exhibit leadership reflected in a philosophy of shared governance. Preference will be given to applicants with success in obtaining extramural funds.

The University serves a student population of 11,500, and is one of three state universities governed by the Board of Regents. The Department has 18 faculty members and offers programs leading to B.A., B.S. and M.A. degrees. The Head assumes responsibility for the departmental budget and programs, and the faculty and staff assignments, evaluation and development. The Head is expected to: assist in establishing program priorities and goals based upon the undergraduate and graduate missions of the department, college and university; encourage and support faculty teaching, research and service; actively assist the department in seeking extramural resources to support and advance the instructional and scholarly activities; and engage in some teaching.

The appointment is for the academic year (9 months) plus the summer session (2 months). The position is available August 1989. Salary is competitive, commensurate with experience and qualifications.

To ensure full consideration, applicants must submit a current curriculum vitae; the names, addresses, and telephone numbers of four referees who may be contacted; and a letter of application describing professional interests and qualifications for the position by 1 February 1989 to:

**Dr. Alan R. Orr, Chairperson
Head Search Committee
Department of Biology
University of Northern Iowa
Cedar Falls, IA 50614
Telephone: 319-273-2456**

The University of Northern Iowa is an Equal Opportunity Educator and Employer with a comprehensive plan for Affirmative Action. The university specifically invites and encourages applications from women and minorities.

INORGANIC CHEMIST. Hamilton College is seeking an inorganic chemist for a tenure-track position beginning in the 1989 to 1990 academic year. All areas of expertise will be considered. Applicants should have a strong interest in teaching and research at the undergraduate level. Teaching responsibilities include sharing responsibility for the junior level laboratory course and general chemistry, and one upper level course in the area of expertise. The department is reasonably equipped with up-to-date instrumentation, and the College will provide start-up funds to support the new faculty member. Send a current résumé and transcripts, and arrange for three letters of recommendation, to: **Professor Robin B. Kinnel, Department of Chemistry, Hamilton College, Clinton, NY 13323.** All materials must be received by 1 February 1989. *Hamilton College is an Equal Opportunity Employer, and women and minority candidates are encouraged to apply.*

MOLECULAR VIROLOGIST

The Retrovirus Diseases Branch, Centers for Disease Control, is inviting applications for Chief of the Molecular Biology Section in this newly formed branch at CDC. Candidates for consideration should be senior-level molecular biologists with extensive experience in human retrovirology. Interests should include understanding the mechanisms of molecular pathogenesis of known human retroviruses. In addition, the candidate should possess a keen interest in contributing to the isolation and characterization of new human retroviruses. Recently, a new 20,000-square-foot containment building has been completed with state-of-the-art resources for infectious retroviral investigations of which approximately 2000 square feet will be committed to the molecular section.

Applicants should send their curriculum vitae and the names of three references to: **Dr. Tom Folks, Chief, Retrovirus Diseases Branch, Building 7/Room 240, Centers for Disease Control, 1600 Clifton Road N.E., Atlanta, GA 30333.** Salary will be commensurate with experience.

CDC is an Equal Opportunity Employer and provides for a smoke-free work environment.

POSITIONS OPEN

IMMUNOLOGIST

The Department of Biology at Loyola University of Chicago seeks an immunologist for a 9-month, tenure-track position at the level of assistant professor beginning August 1989. Ph.D. and postdoctoral experience required. The individual will develop an active research program, direct graduate students, and teach at graduate and undergraduate levels. Applicants should send curriculum vitae, statement of research interests, and list of at least three references by 10 February 1989 to: **Dr. Frederick H. Wezeman, Chairman, Department of Biology, Loyola University of Chicago, 6525 North Sheridan Road, Chicago, IL 60626.** *Loyola University of Chicago is an Equal Opportunity Employer.*

INSTRUCTOR IN THE DEPARTMENT OF INTERNAL MEDICINE

Job description: The position involves studies in structure/function/regulatory relationships of the mammalian carnitine palmitoyltransferase enzyme system and instruction of laboratory personnel in the expansion of molecular biological techniques.

Education: Ph.D. in biochemistry.

Requirements: The applicant should have at least 2 years of postdoctoral experience in the areas of metabolic regulation/enzyme purification/molecular genetics. Applications, together with curriculum vitae and the names of three references, should be sent to: **Dr. J. Denis McGarry, Department of Internal Medicine, University of Texas Southwestern Medical Center, 5323 Harry Hines Boulevard, Dallas, TX 75235.**

An Equal Opportunity Employer.

INSTRUCTOR POSITION: To clone and characterize eukaryotic cell lines deficient in pyridine nucleotide and poly (ADPR) metabolism. Must be trained in biochemistry, mutagenesis, cell biology, and mutant cell selection. Must have 3 years of experience in techniques to study pyridine nucleotide and poly(ADPR) metabolism. Send curriculum vitae, reprints and three letters of recommendation to: **Dr. Nathan A. Berger, Department of Medicine, Case Western Reserve University, 2074 Abington Road, Cleveland, OH 44106.** *CWRU is an Equal Opportunity and Affirmative Action Employer.*

MARINE SCIENTIST

Williams College is seeking applications for a marine scientist to teach oceanography and marine ecology in its undergraduate Maritime Studies Program. The position is open as of 1 July 1989. Facilities are at Mystic Seaport Museum, Mystic, Connecticut, which jointly sponsors the program. Qualifications: Ph.D. required and postdoctoral experience preferred; teaching experience; a commitment to liberal arts education; and an active interest in scholarly research. Faculty rank, salary, and initial term for this renewable but non-tenured position are commensurate with qualifications and experience. Candidates should send a complete résumé, a letter explaining their interest in the position, and the names and addresses of three references to: **Director, Williams Mystic Program, Mystic Seaport Museum, Mystic, CT 06355.** Deadline: 20 January 1989. *Williams College is an Equal Opportunity/Affirmative Action Employer.*

MOLECULAR BIOLOGY

The Department of Biology, The University of Alabama, invites applications for a position at the **ASSOCIATE OR FULL PROFESSOR** level. Candidates currently at the assistant and associate professor level are encouraged to apply. The successful candidate must have demonstrated a consistent record of publication and funding in the area of eukaryotic gene regulation. Research interests of current faculty include membrane biochemistry, protein processing, nucleic acid and protein structure/function analysis, and gene regulation and evolution. Salary will be competitive and generous set-up funds are available. Review of applications will begin 1 February 1989. Applicants should submit curriculum vitae, statement of research interest(s), and the names of at least three references to: **Dr. John K. Hardman, Department of Biology, The University of Alabama, Tuscaloosa, AL 35487-0344.** *The University of Alabama is an Equal Opportunity Employer.*

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/IMG 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



New York University Biology Department Chair

New York University is continuing its search for the Chair of the Department of Biology in the Faculty of Arts & Science. The department, located at the Washington Square Center in the heart of Greenwich Village, seeks an outstanding scientist with administrative talent to provide strong leadership in developing the faculty and the department's research and teaching programs.

The department has 24 faculty members, approximately 700 undergraduate majors, 120 students in the M.S. program, and 80 students in the Ph.D. program. The University is committed in its Science Development Campaign to build a leading biology department and seeks a dynamic Chair to spearhead this effort. Start-up funds, tenure-line positions, prime space, and faculty housing are available.

Unique opportunities exist for several forms of interdisciplinary research: a newly-created Center for Neural Science; groups concerned with macromolecular structure and dynamics in the Departments of Biology, Chemistry, and Computer Science; a mathematics-biology program at the Courant Institute of Mathematical Sciences; and ongoing programs at the NYU Medical Center.

Nominations or applications (including curriculum vitae and names of at least three references) should be sent to:

New York University, Professor Samuel J. Williamson, Biology Chair Search Committee, Room 912, 4 Washington Place, New York, New York 10003

New York University is an affirmative action/equal opportunity institution

DISTINGUISHED RESEARCH FELLOWSHIPS

The Medical Radioisotopes Research Program is seeking outstanding recent PhD recipients for the postdoctoral fellowships described below. All positions require responsibility for planning, initiation and implementation of independent research, presentation of research results, and the ability to work as part of a team. Compensation of \$33,640 - \$35,445 per annum provided; possible renewal for a second year.

Cell Biologist or Tumor Biologist to investigate the mechanisms of radon-induced lung cancer in uranium miners. The successful applicant will collaborate with a multidisciplinary research team to develop radiopharmaceuticals for the detection and treatment of radon-induced lung cancer. Experience in tumor biology, molecular biology, immunology and the medical use of radioisotopes is desirable.

Biochemist, Medicinal Chemist or Organic Chemist to develop methods to label antibodies using linkers to achieve high levels of attachment of chelating agents to antibodies. Synthesize linker-chelate conjugates to be covalently attached to antibodies at a site remote from the antigen-binding sites. Determine the stability, affinity, immunoreactivity and cytotoxicity of labeled antibodies. Experience in protein modification or immunological methods is desirable.

- Candidates interested in the Cell Biologist or Tumor Biologist position should send a resume to Dr. Dean A. Cole, INC-11, MS H809, Los Alamos National Laboratory, Los Alamos, NM 87545, (505) 665-0832.
- Candidates interested in the Biochemist, Medicinal Chemist or Organic Chemist position should send a resume to Dr. Janet Mercer-Smith, INC-11, MS J514, Los Alamos National Laboratory, Los Alamos, NM 87545, (505) 667-2646.

To formally apply, send a resume, bibliography, three letters of reference, graduate and undergraduate transcripts to Carol M. Rich (MS P290), Human Resources Development Division PD-88-041, Los Alamos National Laboratory, Los Alamos, NM 87545.

Affirmative Action/
Equal Opportunity Employer
U.S. Citizenship Required

University of California

Los Alamos

POSITIONS OPEN

INTERNAL MEDICINE: Positions as **ASSISTANT, ASSOCIATE OR PROFESSOR** level available in Allergy/Immunology, Rheumatology, Endocrinology/Metabolism, Nephrology, Hematology/Oncology, and Epidemiology/AIDS. Locations: Los Angeles County/Martin Luther King Hospital/Charles R. Drew University of Medicine and Science/UCLA School of Medicine. Applicant must be eligible for California license and have demonstrated academic excellence. Please send curriculum vitae and three references to: **M. Thadepalli, M.D., Internal Medicine, King/Drew Medical Center, 12021 South Wilmington Avenue, Los Angeles, CA 90059. Telephone: 213-603-4574. Affirmative Action/Equal Opportunity Employer.**

MICROBIOLOGY: Assistant professor, Ph.D. preferred. Teach undergraduate biology in small liberal arts college. Deadline for applications: 30 December 1988. Send application, résumé, three letters of reference, and transcript to: **Dr. William E. Hopper, Dean of Faculty, Florida Memorial College, 15800 N.W. 42nd Avenue, Miami, FL 33054.**

MOLECULAR BIOLOGY

POSTDOCTORAL POSITIONS are available to study the mechanisms of gene expression regulation and recombination with emphasis on the role of DNA sequences that assume non-B DNA structure under torsional stress.

Candidates who are U.S. citizens or have permanent residency status are eligible for NIH Postdoctoral Training Grant appointments.

Please send curriculum vitae and names of three references to: **Dr. Terumi Kohwi-Shigematsu, La Jolla Cancer Research Foundation, 10901 North Torrey Pines Road, La Jolla, CA 92037.**

UNIVERSITY OF MASSACHUSETTS MEDICAL SCHOOL WORCESTER, MASSACHUSETTS DEPARTMENTS OF MOLECULAR GENETICS AND MEDICINE MOLECULAR BIOLOGY/ VIROLOGY/IMMUNOLOGY

Positions available at the postdoctoral level for individuals interested in defining the structure of virus-specific T cell epitopes using T cell clones and determining the function of these cells in human infections, as part of an NIH-supported research team.

Applicants should submit curriculum vitae and three letters of recommendation to: **Professor Francis A. Ennis, Cell Science Center, University of Massachusetts Medical Center, 55 Lake Avenue, North, Worcester, MA 01605.**

NEUROBIOLOGY

Oberlin College invites applications for a 1-year **SABBATICAL REPLACEMENT** position, beginning August 1989, to teach one course in neuroanatomy and one course in histology, cell biology, or physiology, and to participate in a team-taught introductory human biology course. Oberlin College has over 140 majors in biology and neuroscience, many of whom participate with faculty in active research programs. Candidates must demonstrate interest and potential excellence in undergraduate teaching and have a Ph.D. expected or in hand by 31 August 1989. To be assured of consideration, a letter of application, a résumé, academic transcripts, and three letters of reference should be sent to: **The Chair, Biology Department, Oberlin College, Oberlin, OH 44074** by 27 January 1989. Application materials received after that date may be considered until the position is filled. *Minorities and women are encouraged to apply.*

An experienced **NEUROPHYSIOLOGIST** is needed to join our multidisciplinary research team to understand hippocampal function. Research concentrates on associative potentiation/depression. Collaborators on this project include a morphologist, a single cell biophysicist, and a neural network theoretician. The position is available September 1989 and is funded for 4 years. Salary: \$20,000 to \$32,000 depending on experience and expertise. Send curriculum vitae and names of three references to: **Dr. William B. Levy, Department of Neurological Surgery, University of Virginia School of Medicine, Charlottesville, VA 22908. Equal Opportunity Employer/Affirmative Action.**

POSITIONS OPEN

PAPILLOMAVIRUS RESEARCHER

Georgetown University School of Medicine, Lombardi Cancer Research Center, together with the Departments of Microbiology and Obstetrics and Gynecology, have a position available for a senior basic research investigator in Human Papillomavirus. Peer review funding record required. Unique opportunity to lead a well-established HPV unit at Georgetown. Send curriculum vitae to:

**Gregorio Delgado, M.D.
Chief, Division of Gynecologic Oncology
Associate Chairman
Department of Obstetrics and Gynecology
Georgetown University School of Medicine
3800 Reservoir Road, N.W.
Washington, D.C. 20007**

Georgetown University is an Equal Opportunity/Affirmative Action Employer.

U.S. ARMS CONTROL AND DISARMAMENT AGENCY (ACDA)

ACDA seeks a **PHYSICAL SCIENTIST (GS-13/14)** for its International Nuclear Affairs Division to provide technical advice and policy recommendations on nuclear non-proliferation issues related to the international control of material, equipment, and technology. Specific assignments will relate to nuclear export controls and analyses of specific countries' nuclear programs. Ideally, applicants will combine an understanding of scientific and engineering principles and political decision-making, especially in the area of arms control. Applicants should contact: **Ms. N. Aderholdt (202-647-2034)** for a position description and submit a form SF-171 before 15 January 1989.

PLANETARY AND PREBIOLOGICAL ORGANIC CHEMISTRY—POSTDOCTORAL

The Laboratory for Planetary Studies at Cornell University offers a position, available immediately, for an individual with extensive experience and ability in qualitative and quantitative techniques of separation and analysis of diverse classes of organic compounds and biomolecules, including HPLC, UV to IR spectroscopy, and GC/MS. Applicants should have a personal interest in the research area, which involves quantitative studies of organic molecules synthesized in planetary and primitive Earth environments by UV and charged particle radiation sources. Send summary of research experience and interests, curriculum vitae, and three letters of recommendation to: **Professor Carl Sagan, Space Sciences Building, Cornell University, Ithaca, NY 14853-6801. Cornell University is an Affirmative Action/Equal Opportunity Employer.**

PLANT BIOLOGY assistant professor, tenure-track, to start September 1989. Ph.D., vigorous research program, commitment to undergraduate teaching required. This person is the principal plant biologist in a department of eight; opportunity to develop program. Subdiscipline open. Some start-up funds available. Open until filled, screening starts 2 January 1989. Send cover letter, curriculum vitae to: **Dr. S. L. Beck, Chair, Department of Biological Sciences, DePaul University, Chicago, IL 60614.**

PLANT BIOLOGY—TWO POSITIONS

Oberlin College invites applications for two sabbatical replacement, 1-year positions beginning August 1989. Major teaching duties for the incumbents will include participation in two (half-semester) introductory courses (botany and evolution), plus additional courses in plant molecular biology/physiology, plant systematics, and two other botanical courses to be arranged. Candidates must demonstrate interest and potential excellence in undergraduate teaching and have a Ph.D. expected or in hand by 31 August 1989. To be assured of consideration, a letter of application, a résumé, academic transcripts and three letters of reference should be sent to: **The Chair, Biology Department, Oberlin College, Oberlin, OH 44074** by 27 January 1989. Application materials received after that date may be considered until the position is filled. *Minorities and women are encouraged to apply.*

POSITIONS OPEN

NEUROBIOLOGIST: The Department of Zoology at The Ohio State University invites applications for a tenure-track assistant professorship beginning September 1989. Subject to budgetary approval, exceptional candidates may be considered for appointment at the associate professor level. Candidates should have a strong research background in neurobiology. The Department is especially interested in individuals with postdoctoral experience and whose research examines integrative and comparative aspects of nervous systems. The successful candidate will be expected to establish and maintain an extramurally funded research program. Teaching responsibilities will include developing a graduate-level course in the candidate's area of expertise and participating in undergraduate teaching. Please submit a letter of application, a statement of research interests, curriculum vitae, and names and addresses of three referees to: **Neurobiology Search Committee, Department of Zoology, The Ohio State University, 1735 Neil Avenue, Columbus, OH 43210-1293. The Ohio State University is strongly committed to increasing the representation of women and members of minority groups on its faculty and encourages applications from such individuals.**

POSTDOCTORAL FELLOW, University of Connecticut Medical School. A position is open to conduct one or more of the following research: (i) neural mechanisms underlying encoding/processing complex acoustic signals with single-unit recording in the cochlear nucleus and the auditory nerve of awake or decerebrate rabbits or cats; (ii) modeling active/nonlinear cochlear biomechanics; (iii) modeling single neurons and neural networks of the cochlear nucleus. The laboratory offers excellent computer hardware and software including 11/73, Z-386 and VAX stations. The position provides an opportunity to gain experience in neurophysiological experiments, computer applications, and modeling. Motivated candidates who may not have prior experience but want to learn are welcome to apply. Contact: **Dr. D. O. Kim, Director of Research, Division of Otolaryngology, Department of Surgery (also Member of Neuroscience Program), University of Connecticut Medical School, Farmington, CT 06032; Telephone: 203-679-3690.**

An Affirmative Action/Equal Opportunity Employer M/W/H.

NATIONAL AGRICULTURAL BIOTECHNOLOGY COUNCIL JOYCE FOUNDATION POSTDOCTORAL FELLOWS

The Joyce Foundation has provided a grant to Boyce Thompson Institute for Plant Research at Cornell, the University of California (Davis), and the Iowa State University to establish the National Agricultural Biotechnology Council (NABC). The Council will sponsor research, publish an annual journal, and convene an annual meeting to examine socio-economic, environmental, and other impacts of biotechnology on agriculture, and develop options for federal, state, and local policy makers.

Joyce Postdoctoral Fellows will be appointed by the institutions to do research and assist the Council. The Fellowships will be open to postdoctoral (and equivalents) from the fields of science, economics, political science, public and business administration, philosophy, law, and sociology, and carry a competitive stipend. They will commence not later than fall 1989.

Applications and requests for additional information should be sent to: **The Executive Secretary, NABC, Boyce Thompson Institute, Tower Road, Ithaca, NY 14853.** Applications should be submitted by 31 January 1989 and include curriculum vitae with interest in agricultural biotechnology, experience, and institutional preference.

POSTDOCTORAL FELLOWSHIPS available immediately for research on the role of genes and protein products of the major histocompatibility complex in the immune response, reproduction, and aging. Background in immunology/biochemistry/molecular biology desirable. Send curriculum vitae and three letters of reference to: **Dr. Carol Warner, Department of Biology, Northeastern University, Boston, MA 02115. Northeastern is an Equal Opportunity/Affirmative Action, Title IX University.**



For our Research Centre near Lausanne, Switzerland, we are seeking a

TRACE ELEMENT NUTRITIONIST

To work as part of a small research group specializing in infant nutrition and studying the bioavailability of nutrients for infant and hospital foods and other food products.

Our collaborator will be assigned the following tasks:

- Studies in human subjects using stable isotopes to determine the influence of dietary factors on the absorption and utilization of iron, zinc and selenium,
- Nutritional evaluation of newly-developed food products and novel ingredients.

The successful candidate will have a PhD. in nutrition and a good knowledge of food science.

Kindly send your application to **Mrs. M. Germanier Audrin, Personnel Services, Research Centre Nestlé, P.O. Box 353, CH-1800 Vevey, "SWITZERLAND"**



THE NORTH CAROLINA SCHOOL OF SCIENCE AND MATHEMATICS

DIRECTOR

The North Carolina School of Science and Mathematics invites applications and nominations for the position of Director to take office on July 1, 1989. Reporting to the Board of Trustees, the Director serves as the Chief Executive Officer of the School.

Institution

NCSSM is the nation's first state-supported, statewide, residential school for eleventh and twelfth graders who are academically talented in science and mathematics. Since its opening in 1980, the School has become a national and international model and innovator in curriculum development. The school's comprehensive high school curriculum enrolls 550 students, one-third of whom are National Merit Semifinalists. The student/faculty ratio is 10:1. All faculty members hold a master's degree, 36% hold a Ph.D. An affiliate school of The University of North Carolina, NCSSM is located in the heart of the Research Triangle Park area and benefits from many cooperative arrangements with local research industries and four major universities. The school has an extensive outreach program, including workshops for teachers from other schools, and administers a summer enrichment program at five university campuses around the state for 750 high school students.

The Search Committee is seeking candidates with the following characteristics:

- (1) a distinguished record of professional success and an understanding of the reform movement in science and mathematics education for talented high school students;
- (2) a keen awareness of the unique nature of a residential learning environment for adolescents;
- (3) visionary leadership and the ability to inspire others;
- (4) strong communications, organizational and management skills;
- (5) talents to work with constituents external to the School—local, state and national;
- (6) skills necessary for resource development;
- (7) experience in working effectively with a governing board;
- (8) acceptable academic qualifications with an earned doctorate preferred.

Nominations should include the nominee's current address. Applications should include a letter of interest, a resume, and the names, addresses, and telephone numbers of five (5) references.

Nominations and applications should be received by January 15, 1989. All correspondence should be addressed to:

Bland W. Worley, Chairman
Director's Search Committee
P.O. Box 2477
Durham, N.C. 27705

Equal Opportunity Employer

University of Illinois at Urbana-Champaign

DEAN

COLLEGE OF VETERINARY MEDICINE

Notice of Position Available

The University of Illinois at Urbana-Champaign invites nominations and applications for Dean of the College of Veterinary Medicine.

The Dean is the chief executive officer of the College, responsible to the Vice Chancellor for Academic Affairs and to the Chancellor for its administration, and is the agent of the College faculty for the execution of College policy. The College has three academic departments offering graduate programs including Ph.D.s, three additional service units reporting to the Dean, excellent new physical facilities, an eighty acre research farm, and a teaching hospital. Many faculty members have close interdisciplinary relationships with departments across the campus including agriculture, engineering, medicine, and liberal arts and sciences.

Position requirements include a DVM or equivalent veterinary degree and demonstrated research accomplishments. Preferred qualifications include academic experience; demonstrated excellence in administrative leadership; commitment to affirmative action; ability to lead the College in its academic responsibility as part of a nationally and internationally recognized land-grant University; and ability to relate to the livestock and companion animal industries. The Dean provides leadership in the College's service to a major agricultural and industrial state, works closely with Campus and University Administration, and interacts with leaders at local, state, and national levels. Candidates should appreciate the changes in the national veterinary environment and the challenges posed for the development of educational programs. The Dean is expected to be a constructive advocate for the College and its faculty.

Salary open. Date of appointment is negotiable.

To assure full consideration, nominations and applications (including vita) should be postmarked by February 15, 1989, and sent to:

Dr. C. C. O'Morchoe, Chair
Search Committee for the Dean
of the College of Veterinary Medicine
University of Illinois at Urbana-Champaign
Swanlund Administration Building
601 East John Street
Champaign, Illinois 61820

Attention: C. K. Gunsalus (217/333-4523)

THE UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN
IS AN AFFIRMATIVE ACTION-EQUAL OPPORTUNITY EMPLOYER.

PROGRAM OFFICERS

The Allergy, Immunology and Transplantation Program (AITP) of the National Institute of Allergy and Infectious Diseases, NIH, is currently recruiting for two Program Officers.

The Program is divided into four Branches: Asthma and Allergy; Immunobiology and Immunochemistry; Genetics and Transplantation; and Clinical Immunology and Immunopathology. We are currently seeking two Program Officers (particularly for the Asthma and Allergy, and Genetics and Transplantation Branches). Program Officers assist the Branch Chiefs in the duties of their respective Branches, which include: contract functions, conference activities, special reports, budget and publication materials, and surveys and analyses of scientific and administrative issues.

Applicants for these positions should possess the M.D. or Ph.D. degree in relevant areas, as well as research and grant experience. The successful candidate should have a track record demonstrating the ability to obtain research support.

Applicants for the Program Officers' positions must qualify for a GS-13/14 rating with salary range of \$39,501 to \$60,683 or an appointment in the USPHS Commissioned Corps; salary to be consistent with appropriate rank. Physician's Comparability Pay up to \$20,000 may be payable, also. U.S. citizenship required.

For further information about these positions, please write directly to:

Dr. Robert A Goldstein, Acting Director, AITP
NIAID, Building 31, Room 7A-52
National Institutes of Health
9000 Rockville Pike
Bethesda, MD 20892



NIH IS AN EQUAL OPPORTUNITY EMPLOYER

POSITIONS OPEN

POSTDOCTORAL FELLOW/Molecular Biology of Growth Factor Receptors. A position is available for research in the area of growth factor receptor biology related to the mechanisms of signal transduction. (For more information see *J. Biol. Chem.* 262, 16041; 263, 5319; 263, 5373; 263, 7450; and 263, 9462.) A strong background in molecular biology or protein chemistry is desirable. Send curriculum vitae and the names of three references to: **Dr. Roger J. Davis, Department of Biochemistry, University of Massachusetts Medical School, 55 Lake Avenue North, Worcester, MA 01655.** UMMC is an Equal Opportunity/Affirmative Action Employer.

POSTDOCTORAL FELLOWSHIP, Division of Biochemistry and Molecular Biology, The John Curtin School of Medical Research, The Australian National University. A postdoctoral fellow is sought to be a member of a group involved with studies on the reactions catalyzed by dihydrofolate reductases from various sources. The aims of the present investigations are to determine the kinetic and chemical mechanisms of the reactions as well as the mechanisms of the inhibition of the enzymes by classical and slow-binding inhibitors. For this purpose a wide range of steady-state kinetic techniques is being utilized. Applicants should have experience in the field of enzymology and be familiar with the principles of enzyme kinetics. Enquiries to: **Dr. J. F. Morrison (062) 492030/492499.** Appointment will be for 2 years. Closing date: 6 January 1989. Ref: JC 18.11.1. Salary (fixed point): Aus\$26,617 to \$30,360 per annum. Applications should be submitted in duplicate to: **The Registrar, The Australian National University, GPO Box 4, Canberra ACT 2601,** quoting reference number and including curriculum vitae, list of publications and names of at least three referees. The University reserves the right not to make an appointment or to appoint by invitation at any time. Further information is available from the Registrar.

The University is an Equal Opportunity Employer.

UNIVERSITY OF CALIFORNIA AT IRVINE POSTDOCTORAL FELLOWSHIPS IN MATHEMATICAL BEHAVIORAL SCIENCE

The Irvine Research Unit (IRU) in Mathematical Behavioral Sciences invites applications for postdoctoral fellowships during the 1989 to 1990 academic year for research in mathematical applications to the behavioral sciences. The faculty associated with the IRU span the following substantive disciplines: anthropology, economics, geography, political science, psychology, and sociology. Candidates should have advanced training in both mathematics and one of these substantive disciplines and should provide evidence, preferably in the form of research papers, of some experience in melding the two. In addition to a statement of accomplishments and interests, the application should include curriculum vitae and the names of at least three references (do not solicit letters; we will). The application should be submitted to: **R. Duncan Luce, Director of the IRU, Social Science Tower, University of California, Irvine, CA 92717.** To ensure consideration, apply before 28 February 1989.

UCI is an Affirmative Action/Equal Opportunity Employer. Women and minorities are urged to apply.

POSTDOCTORAL POSITION STRUCTURAL IMMUNOLOGY

A position is available immediately to investigate the structural basis of the maturation of an immune response. The research project combines a crystallographic analysis of Fab fragment:hapten complexes with a molecular and genetic analysis of the role of somatic mutations in modulating affinity. Details of the project appear in Leahy et al., *J. Mol. Biol.* 203, 829-830 (1988). Knowledge of crystallographic, molecular immunology or molecular biology methods is desirable. Send inquiries and curriculum vitae with the name and address of three references to: **Dr. Robert O. Fox, Howard Hughes Medical Institute, Department of Molecular Biophysics and Biochemistry, Yale University, 260 Whitney Avenue, New Haven, CT 06511.**

POSITIONS OPEN

POSTDOCTORAL POSITION available immediately for Ph.D. or M.D. to study human tumor antigens with a special emphasis on the structure and biosynthesis of carbohydrate antigens. Experience in the chemistry, immunochemistry, or molecular biology of glycolipids or glycoproteins desirable. Send curriculum vitae and names of references to: **Dr. Kenneth O. Lloyd, Sloan-Kettering Institute, 1275 York Avenue, New York, NY 10021.** An Equal Opportunity Employer, M/F/H/V.

POSTDOCTORAL POSITION available immediately. Project involves identification, isolation, characterization, and expression of hormonally regulated gene products from testicular cells, with emphasis on relationship to differentiation. Send curriculum vitae and three letters of reference to: **Dr. B. Sanborn, Department of Biochemistry and Molecular Biology, University of Texas Health Science Center Houston, P.O. Box 20708, Houston, TX 77025.** The University of Texas is an Equal Opportunity Employer. Minorities and women are encouraged to apply.

POSTDOCTORAL POSITION available to study protein kinases during mitosis in marine eggs. Emphasis is on calcium-calmodulin dependent kinases but will extend to other kinases as necessary. Studies will involve protein chemistry, immunolocalization, microinjection and structure determination using molecular biological techniques. Salary will be at NIH postdoctoral levels. Please send curriculum vitae and names of three references to: **L. I. Rebhun, Department of Biology, Gilmer Hall, University of Virginia, Charlottesville, VA 22901.** Equal Opportunity/Affirmative Action.

POSTDOCTORAL POSITION, Ph.D. or M.D., immediately available for physiological studies on mechanism of local control of tissue blood flow and modulation by hemoglobin O₂ affinity. Applicants should have strong background in physiology. Send full curriculum vitae, thesis abstract, and names of three references to: **Dr. R. D. Woodson, Department of Medicine, University of Wisconsin, Madison, WI 53792.** An Equal Opportunity/Affirmative Action Employer.

POSTDOCTORAL POSITION AVAILABLE

The Huntington Medical Research Institutes has a postdoctoral position available in its division of magnetic resonance spectroscopy. Applicants should have experience in NMR spectroscopy. The research group has interests in cancer, brain, kidney, and heart research. Equipment available includes a 4.7T, 33-cm bore "CSI" spectrometer/imager, other high field spectrometers, a Dionsics 0.35T whole-body imager, and for Clinical MR spectroscopy a 2T Dionsics and (shortly) 1.5T G.E. Signa. The successful applicant may work in any of these areas and will be expected to develop his/her own special interests.

Huntington Medical Research Institutes is a privately funded Institution but in its MR program has close links with The California Institute of Technology. The salary is negotiable, starting as soon as possible. For more information call: 818-397-3271. *Equal Employment Opportunity/Affirmative Action.* Please send curriculum vitae and the names and addresses of three references to: **Brian Ross, M.D., Ph.D., FRCS, Director of Magnetic Resonance Spectroscopy Unit, Huntington Medical Research Institutes, 660 South Fair Oaks, Pasadena, CA 91105.**

FOX CHASE CANCER CENTER POSTDOCTORAL POSITIONS

Postdoctoral positions are available in the coming year to study various aspects of the molecular biology of retroviruses, a topic of significant scientific interest, as well as practical relevance to human diseases such as AIDS. Areas include viral RNA and protein processing, and DNA integration. These are excellent opportunities for bright, motivated scientists to join an active and productive group of one of the country's outstanding research centers. Interested individuals should send curriculum vitae and three letters of reference to: **Dr. A. M. Skalka, Director, Institute for Cancer Research, Fox Chase Cancer Center, 7701 Burholme Avenue, Philadelphia, PA 19111.** We are an Equal Opportunity Employer.

POSITIONS OPEN

POSTDOCTORAL POSITION ELECTRON MICROSCOPY AND IMAGE ANALYSIS OF BIOLOGICAL MACROMOLECULES

A postdoctoral position is available immediately to work on high-resolution electron microscopy and image analysis studies of biological macromolecules. Applicants must either have a solid background in the examination of biological specimens by transmission electron microscopy or extensive experience in computer image analysis of electron micrographs. A highly-motivated individual with a Ph.D. degree in one of the biological or physical sciences is preferred. Most current work is focused on structural studies of native biomacromolecular structure using minimal-irradiation and cryo-microscopy techniques coupled with objective image analysis procedures. Inquiries for further information, or applications including curriculum vitae, a statement of experience and goals, and three letters of reference, should be directed to: **Dr. T. Baker, Department of Biological Sciences, Purdue University, West Lafayette, IN 47907.** An Affirmative Action/Equal Opportunity Employer.

POSTDOCTORAL POSITION HARVARD MEDICAL SCHOOL

Available immediately. Organic chemist will synthesize radionuclide carrier molecules as part of a multidisciplinary program studying the toxic effects of internal emitters in cancer radiotherapy. Salary contingent on experience (NRSA Guidelines). U.S. citizenship or permanent residency status required. Please contact: **Dr. A. I. Kassiss, Harvard Medical School, SWRL, 50 Binney Street, Boston, MA 02115.** Telephone: 617-732-2184. An Equal Opportunity/Affirmative Action Employer.

POSTDOCTORAL POSITION—Available in commercial laboratory and research business to develop several new products for immuno-modulation. Experience with hematopoietic colony assays, stem cell assays, bone marrow and cellular cryopreservation techniques and cytogenetics would be extremely helpful. Salary is competitive with postdoctoral positions available at NIH, located one block from the laboratory. Send inquiries and curriculum vitae to: **Dr. Debra Saxe, Molecular Medicine, Inc., 5606 Shields Drive, Bethesda, MD 20817.**

POSTDOCTORAL POSITIONS X-RAY CRYSTALLOGRAPHY AND MOLECULAR BIOLOGY OF AMINOPEPTIDASES

Seeking two postdoctoral fellows to participate in the mutagenesis and expression of eukaryotic aminopeptidases for chemical and crystallographic studies. Experience in x-ray diffraction and an interest in exploiting molecular biology to answer fundamental questions about protein structure is required. These positions are available immediately and are part of an ongoing collaboration with Professor Michael James of the University of Alberta. It is anticipated that the majority of the time will be spent at Harvard Medical School with an opportunity to spend considerable time in Alberta.

Please send a résumé and names of three references to: **Dr. John A. Smith, Department of Molecular Biology, MGH, Boston, MA 02114.** Telephone: 617-726-5954.

POSTDOCTORAL RESEARCH on the Effect of Mutations at an Enzyme Active Site on Function. A position is available for a candidate with research experience in enzymology or biophysical chemistry to join a research group active in this area [see *J. Biol. Chem.* 263, 9187 and 10304 (1988)]. Training will be provided in methods for studying ligand binding, conformational equilibria and catalysis, include methods for the study of transient state kinetics. Starting salary \$22,000 or higher depending on relevant experience. To apply send curriculum vitae and three references to: **Dr. R. L. Blakley, Department of Biochemical and Clinical Pharmacology, St. Jude Children's Research Hospital, 332 North Lauderdale, Memphis, TN 38101.** An Equal Opportunity Employer.

RESEARCH SCIENTIST Analytical Biochemistry

Committed to
Scientific
Excellence

Sterling Research Group, the worldwide pharmaceutical research and development organization of Sterling Drug, announces an opening for a Research Scientist in the Department of Analytical Biochemistry at its new Great Valley research facility, near Philadelphia.

Responsibilities associated with the position include: developing, validating and writing methodologies for the analysis of proteinaceous drug substances and drug products; and assisting in the isolation and characterization of peptides and proteins using modern analytical instrumentation.

Candidates should possess a BS or MS in Biochemistry, Chemistry, Pharmaceutical Science, or the equivalent, with a minimum of

two years experience in analytical or pharmaceutical chemistry, or protein/peptide characterization. Experience with analytical techniques, including gel electrophoresis and chromatography methods, is essential. Familiarity with enzyme assays is desirable. Good technical writing and oral communication skills are required.

We offer competitive salaries and a full range of benefits, together with outstanding opportunities for professional and personal growth. For confidential consideration, interested candidates should send their resumes with salary history/requirements and the names of three references to:



Employee Relations
Department PLCY

STERLING RESEARCH GROUP

A Division of Sterling Drug Inc.
9 Great Valley Parkway, Malvern, PA 19355

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BUILDING A NEW LAB?

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LAB AND WE WILL DO THE REST.

WRITE TO:

**SCIENCE MAGAZINE
NEW LAB SERVICE DEPT.
1515 BROADWAY
NEW YORK, N.Y. 10036**

Boston University Dean, College of Engineering

Boston University, the nation's fifth largest independent University, invites nominations and applications for the Deanship of its College of Engineering. The position is available September 1, 1989.

The College of Engineering is organized into four departments: Electrical, Computer and Systems Engineering; Biomedical Engineering; Aerospace and Mechanical Engineering; Manufacturing Engineering. Over 2,400 students are enrolled in programs leading to bachelor's and master's degrees in the College. The Ph.D. is awarded through the Division of Engineering and Applied Sciences of the Graduate School.

The College, rapidly growing in graduate enrollment and sponsored research, has recently completed a research building as part of the University's \$150 million investment in science and engineering facilities.

The Dean of the College is responsible for all programs in instruction and research, administers the unrestricted operating budget, and reports to the Provost. The Dean must have the vision to further the development of an excellent teaching and research program in one of the nation's most active high technology regions.

Nominations and applications should include a curriculum vitae and the names and addresses of three references. The University encourages applications from women and minority candidates. Send by January 31, 1989 to:

Dr. Dennis D. Berkey, Provost, Boston University,
145 Bay State Road, Boston, MA 02215.



BOSTON UNIVERSITY

An equal opportunity, affirmative action employer

POSITIONS OPEN

POSTDOCTORAL POSITION now available for collaborative studies of growth factor synthesis and function in hormone responsive and unresponsive prostate cancer cells. Molecular studies of hormonal regulation of gene expression and biochemical studies of growth factor function will be pursued with **Dr. Sydney A. Shain**. Candidates must have strong background and laboratory experience in cell biology and/or molecular biology. Appointments are for 1-year periods up to 3 years. Send curriculum vitae and the names and telephone numbers of three references to: **Personnel Director (847), Southwest Foundation for Biomedical Research, P.O. Box 28147, San Antonio, TX 78284.** *Equal Opportunity Employer M/F.*

POSTDOCTORAL RESEARCH ASSOCIATE. The U.S. Department of Agriculture, Agricultural Research Service, Mississippi State, Mississippi, seeks a plant pathologist or microbiologist, GS11/12, (\$28,852 to \$34,580 per year) for 2-year assignment to characterize a soybean dwarf-like luteovirus and produce monoclonal antibody and c-DNA probes. Refer to **announcement no. S-9-002** when applying. Send application (SF171), college transcripts, one-page abstract of Ph.D. dissertation, list of publications, and qualifications summary by 13 January 1989 to: **Dr. M. R. McLaughlin, P.O. Box 5367, Mississippi State, MS 39762-5367.** For information call: **Darlene Fowler, 301-344-1508.** *USDA-ARS is an Equal Opportunity Employer.*

POSTDOCTORAL RESEARCH ASSOCIATE

Position available immediately to investigate mechanisms of acute lung injury and strategies for prevention. Laboratory investigates lung injury utilizing small animal models, cell culture techniques, neutrophil signal transduction pathway biochemistry, patch-clamping, and receptor interaction studies. This position will have some supervisory responsibility. Approximate annual salary is \$32,000. Please send curriculum vitae, names of three references, and brief description of interests, experience and mastered investigative techniques to: **Dr. Thomas A. Raffin, M.D., Acting Chief, Division of Respiratory Medicine, Room C356, Stanford, CA 94305.**

POSITIONS OPEN

POSTDOCTORAL POSITION to study pharmacological and protein phosphorylation regulation of ion channels. Experience with phosphoprotein research desirable but not essential. Familiarity with intracellular recording, voltage- or patch-clamp techniques necessary. The position is available beginning January 1989 and will extend for a minimum of 2 years. Salary: \$21,000 to \$24,000 plus benefits. Send curriculum vitae and names of three references to: **J. Farley, Program in Neural Sciences, Indiana University, Bloomington, IN 47405.** *Indiana University is an Equal Opportunity/Affirmative Action Employer.*

POSTDOCTORAL/RESEARCH ASSOCIATE POSITION available 1 January 1989 for a qualified individual interested in a project involving viral gene transfer and immunotherapy. Demonstrated research experience in basic techniques of mammalian molecular biology required. Some cellular immunology experience would be helpful. *Applicants should be either citizens or permanent residents of the United States.* Send curriculum vitae and letters of interest to either: **Dr. Eli Gilboa or Dr. David Emanuel, Memorial Sloan-Kettering Cancer Center, 1275 York Avenue, New York, NY 10021.** *Memorial Sloan-Kettering Cancer Center is an Equal Opportunity Employer.*

POSTDOCTORAL SCIENTIST, Retroviral Research Laboratory, Cancer Research Center of Hawaii. A federally funded position is available beginning 1 February 1989 to conduct clinical and epidemiological studies of HTLV-I sequences in patients. The project will use molecular technology to develop diagnostic and prognostic markers to follow individuals infected with HTLV-I. Minimum requirements: Ph.D. in an appropriate discipline, or an M.D., with research experience in molecular biology. To apply send curriculum vitae with names, addresses, and telephone numbers of four references to: **Dr. Tom Humphreys, University of Hawaii, Pacific Biomedical Research Center, 1993 East-West Road, Honolulu, HI 96822.** Inquiries: 808-531-3538. Closing date: 31 January 1989. *Equal Employment Opportunity/Affirmative Action.*

POSITIONS OPEN

POSTDOCTORAL POSITION available immediately for biochemist/endocrinologist at Memorial Sloan-Kettering Cancer Center to study the relationship of signal transduction pathways to tumor promotion. Research areas include protein kinase C, phospholipid metabolism and mechanisms of cell growth and differentiation. Send curriculum vitae and the names of three references to: **Dr. Richard N. Kolesnick, 1275 York Avenue, New York, NY 10021.**

TWO POSTDOCTORATE POSITIONS are available at Bay Area non-profit research Institute. **MOLECULAR BIOLOGIST:** This position requires a person experienced in cDNA cloning and related techniques to participate in study of the molecular biology of antigenic variation in breast cancer related to immunotherapy. **IMMUNOBIOLOGIST:** To conduct research in breast cancer antigens and immunotherapy with monoclonal antibodies. Applicant with experience in serum immunology, pharmacology, and/or radiobiology is being sought. Available September 1988. Salary ranges from \$25,000 to \$32,000, based on experience. To apply, forward résumé and references to: **Roberto L. Ceriani, M.D., Ph.D./Jerry A. Peterson, Ph.D., John Muir Cancer and Aging Research Institute, 2055 North Broadway, Walnut Creek, CA 94956.** Telephone: 415-943-1167.

RESEARCH ASSOCIATE—IMMUNOLOGY

Position available January 1989 for Ph.D. immunologist to participate in research projects dealing with pathogenesis of AIDS as related to number and function of activated T lymphocytes and their susceptibility to infection with HIV-1. Experience in immunoassays including ELISA, limiting dilution analysis, tissue culture, cell separation, and immunophenotyping required. Salary negotiable according to experience. Send curriculum vitae and three references to: **J. B. Margolick, M.D., Ph.D., Department of Environmental Health Sciences, Johns Hopkins School of Public Health, 615 North Wolfe Street, Baltimore, MD 31205.** *Johns Hopkins is an Affirmative Action/Equal Opportunity Employer.*

Announcement Pre- and Post-Doctoral Training in Immunology

The Immunology Training Program at Boston University Medical School announces the availability of NIH-funded fellowships, at both pre- and post-doctoral levels, for studies in cellular and molecular immunology. Training faculty and their projects include:

David Beller: cellular and subcellular events regulating macrophage and T cell function

Paul Black: psychoneuroimmunology; immunosuppression in AIDS; cell surface shedding

David Center: CD4/HIV interaction; lymphokine action on CD4 cells

Shyr-Te Ju: cytotoxic CD4 cells; T cell activation by phorbol esters

Ann Marshak-Rothstein: immunoregulatory defects leading to autoimmunity

Richard Miller: T lymphocyte activation; T cell-function in aging

Tom Rothstein: activation pathways of B cell subsets; cytoskeletal interactions

Jackie Sharon: immunoglobulin genetic engineering; application to disease models

Gail Sonenshein: c-myc gene expression and B lymphocyte activation

Direct inquiries to Richard Miller, Dept. of Pathology, Boston University, 80 East Concord Street, Boston, MA 02118. Post-doctoral candidates should include a CV and should list lab(s) of particular interest. Pre-doctoral positions available for July and September, 1989.

An Affirmative Action/Equal Opportunity Employer

**Boston University
Medical Center**

OREGON HEALTH SCIENCES UNIVERSITY VICE PRESIDENT FOR ACADEMIC AFFAIRS

The Oregon Health Sciences University invites applications and nominations for the position of Vice President for Academic Affairs. The Vice President reports to the President of the University. As the University's chief academic officer, the position is responsible for the development, implementation and monitoring of University policies on curriculum, education, training, research and other academic affairs.

The University, Oregon's only academic health center, is part of the State System of Higher Education and includes the Schools of Dentistry, Medicine and Nursing; Vollum Institute for Advanced Biomedical Research; the Biomedical Information Communication Center; the Center for Occupational Disease Research; the Child Development and Rehabilitation Center; and University Hospital.

The Vice President is responsible for academic programs of the Schools, the Vollum Institute and the Center for Occupational Disease Research. The Vice President coordinates interdisciplinary institutes, centers and programs as they are established. The Vice President for Academic Affairs is also responsible for administration of student and academic support activities, and serves as the University liaison with student and faculty organizations.

Qualifications include evidence of outstanding teaching, scholarship and professional accomplishments, an earned doctorate, experience with academic administration, a dedication to academic excellence, the ability to provide leadership and to work closely with faculty, students and administrative colleagues, background in health education, ability to effectively promote the mission of the University, ability to effectively interact with all segments of the University community, and a commitment to affirmative action and equal opportunity in the recruitment of students, faculty and staff.

Applications should be submitted by December 31, 1988. Applicants should furnish names of three individuals who will provide letters of support, as well as curriculum vitae. The Oregon Health Sciences University encourages the application and nomination of women and minorities. Late applications may be considered until the position is filled. Nominations and applications should be submitted to:

Vice President Search Committee
Office of the President
Oregon Health Sciences University
3181 S.W. Sam Jackson Park Road
Portland, Oregon 97201

The Oregon Health Sciences University is an equal opportunity/affirmative action employer.

RESEARCH SCIENTISTS

Protein Biochemistry
Molecular Biology
Enzymology

Committed to
Scientific Excellence

The Sterling Group, the worldwide pharmaceutical research and development organization of Sterling Drug, announces openings for Research Scientists at our Great Valley, PA facility near Philadelphia.

Openings are in the recently established Departments of Protein Biochemistry/Molecular Biology and Enzymology. The Protein Biochemistry/Molecular Biology group needs scientists to isolate genes, generate recombinant vectors, transfect DNA into a variety of systems, express recombinant proteins, and to synthesize, purify and characterize proteins. The Enzymology group is interested in enzyme isolation and the development of enzyme assays.

Candidates should have experience in several of these areas and interest in learning others. A B.S. or M.S. degree in chemistry, biology, or one of the life sciences with at least one year experience is required. Since this is an excellent opportunity for a scientist to diversify and become involved in several phases of projects, other qualifications, for these positions include creativity, flexibility, the ability to do independent work and good communication skills.

Sterling Drug offers competitive salaries and a comprehensive benefits program, along with outstanding career opportunities for professional growth. For confidential consideration please forward your resume and the name of three references to:

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Assistant Professor Biochemistry/Molecular Biology Boston University

As part of a \$110-million expansion in the natural science and engineering programs at Boston University, the Department of Chemistry invites applications for a tenure-track position at the Assistant Professor level to start in September 1989. Candidates must have demonstrated ability in research which emphasizes *chemical approaches* to fundamental problems in biochemistry or molecular biology. We particularly seek applicants with interests in enzyme structure and mechanism, protein X-ray crystallography, protein folding or other aspects of protein or nucleic acid structure and function. The successful candidate will join a core faculty of twelve biochemists, molecular biologists and biophysicists in the Departments of Chemistry, Biology and Physics who have similar interests.

Applicants should send their resume and a description of research interests, and have three letters of recommendation sent to **Faculty Development Committee, Department of Chemistry, Boston University, 590 Commonwealth Avenue, Boston, Massachusetts 02215**. Boston University is an affirmative action/equal opportunity employer.

MOLECULAR BIOLOGY/GENE CLONING SPECIALIST

Cancer Therapeutics

The Dow Chemical Company, in Midland, Michigan, is a recognized world leader in the chemical industry. Expanded research efforts in the area of cancer therapeutics and immunotherapy have created an immediate need within the Bioproducts Laboratory in the Central Research Department for a qualified Molecular Biology/Gene Cloning Specialist.

The successful candidate will have a Ph.D. and some postdoctoral experience in genetic engineering, as well as hands-on experience with immunological systems. Experience in cDNA cloning, preparation and screening of genomic libraries, eukaryotic expression vectors, and DNA sequencing is required. Research efforts will be directed toward protein design for application in our biotech-based cancer therapeutic program.

The above candidates must also possess strong communication skills and a desire to carry out independent research while functioning as part of an interdisciplinary research team.

The Dow Chemical Company offers a stimulating work environment and a competitive salary/benefits package. For consideration, send your resume to: **Technical Recruiting, Department MB-1, The Dow Chemical Company, 1801 Building, Midland, MI 48674**. An equal opportunity employer.



POSITIONS OPEN

POSTDOCTORAL POSITIONS available to study transcriptional and post-transcriptional regulation of protein synthesis in liver and skeletal muscle. Positions require experience in protein chemistry, tissue culture, and gene expression in mammalian cells. Send curriculum vitae and three letters of reference to: **Dr. Leonard S. Jefferson, Chairman, Department of Physiology, College of Medicine, The Pennsylvania State University, Hershey, PA 17033.** Affirmative Action/Equal Opportunity Employer.

RESEARCH ASSISTANT PROFESSOR/FACULTY POSITION—Electron microscopy of cryoprepared cells and tissues using rapid cryofixation, molecular distillation drying, freeze-fracture, freeze-substitution, immunocytochemistry, EDS, autoradiography, and hybridization histochemistry. Ph.D. in anatomy, cell biology, or biochemistry, and experience in ultrastructure preferred. Salary based on experience. Curriculum vitae to: **Cryobiology Research Center, University of Texas Health Science Center at Houston, 3606A Research Forest Drive, The Woodlands, TX 77381.** The University of Texas is an Equal Opportunity Employer. Women and minorities are encouraged to apply.

RESEARCH ASSOCIATE/MICROBIOLOGIST

The Agricultural Research Service, Northern Regional Research Center, 1815 North University Street, Peoria, IL 61604, is seeking a postdoctoral research associate to study hydrolytic enzymes from entomogenous fungi. Candidates should have knowledge of enzyme purification and characterization. Salary will be commensurate with experience, GS-11/12 (\$27,716 to \$33,218). An initial appointment of 2 years is anticipated, which may be extended for an additional year. To apply, please send résumé and three letters of reference to: **Dr. T. D. Leathers** at the above address. Telephone: 309-685-4011. Applications in response to this advertisement must be marked **8N040**, and must be received by 13 January 1989. *ARS is an Equal Opportunity Employer.*

RESEARCH TECHNICIAN/SPECIALIST

Applicant should have a bachelor's or master's level degree in biochemistry or related field and experience in a research environment. Applicants must possess strong background in lipid analyses. Send curriculum vitae and references to:

University of Illinois at Chicago
Eye Center (MC C48)
1855 West Taylor
Chicago, IL 60612

UIC is an Affirmative Action/Equal Opportunity Employer.

RISK ASSESSMENT/ENVIRONMENTAL CHEMISTRY

Envirosphere Company has opportunities in its national headquarters in Northern New Jersey for candidates with an advanced degree in public health, toxicology, or environmental chemistry plus experience in fate, transport and/or exposure/risk assessment for hazardous chemicals.

GC/MS AND AA/ICP ANALYSTS

Positions are also available in our subsidiary laboratory Hittman-Ebasco, Columbia, Maryland for GC/MS and AA/ICP Analysts. GC/MS candidates, with minimum of 2 years of GC/MS experience, must operate and maintain Hewlett-Packard GC/MS systems, perform data reduction and interpret mass spectra, EPA CLP format desirable. AA/ICP applicants, with 1 year of minimum experience, including furnace AA and knowledge of EPA CLP requirements, must operate and maintain PE AA and/or ICP systems measuring trace levels of metals in environmental samples.

QUANTITATIVE BIOLOGY/COMPUTER SCIENCE

Envirosphere Company also has opportunities in Northern New Jersey for experienced professionals and entry-level candidates in data base management, statistics, and/or math modeling of populations, ecosystems, fate and transport of toxic substances and natural resources/hazardous waste assessments. Advanced degree preferred.

Envirosphere offers competitive salaries and a comprehensive benefits package. Please send résumé to: **Theresa A. Caparo, Ebasco Services, Inc. 160 Chubb Avenue, Lyndhurst, NJ 07071.**

POSITIONS OPEN

RESEARCH ASSOCIATE AND RESEARCH ASSISTANT POSITIONS. Available immediately to study the molecular microbiology of oral streptococci. Experience in recombinant DNA techniques, sequencing and in vitro mutagenesis is desired. Salary negotiable depending upon experience. Send curriculum vitae, copies of representative publications and names of three references to: **Dr. My Lien Dao, Department of Pediatrics/St. Petersburg, University of South Florida, All Children's Hospital, 801 6th Street South, St. Petersburg, FL 33714.** Affirmative Action/Equal Opportunity Employer.

RESEARCH OPPORTUNITIES at the National Center for Toxicological Research (NCTR)—Opportunities for faculty and postgraduates to conduct collaborative research at NCTR, a Food and Drug Administration laboratory in central Arkansas. Research efforts focus on testing the assumption used in assessing risks posed by toxic chemicals emphasizing studies in biomarkers, modulators of toxicity, and extrapolation/risk assessment. U.S. citizenship or PRA status required. For more information contact: **Research Participation Program at NCTR, University Programs Division, Oak Ridge Associated Universities, P.O. Box 117, Oak Ridge, TN 37831-0117, telephone: 615-576-3190.** Please indicate if interested in faculty and/or postgraduate program.

SENIOR ENVIRONMENTAL SCIENTIST. 50% time. The Board on Environmental Studies and Toxicology (BEST) of the National Research Council (NRC) is seeking a 50% time senior professional in environmental science, ecology, or a related field. Will serve as a senior staff officer for a 6-month study on conservation of sea turtles. Works with and provides intellectual overview and guidance for a committee of experts. A Ph.D. or equivalent required with at least 6 years of experience with environmental issues, ability to understand the utilization of scientific information in decision making and to integrate data from a wide variety of disciplines. Please submit in confidence curriculum vitae, a recent publication or writing sample, and names of references to: **NRC/BEST/OP, HA 354, 2101 Constitution Avenue, N.W., Washington, D.C. 20418.** Equal Opportunity Employer.

SENIOR FELLOW. Western Psychiatric Institute and Clinic, a division of the University of Pittsburgh, has an immediate opening for a Senior Fellow to provide professional expertise in a neurochemistry and psychopharmacology laboratory. The incumbent will study membrane phospholipids in a well equipped laboratory. This position is funded on a NIMH grant with a 2-year commitment. A Ph.D. in lipid biochemistry with training in phospholipids metabolism is preferred.

This position offers a competitive starting salary and a liberal benefit package including a 100% immediately vested retirement program. Interested candidates send résumé to: **Dr. Jeffrey K. Yao, Director, Neurochemistry and Psychopharmacology Laboratory, Psychiatric Services, 116A6 VAMC, Highland Drive, Pittsburgh PA 15206. Telephone: 412-363-4900, extension 465.** An Equal Opportunity Employer.

MOLECULAR VACCINES, INC.

Molecular Vaccines, Inc., a young and dynamic biotechnology company located in a suburb of Washington, D.C. is committed to the discovery and application of novel molecular and immunologic approaches toward the development of vaccines and therapeutic agents for infectious diseases. **SENIOR LEVEL INDIVIDUALS** are sought to lead Protein Chemistry Laboratory and Immunology Laboratory.

RESEARCH SCIENTISTS AND ASSOCIATES are also needed with expertise in protein biochemistry, molecular virology and cellular immunology.

Successful candidates will have strong research experience and a demonstrable record of scientific productivity. This is a unique opportunity to join an exciting organization that encourages professional growth. Applicants should submit curriculum vitae, statement of research interests, and references to: **Human Resources, Molecular Vaccines, Inc., 19 Firstfield Road, Gaithersburg, MD 20878.**

POSITIONS OPEN

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 PROFESSORSHIP IN THE SPACE SCIENCES UNIVERSITY OF CALIFORNIA, LOS ANGELES

UCLA seeks an outstanding scientist, theoretical or experimental, in the space sciences, broadly construed as any physical science dependent upon, or stimulated by, data collected by space techniques. The appointment may be singly in any one of the Departments of Astronomy, Atmospheric Sciences, Chemistry, Earth and Space Sciences, or Physics, or jointly between departments and/or the Institute of Geophysics and Planetary Physics. Strengths of UCLA that the appointment might complement include: space plasma physics, solar-planetary relationships, climate dynamics, star formation, cosmochemistry, and planetary physics.

Interested individuals should contact: **Professor William M. Kaula, Department of Earth and Space Sciences, University of California, Los Angeles, CA 90024-1567. Telephone: 213-825-4363.** UCLA is an Affirmative Action/Equal Opportunity Employer.

SENIOR SCIENTIST/ LABORATORY GROUP LEADER IN MOLECULAR BIOLOGY

The W. Alton Jones Cell Science Center, Inc., is seeking an individual to lead a core molecular biology lab group. The group is expected to interface with the cell biology groups for consultation, collaboration, and application and transfer of molecular technologies; in addition, develop an individual research program in molecular cell biology. The group will be responsible for a fully-equipped DNA synthesis and sequencing facility. Requirements include a doctoral degree and several years of postdoctoral experience in molecular biology. Experience in cell biology and cell culture is desirable. Send curriculum vitae to: **The Personnel Office, W. Alton Jones Cell Science Center, 10 Old Barn Road, Lake Placid, NY, 12946.** Please refer to job 88-23. Affirmative Action/Equal Employment Opportunity.

The Research Institute of The Hospital for Sick Children offers a **STAFF POSITION** in its Division of Biochemistry Research.

A major biomedical research organization, the Institute has over 150 Principal Investigators and 200 trainees in strong programs that range from basic to clinical studies. Initial appointments are for 3-year periods, moving to 4-year renewable appointments. The Institute is based on a firm, long-term endowment income; its research is exciting, collaborative, and is supported by a full range of services. There is the potential for cross-appointment to the University of Toronto.

We are seeking a Ph.D. with at least 3 years of postdoctoral experience in the application of modern techniques of physical biochemistry to protein structure and function. The applicant should be prepared to develop a strong independent research program. Applicants should forward curriculum vitae and an outline of research interests, and should arrange for three letters of reference, all to be sent to: **Dr. H. Schachter, Head, Division of Biochemistry Research, The Hospital for Sick Children, 555 University Avenue, Toronto, Ontario, M5G 1X8.**

STAFF TOXICOLOGIST

California Department of Food and Agriculture seeks staff toxicologists in its pesticide regulatory program. Incumbents will evaluate toxicology studies and/or conduct risk assessments. Doctorate in toxicology or closely related biological field followed by 3 years of relevant experience is required. Salary range begins at \$3990 per month. Submit résumés by 6 January 1989 to:

Department of Food and Agriculture
Examinations Unit
1220 N Street, Room 154
Sacramento, CA 94271-0001



SPECIALISTS IN PLANT/SOIL RELATIONS

AND IN NITROGEN CYCLING

Extension of application deadline

CIAT is an international agricultural research and training center with programs in Beans, Cassava, Rice, Tropical Pastures and Training and Communications, working closely with national agricultural research programs.

In the Tropical Pastures Program, with a staff of 17 senior scientists, a team is working on adaptation of grasses and legumes to acid soils, including management practices. Two experienced scientists are sought to join an ecophysiological and a pasture management specialist. Candidates should have knowledge of tropical pastures and/or tropical agriculture and the ability to work in small teams. Proficiency in English is essential and some fluency in Spanish highly desirable.

SPECIALIST IN PLANT/SOIL RELATIONS

To understand the mechanisms of adaptation of grasses and legumes to acid and infertile soils in low-input pasture systems in the tropics. Using prototype grass-legume pastures, grown in contrasting soils and climates, his/her work will concentrate on the uptake and utilization of P, Ca, Mg, K and S to assist the search for adapted germplasm. He/she will also contribute to studies of nutrient cycling in grazed pastures to define the interaction between fertilizer practice and management.

Ph.D. in plant/soil relations or related discipline with at least 5 years research in relevant aspects of plant nutrition, plant physiology and soil science.

SPECIALIST IN NITROGEN CYCLING

To optimize N nutrition of grazed pastures on acid and infertile tropical soils. Research will be conducted on the nitrogen cycle (fixation, immobilization, and mineralization) in pure grass and grass-legume pastures, to determine pool sizes and rates of nitrogen losses and gains, emphasizing biological N fixation. He/she will also maintain the rhizobium collection and identify effective legume-rhizobium combinations, and will collaborate to develop screening methods for the International Network of Tropical Pasture Evaluation.

Ph.D. in soils/plant nutrition, ecology, soil microbiology, or other relevant discipline, with at least 5 years' research experience.

Applications

Both will be stationed at CIAT Headquarters near Cali-Colombia. Salary and benefits are comparable to other international organizations, level depending on qualifications and relevant experience.

Applications closing date 15th January 1989 or until a suitable candidate is identified. Submit curriculum vitae including names and addresses of three references to: Dr. Filémon Torres, Deputy Director General, CIAT. Apartado Aéreo 6713, Cali - Colombia.

GRADUATE PROGRAM CELL AND MOLECULAR BIOLOGY (MULTI-DEPARTMENTAL)

- GENE REGULATION
- MOLECULAR GENETICS
- DEVELOPMENTAL BIOLOGY
- ONCOGENES AND GROWTH FACTORS
- STRUCTURAL BIOLOGY
- NEUROBIOLOGY
- MOLECULAR VIROLOGY AND IMMUNOLOGY

The Graduate School at BAYLOR COLLEGE OF MEDICINE has recently created a graduate program in CELL AND MOLECULAR BIOLOGY stressing basic research in the above areas. Students accepted for studies leading to the Ph.D. degree will receive financial support. For further information contact:

Dr. Savio Woo, Director
Graduate Program in Cell and Molecular Biology
Baylor College of Medicine, Room 185A
One Baylor Plaza
Houston, Texas 77030
Phone: (713) 799-6557

Vice President For Research

Rhode Island Hospital, a primary affiliate of the Brown University Program in Medicine, has a challenging opportunity for a qualified professional to coordinate and direct the Office of Research and the research efforts of Hospital-based faculty and staff. Position reports to the Medical Director of the Rhode Island Hospital with primary responsibilities that include:

- Directing the allocation process of internal endowment funds available for research support;
- Establishing and monitoring standards for performance in research;
- Developing new sources of research support;
- Coordinating efforts of RIH-based faculty with the Brown campus-based faculty and other Affiliated Hospital-based faculty.

Qualified candidate should be an M.D. or Ph.D. with demonstrated administrative skills and knowledgeable and experienced in the successful conduct of research and competitive funding thereof. Selected candidate will be eligible for faculty appointment at Brown University.

If you are interested in joining a team of professionals dedicated to excellence in patient care, education and research, please send resume to:

Thomas Denton
Vice President for Human Resources
Rhode Island Hospital
593 Eddy Street
Providence, RI 02903.

The Rhode Island Hospital is an Equal Opportunity/Affirmative Action Employer.

Medical Staff Fellowship in Molecular Genetics at NIH

The Molecular Genetics Section of the Genetics and Biochemistry Branch, National Institute of Diabetes, and Digestive and Kidney Diseases, National Institutes of Health, is offering a Medical Staff Fellowship in Molecular Genetics. Applications are invited from individuals of the highest caliber with the M.D. or M.D., Ph.D. degrees. Applicants should have two years of clinical experience and research experience is preferred. Applications are being accepted now for appointments which begin July 1989. The appointment is for two years and can be extended for a third year. Medical Staff Fellows receive an initial salary of \$32,000, with increments of \$2,000 per year.

The Medical Staff Fellow may participate in the NIH Interinstitute Medical Genetics Program as well as carry out research in basic molecular genetics. Current research interests include the biochemistry of eukaryotic recombination, cell-free systems for the study of immunoglobulin rearrangements, the study of mutants defective in genetic recombination, gene targeting and gene disruption in mammalian cells and the molecular biology of Tay-Sachs disease.

Interested candidates should submit their curriculum vitae and bibliography to:

Dr. R. Daniel Camerini-Otero
Chief, Genetics and Biochemistry Branch
National Institute of Diabetes and
Digestive and Kidney Diseases
Building 10, Room 9D-15
National Institutes of Health
9000 Rockville Pike
Bethesda, Maryland 20892

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POSITIONS OPEN

SENIOR FACULTY POSITION IN ENVIRONMENTAL SCIENCES, University of California, Los Angeles. Faculty Position in Environmental Science and Engineering (ESE), School of Public Health. Upper level tenure-track appointment in the Interdepartmental Environmental Science and Engineering Program and, jointly, in the Division of Environmental and Occupational Health Sciences. The candidate should have the potential to be director of the ESE program. Research and teaching in the environmentally pertinent area of biology, microbiology, chemistry, or biochemistry, as broadly defined. The ESE Program emphasizes the relationship between science and public policy, so a demonstrated interest in this relationship plus an outstanding record of research in a specialized area is required. Opportunity to participate in the M.S. and Ph.D. training programs of the Division and for interaction with engineers and basic scientists from other departments such as biology, microbiology, biological chemistry, chemistry, engineering, earth sciences, etc. Send curriculum vitae, statement of research and teaching goals, and names of three references by 15 March 1988 to: **Robert A. Mah, Chair, ESE Search Committee, School of Public Health, UCLA, Los Angeles, CA 90024.** *UCLA is an Affirmative Action/Equal Opportunity Employer. Women and minorities are encouraged to apply.*

HARVARD FOREST LTER

SYSTEMS ANALYST—GIS. A staff position in computer sciences is available with responsibilities including implementation of GIS software, management of microcomputer facilities and research on the Long Term Ecological Research (LTER), which emphasizes ecosystem response to natural and human disturbance processes. Background in ecology, forestry or other natural sciences preferred.

PALEOECOLOGIST. This postdoctoral position will emphasize research on the long-term history of vegetation, disturbance processes and environmental change within the context of the LTER. Research will include fine-resolution palynology, charcoal analysis and integration of local forest history into the regional record of central New England. Closing date: 30 January 1989. Please send curriculum vitae, a letter describing research interests, relevant publications and three letters of recommendation to: **David R. Foster, Harvard Forest, Harvard University, Petersham, MA 01366.** Telephone: 508-724-3302. *Harvard University is an Equal Opportunity Employer.*

The Experimental Therapeutics Division of the University of Rochester Cancer Center invites applications for a **TENURE-TRACK POSITION** at the assistant, associate, or full professor level in the area of tumor cell biology. Applicants must have demonstrated research achievement as evidenced by prime authorship publications in critically reviewed journals. The successful candidate will be expected to develop and maintain an independent, extramurally funded research program in an integrated research/clinical program that interacts with other basic science departments. The Experimental Therapeutics Division is particularly interested in molecular mechanisms of growth regulation, multi-drug resistance, molecular and cellular carcinogenesis, tumor pathophysiology or DNA repair. Send curriculum vitae, a statement of research interests and names and addresses of three references to: **Dietmar W. Siemann, Ph.D., Director, Experimental Therapeutics Division, University of Rochester Cancer Center, 601 Elmwood Avenue, Rochester, NY 14642.**

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

TOXICOLOGIST. CanTox Inc., consultants in toxicology, has an opening for a Ph.D. level senior mammalian toxicologist with experience in toxicology research and/or evaluation and a demonstrated ability to analyze and resolve complex toxicological problems. Superior writing and communications skills are required. Proven management experience would be an asset. Salary commensurate with experience. CanTox Inc. has offices in Canada and the United States. Applications should be sent to: **Dr. C. I. Chappel, President, CanTox Inc., Suite 200, 627 Lyons Lane, Oakville, Ontario, Canada, L6J 5Z7.**

WORKSHOPS

STRUCTURAL AND CHEMICAL BASIS FOR CELL FUNCTIONS

Sponsors: Annenberg Center for Health Sciences, The Research Institute of Scripps Clinic, 25 to 28 April 1989.

A conference designed to create a forum for integrating chemistry, biophysics and cell biology. Poster session available to participants.

Topics: Macromolecular Assemblies, Regulation of Gene Expression, Intracellular Transport, Signal Transduction, Motility, and Cell Surface/Membrane Channels.

Organizing Committee: **N. B. Gilula, L. Gerace, J. Hogle, B. Huang, R. Milligan, I. Wilson, N. Unwin.**

Invited participants: **J. Abelson, Pasadena; D. Agard, San Francisco; C. Akay, England; H. Betz, FRG; H. Bourne, San Francisco; D. Eisenberg, Los Angeles; S. Fuller, FRG; L. Garace, La Jolla; S. Harrison, Cambridge, MA; T. Hunter, La Jolla; S. H. Kim, Berkeley; M. Kirschner, San Francisco; B. Kretsinger, Charlottesville, VA; T. D. Pollard, Baltimore; D. Rees, Los Angeles; J. Sedat, San Francisco; K. Simons, FRG; J. Spudich, Palo Alto; R. Vallee, Worcester, MA; P. Walter, San Francisco.**

Registration information: Registration fee is \$125. It covers the conference, coffee breaks, and reception. For registration forms, poster session forms and additional information: **Annenberg Center, 39000 Bob Hope Drive, Rancho Mirage, CA 92270** or call: **800-321-3690 US, 800-621-7322 CA, FAX: 619-773-4513, TELEX: 188979 ANNENBERG CTR.**

FELLOWSHIPS

POSTDOCTORAL FELLOW OPHTHALMIC MOLECULAR GENETICS

Postdoctoral fellowship positions available for 2 to 3 years beginning on 1 July 1989 or sooner to study diseases affecting the eye using recombinant DNA techniques. Background in protein chemistry and experience in molecular biology are desirable. Send curriculum vitae to: **Dr. J. Bronwyn Bateman, Jules Stein Eye Institute, UCLA School of Medicine, Los Angeles, CA 90024.** *UCLA is an Equal Opportunity/Affirmative Action Employer.*

POSTDOCTORAL FELLOWSHIPS available in The Center for Inherited Disorders of Energy Metabolism, Case Western Reserve University, a federally funded national resource for studying defects of pyruvate, and fatty acid metabolism and electron transport, integrating biochemistry, genetics, medicine, and pediatrics. Applicants for 2- to 3-year program should have M.D. or Ph.D., U.S. citizen or resident. Send curriculum vitae to: **Douglas Kerr, M.D., Ph.D., Rainbow Babies and Childrens Hospital, 2074 Abington Road, Cleveland, OH 44106.**

PREDOCTORAL FELLOWSHIPS

Are you interested in a career devoted to solving health problems associated with chemical pollution of the environment? Perhaps you should consider earning a Ph.D. in environmental toxicology in The Joint Graduate Program in Toxicology of Rutgers, The State University of New Jersey and The University of Medicine and Dentistry of New Jersey/Robert Wood Johnson Medical School. The program is a component of The Environmental and Occupational Health Sciences Institute which also contains the newest National Institutes of Health Environmental Health Center. We are conducting a national search for scholars who wish to earn the M.S. and/or Ph.D. in Toxicology. Our internationally recognized faculty will provide an opportunity for you to conduct research in cellular/molecular toxicology, immunotoxicology, hepatotoxicology, solvent toxicology, carcinogenesis, inhalation/respiratory toxicology, neurotoxicology, environmental and aquatic toxicology, and metabolism of environmental chemicals. Sources of graduate student support include a N.I.E.H.S. training grant, graduate teaching assistantships, and a variety of graduate research fellowships, which provide a stipend of \$10,000 per year plus tuition and fees. For further information please contact: **Dr. Robert Snyder, Director, Joint Graduate Program in Toxicology, Rutgers University College of Pharmacy, Piscataway, NJ 08855-0789.** Telephone: 201-932-3720. *Rutgers, the State University of New Jersey is an Equal Opportunity/Affirmative Action Employer.*

FELLOWSHIPS

GRADUATE FELLOWSHIPS CENTER FOR THE STUDY OF EVOLUTION (CSEOL) AND THE ORIGIN OF LIFE UCLA

CSEOL invites applications for three first-year predoctoral fellowships for 1989-1990. Stipends are each \$9,137 for 9 months with no teaching or other duties. Fellows are included in a select group of former Fellows and other graduate students invited to interact with Center faculty in a weekly dinner/seminar/discussion series. Applicants should be planning to carry out thesis research under the supervision of a CSEOL faculty member and in a subject area relating to evolution, broadly construed—of the solar system, of Earth, of the environment, of life, of humans. Areas of particular interest for 1989-1990 include: (i) the origin of life; (ii) biochemical phylogeny; (iii) Precambrian biotic-environmental evolution; and (iv) the interface between molecular biology and the known fossil record. Faculty are members of the UCLA Departments of Anthropology, Astronomy, Atmospheric Sciences, Biology, Chemistry and Biochemistry, Computer Science, Earth and Space Science, Geography, and Microbiology; the School of Medicine (Anatomy; Microbiology and Immunology; Physiology; Biobehavioral Sciences); and the School of Public Health. Fellowship applicants must apply by 1 March 1989, both to an appropriate academic department and to CSEOL. For application forms and a list of CSEOL members, contact:

**CSEOL Fellows Committee
Geology Building, Room 5687
University of California, Los Angeles
Los Angeles, CA 90024-1567
Telephone: 213-825-1170**



Tourette Syndrome Association, Inc.

ANNOUNCES . . . RESEARCH GRANTS AND FELLOWSHIPS AVAILABLE

Basic Neurosciences	\$ 5,000 to \$25,000
Clinical Studies	\$ 5,000 to \$25,000
Postdoctoral Fellowship	\$15,000 to \$20,000

For application write: **Tourette Syndrome Association, 42-40S Bell Boulevard, Bayside, NY 11361.** Letters of intent to apply due: 15 January 1989 and 15 July 1989.

MARKETPLACE

DIRECT MAIL FUNDRAISING

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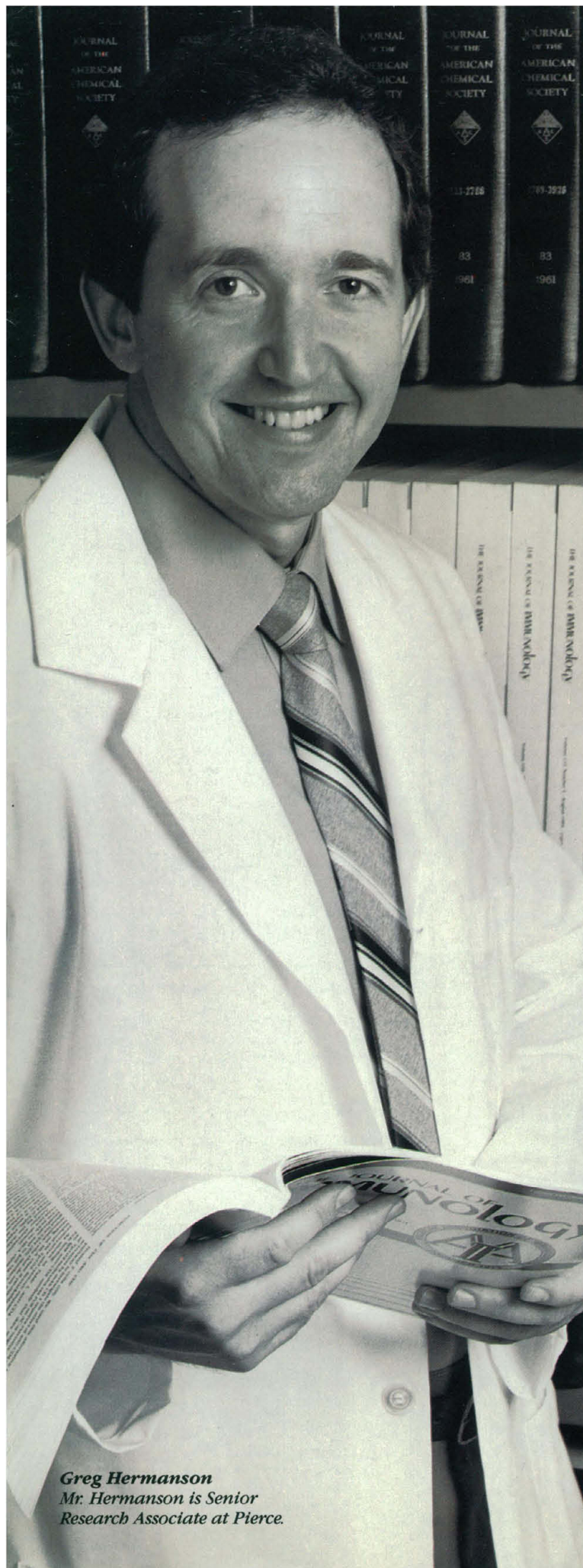
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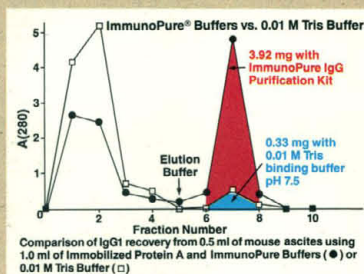
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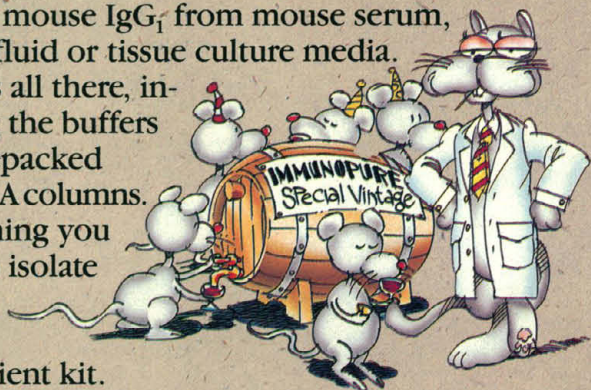
Greg Hermanson
Mr. Hermanson is Senior
Research Associate at Pierce.

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How To Choose The Right Low Pressure LC System Even If It Isn't Ours

To simplify choosing the right peristaltic pump, detector and fraction collector for your LC System, review these guidelines and send for our free Low Pressure System Selection Worksheet:

1 Identify your separation goals.

Know the characteristics of your sample. What mass will you load on your column? What flow rate will you need to achieve optimal speed and resolution? At which wavelengths does your sample exhibit maximum absorbance? What size fractions will you collect? Are you interested in collecting peaks?

2 Examine the components' specs.

After you've identified the key operating parameters, take a look at the pump, detector and fraction collector specifications to be sure they meet your needs. To illustrate, let's look at specifications for components in the Gilson Low Pressure System.

The most important criteria used to select a peristaltic pump are smooth, stable flow and usable flow rate range. The Gilson system uses the new Minipuls 3 Pump. Stepper-motor drive and proven pump head design ensure smooth flow from 1 μ l to 50 ml/min. A high flow head allows flow rates from 50 ml to 220 ml/min. Interchangeable pump heads with 1-, 2-, 4-, or 8 channels are available.

Wavelength specificity and ease-of-use are key considerations when choosing a detector. The Gilson 112 UV/VIS fixed-wavelength detector allows selection of wavelengths from 214 nm to 640 nm. A choice of five flow cells accommodates a wide range of flow rates and sample concentrations. A large digital readout and convenient autozero and event mark functions keep detector operation easy.

Select a fraction collector according to your collection mode, fraction volume, and multiple column collection needs.

Gilson's FC 203 fraction collector allows drop, time, or peak collection modes with up to ten collection windows in each mode. The widest range of racks available—capable of handling as many as 128 fractions—makes the FC 203 suitable for almost any application.

3 Check for compatibility of components with each other and with your future needs.

At this point, you've identified components to meet basic needs, but also look at the components as a system. Were they designed to work together? Or will you need to buy complicated adapters and special plumbing? Working with a single

supplier avoids the service and support problems often associated with a system assembled piece-by-piece.

You should also assess your future needs. An LC system may work fine for your current application. But will you need to change detection wavelengths or collection volumes later? Is an upgrade to HPLC a possibility? If so, consider modular equipment that adapts to your changing needs easily and inexpensively.

4 Look at each supplier's record of reliability, service and support.

After identifying suitable components, you narrow your choice by looking at each supplier's track record for reliable equipment and efficient service.

To evaluate the Gilson Low Pressure System, consider our reputation for fraction collectors and detectors.

Gilson has a proven track record that began more than 35 years ago. More than 1000 FC 203s—introduced just 16 months ago—continue to display dependable, trouble-free operation.

The Minipuls 2, the reliable predecessor to our new Minipuls 3, has earned spaces on more than 24,000 lab benches worldwide, making it the best-selling peristaltic pump.

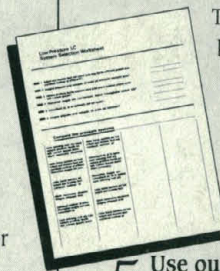
5 Use our free Low Pressure LC System Selection Worksheet to gather and compare your options.

For the final step in choosing your system, compare the information you've gathered. To help, we've put together a selection worksheet to simplify the process.

This free worksheet lists major criteria to use in your comparisons. We've filled in information about the Gilson Low Pressure System and have left space for you to fill in specs from other suppliers.

Why do we encourage this comparison? Because it's the best way to buy a system matched to your needs. Plus, we're confident that in most cases your low pressure system will be a Gilson Low Pressure System.

So, for your free Low Pressure System Selection Worksheet, simply circle the magazine's reader service number or call us toll free at 800-445-7667. We'll see that you get your worksheet fast.



GILSON

Gilson Medical Electronics, Inc., Box 27, 3000 W. Beltline Hwy., Middleton, WI 53562 USA, Tel: (608) 836-1551 Telex: 26-5478
Gilson Medical Electronics (France) S.A., 72 rue Gambetta, B.P. No. 45,95400, Villiers-le-Bel, France, Tel: (1) 39.90.54.41 Telex: 696682

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