

of humans. A major achievement of the book has been to present a detailed baseline understanding of alcid status and ecology and a thorough and critical review of present threats to alcids.

Clearly *The Atlantic Alcidae* will be indispensable to any student of alcid biology and a valuable source of ideas for seabird biologists in general. It also deserves to be read by marine biologists, conservationists, ecologists, and evolutionary biologists. Chapters by Birkhead and Harris on ecological adaptations for breeding and by Gaston on chick development make excellent use of comparisons between species (perhaps it is a shame that Pacific species were not dealt with here) and also make use of comparisons between colonies of the same species. This approach can be highly rewarding. For example, the discovery that chick weight at fledging varies inversely with colony size has important implications for understanding influences of intraspecific competition for food around colonies. Chapters by Bradstreet and Brown are equally stimulating, being careful accounts of the relationships between alcids, their food supplies, and the oceanographic environment, a subject about which rather little has been known until recently.

I hope this book will receive the ultimate accolade: imitation. Sequels dealing with the Pacific Alcidae and the penguins would seem appropriate, as this approach to seabird ecology clearly has great merit.

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Some Other Books of Interest

Design for Research. Principles of Laboratory Architecture. SUSAN BRAYBROOKE, Ed. Merle Westlake, technical consultant. Wiley-Interscience, New York, 1986. xx, 193 pp., illus. \$39.95.

In the 1950's the Nuffield Foundation commissioned what was, according to Braybrooke, "thought to be the first systematic attempt to study laboratory design." The results of that study, which focused on the physical characteristics of the laboratory environment and how space and facilities were actually used by scientists, were reported in *The Design of Research Laboratories* (Oxford University Press, 1961). Literature on the subject since then has been "very scant" (one recent generally accessible article is F. Drake and C. Williamson's "The efficient laboratory," *New Scientist* 12 June

1986). Meanwhile, some "famous tours de force" of laboratory design have raised "serious questions of functional inadequacy" and efficient laboratories have "tended to be competent architecture, no more." The present work, by a group of architects and engineers, represents an effort to produce "a totally new study of the state of the art and future directions in laboratory design." The research has been focused on three issues: flexibility, safety, and quality of environment, with regard to the last of which the editor observes that "scientists, introduced to attractive, modern facilities tailored to their real needs, have been known to comment that the surroundings 'were too good for them.'" The first chapter of the book, "A design approach" by John Weeks, which includes discussion of the historical evolution of the laboratory and of ergonomic considerations, emphasizes that "the most enduring requirement in the design of research facilities is the maintenance of the ability of the users to use the facilities in an ill-defined way." Two subsequent chapters by Bryant Putnam Gould include an outline of matters that must be taken into account in devising and presenting a "program" for a proposed facility. There follow a chapter on service systems—electrical and mechanical, ventilation and exhaust, waste disposal, fire protection, water purification, and so on—by Joseph P. Loring *et al.* and one on lighting by Newton F. Watson *et al.* Most appealing to casual readers is likely to be Bradbrooke's "Design in practice," a 56-page array of photographs, plans, and sections of six modern research facilities, with brief descriptive text. The volume concludes with an appendix presenting a comparison of three types of environmental and service-distribution systems—service corridor or central core, interstitial, and vertical—with respect to flexibility, safety, and construction and maintenance costs. The volume generally is extensively illustrated and includes an index.—K.L.

Harvard University Press. A History. MAX HALL. Harvard University Press, Cambridge, MA, 1986. xii, 257 pp., illus. \$20.

Readers with a curiosity about how academic book publishing is carried on have a relatively small literature to turn to. One historical example that comes to mind is *Development of Science Publishing in Europe* (A. J. Meadows, Ed.; reviewed in *Science* 212, 776 [1981]). For the contemporary scene there are Coser *et al.*'s *Books: The Culture and Commerce of Publishing* (reviewed in *Science* 216, 862 [1982]) and Walter W. Powell's *Getting into Print: The*

Decision-Making Process in Scholarly Publishing (University of Chicago Press, 1985), a case study of two commercial houses. The present account of one of the larger university presses is largely an administrative history with relatively little information about day-to-day operations, but in naming names and titles it provides some concreteness lacking in the works by Coser *et al.* and Powell, whose characters are kept discreetly anonymous. As with other university presses, Harvard's activities have been centered on areas other than natural sciences. Readers with a particular interest in science publishing will, however, find some information about the press's first concerted efforts in science publishing following World War II, some background on the development of its publications in evolution and animal behavior, and an account of how the press came not to publish *The Double Helix*. Observers of scientists and their doings more broadly might find interest in the account of the fortunes of the press during the Harvard presidency of James B. Conant, who, already dissatisfied with the press, was led by the lack of enthusiasm with which his own collection of patriotic lectures to undergraduates was greeted to the conclusion that "one might just as well drop the book into the Atlantic Ocean" as to have it published by the press.—K.L.

Books Received

Acid Deposition. Long Term Trends. Committee on Monitoring and Assessment of Trends in Acid Deposition, National Research Council. National Academy Press, Washington, DC, 1986. xiv, 506 pp., illus. Paper, \$24.50.

Adenovirus DNA. The Viral Genome and Its Expression. Walter Doerfler, Ed. Nijhoff, Dordrecht, 1986 (U.S. distributor, Kluwer, Hingham, MA). xiv, 458 pp., illus. \$72.50. Developments in Molecular Virology.

Alexis Carrel. L'Ouverture de L'Homme. Yves Christen, Ed. Félin, Paris, 1986. 205 pp., illus. F 89. Les Hommes de Connaissance.

American Archaeology Past and Future. A Celebration of the Society for American Archaeology, 1935–1985. David J. Meltzer, Don D. Fowler, and Jeremy A. Sabloff, Eds. Published for the Society for American Archaeology by the Smithsonian Institution Press, Washington, DC, 1986. 479 pp., illus. \$35; paper, \$19.95.

Amorphous Silicon Solar Cells. K. Takahashi and M. Konagai. Wiley-Interscience, New York, 1986. xii, 225 pp., illus., + plates. \$68. Translated with revisions from the Japanese edition (Tokyo, 1983) by F. R. D. Apps.

An Analysis of the Early Cultural Sequence of the Nepeña Valley, Peru. Donald A. Proulx. Department of Anthropology, University of Massachusetts, Amherst, 1985. viii, 359 pp., illus. Paper, \$15. Department of Anthropology Research Report no. 25.

Animal Behavior. Psychobiology, Ethology and Evolution. David McFarland. Benjamin/Cummings, Menlo Park, Calif., 1985. xiv, 576 pp., illus. \$28.95.

Arms Control Verification. A Guide to Policy Issues for the 1980s. William F. Rowell. Ballinger (Harper and Row), Cambridge, MA, 1986. xviii, 169 pp., illus. \$24.95. A Harvard Program on Information Resources Policy Book.

Antarctic Treaty System. An Assessment. Polar

(Continued on page 235)

Products & Materials

DNA Synthesizer

The Coder 300 DNA synthesizer employs β -cyanoethyl-diisopropyl phosphoramidite chemistry and produces efficient and reproducible synthesis of oligonucleotides on a scale of 0.25, 1, or 5 μ mol. The Coder 300's integral microprocessor controls fluid metering and microvalve plumbing to admit nucleotide derivations one by one in the order of an operator-dictated sequence. Sequences of up to 100 bases may be produced. The growing DNA molecule is immobilized on a solid support. When the synthesis is complete, the DNA is recovered and purified for experimental use. Simple software commands access procedures for reproducible results. This means that the operator does not need prior chemical training. The Coder 300 is available in single and multicolumn configurations. A fluid sensor monitors the delivery of reagents. A number of signal alerts prevent the loss of materials or damage to the system. In the event of a power failure, an automatic restart resumes synthesis at the point the failure occurred when power is restored. DuPont, Biotechnology Systems Division. Circle 531.

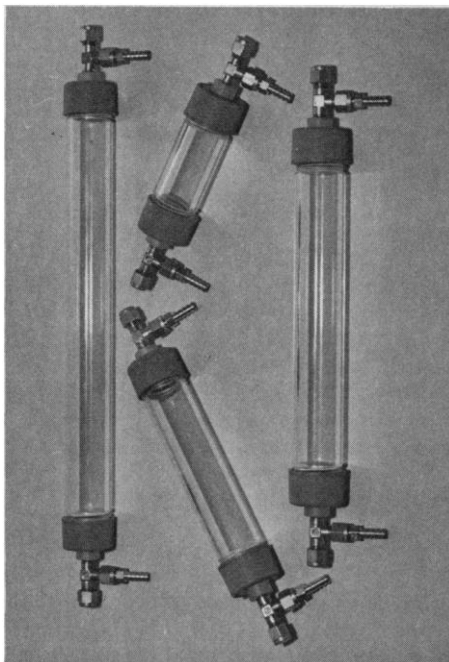
Worksheet Software

DADiSP (pronounced "day-disp") provides a spreadsheet-like, menu-driven environment to display and analyze digital waveforms. The DADiSP Worksheet does for scientists and engineers what financial spreadsheets have done for business users. Inside DADiSP, worksheets act like programs, but unlike traditional programming languages, individual signal processing steps are created simply by typing a formula into a window. Because signals and their mathematical relationships appear graphically in up to 64 windows on the screen, DADiSP can dramatically simplify complex digital signal processing tasks. Worksheets enable a user to build a custom library of analysis templates that are easy to create, store, modify, and apply to new tasks. DADiSP offers more than 150 data manipulation and analysis functions including signal arithmetic and calculus, signal editing, waveform genera-

tion, Fourier analysis, and peak finding. Users may also tailor their own functions using DADiSP's user-defined macros. DADiSP supports real and complex arithmetic and carries engineering units through compound calculations. DADiSP works on the IBM PC and compatible computers using EGA, IBM CGA, or Hercules graphics adapters. DADiSP also supports nine different printers for hard copy. DSP Systems. Circle 535.

HPLC Column Jackets

A line of column water jackets includes a Universal Analytical Column Jacket Kit for a variety of analytical HPLC columns. The kit consists of two end assemblies and four jacket bodies for HPLC columns of up to



7.5, 15, 22, and 30 cm long. The inside diameter (1.125 inch) of the analytical column jackets accommodates conventional analytical columns, as well as cartridge column systems. Aura Industries. Circle 534.

Incubators

Two new general-purpose incubators feature electronic controllers, calibrated to an accuracy of $\pm 0.3^\circ\text{C}$. Uniformity of temperature within the chamber is 0.5°C . Accidental changing of the operating temperature is prevented by the dual adjustment buttons. Recorder outputs with jacks are standard. Two chamber sizes are available: 1.5 and 5.0 cubic feet. The doors permit right- or left-hand opening. For overtemperature protec-

tion, a secondary output switching device is provided to prevent a high temperature condition arising in the event that the primary electronic output switch fails. Thermo-Lyne. Circle 525.

Cell Measurement

The CAS 100-RS Cell Measurement Program now allows biological and medical investigators to quantitate and analyze morphological differences between individual cells or between subpopulations of cells for ten different parameters. The program distinguishes texture, size, and shape of cell nuclei and alterations in nuclear-to-cytoplasmic ratios using several familiar stains. Upgrading for fluorescence capability may be added. The CAS 100-RS also quantitates and analyzes antigen density as detected by common histochemistry procedures on cells derived from needle aspirates, cell culture material, and tissues. The program can integrate data retrieved from the cells under investigation with cell discrimination statistical analyses. The results generated are easy to understand and interpret. No previous computer experience is necessary. Cell Analysis Systems. Circle 537.

Literature

Sample and Reagent Preparation offers solutions to most sample preparation problems, explains techniques for sample and reagent preparation, and provides complete protocols for most sample preparation methods. Bio-Rad Laboratories. Circle 538.

Third-Party Software for Scientific Computers and Array Processors is divided into two library sections, one for each product line. Each library is divided into alphabetic application groups and cross-application libraries. Floating Point Systems. Circle 539.

pH and Ion-Selective Electrodes describes a line of pH, reference, combination pH, ion-selective, and oxidation reduction potential electrodes. Special electrodes for problem applications are included and there is a line of buffers and related solutions. Gam Rad West. Circle 540.

Analytical Supplies is a catalog that also features a reference guide to chromatography. There are gas and liquid columns, fittings, pipes, and chemical supplies for most forms of chromatography. Hewlett-Packard. Circle 541.

Histogram Reference Manual is designed to assist the laboratorian in the interpretation of histograms from the Ortho ELT hematology analyzer. Ortho Diagnostic Systems. Circle 542.

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.

(Continued from page 233)

Research Board, National Research Council. National Academy Press, Washington, DC, 1986. xvi, 435 pp., illus. \$22.50. From a workshop, Beardmore South Field Camp, Antarctica, Jan. 1985.

Astronomy With Your Personal Computer. Peter Duff-Smith. Cambridge University Press, New York, 1985. x, 258 pp., illus. \$44.50; paper, \$14.95.

The Balance of Terror. Nuclear Weapons and the Illusion of Security, 1945-1985. Edgar Bottomore. Beacon, Boston, 1986. xiv, 291 pp. Paper, \$11.95. Revised ed. of *The Balance of Terror: A Guide to the Arms Race* (1971).

Basic Microbiology. With Applications. Thomas D. Brock, Katherine M. Brock, and Davik M. Ward. 3rd ed. Prentice-Hall, Englewood Cliffs, NJ, 1986. xviii, 557 pp., illus. \$34.95.

The Bermuda Triangle Mystery Solved. Larry Kusche. Revised ed. Prometheus, Buffalo, New York, 1986. xx, 302 pp., illus. Paper, \$11.95.

Ecology of an Oak Forest in Hungary. Results of "Sikfokut Project" I. Structure, Primary Production and Mineral Cycling. P. Jakus. Ed. Akadémiai Kiadó, Budapest, 1985. xiv, 546 pp., illus., + plates. \$49. Translated with revisions.

The Economics of Women, Men, and Work. Francine D. Blau and Marianne A. Ferber. Prentice-Hall, Englewood Cliffs, NJ, 1986. xvi, 365 pp., illus. Paper, \$18.95.

Electricity in Economic Growth. Committee on Electricity in Economic Growth, National Research Council, National Academy Press, Washington, DC, 1986. xx, 165 pp., illus. Paper, \$13.50.

Electrocatalysis for Organic Synthesis. Demetrios K. Kyriacou and Demetrios A. Jannakoudakis. Wiley-Interscience, New York, 1986. xii, 139 pp., illus. \$35.

Environment and Chemicals in Agriculture. F. P. W. Winteringham, Ed. Elsevier, New York, 1986. xx, 407 pp., illus. \$79.25. From a symposium, Dublin, Ireland, Oct. 1984.

Equations of State. Theories and Applications. K. C. Chao and Robert L. Robinson, Jr., Eds. American Chemical Society, Washington, DC, 1986. x, 598 pp., illus. \$94.95. ACS Symposium Series, 300. From a symposium, Miami Beach, FL, April 1985.

The Evolution and Ecology of Armadillos, Sloths, and Vermilinguas. G. Gene Montgomery, Ed. Smithsonian Institution Press, Washington, DC, 1985. xii, 451 pp., illus. Paper, \$45. From a symposium, 1979.

Expert Systems Technology. A Guide. L. Johnson and E. T. Keravnou. Abacus, Cambridge, MA, 1985. viii, 184 pp., illus. \$28. Information Technology and Systems Series.

The Fall of a Sparrow. Salim Ali. Oxford University Press, New York, 1985. xvi, 265 pp., + plates. \$16.95. The autobiography of a well-known Indian ornithologist.

Human Growth. A Comprehensive Treatise. Vol. 2. Postnatal Growth Neurobiology. Frank Falkner and J. M. Tanner, Eds. 2nd ed. Plenum, New York, 1986. xxii, 555 pp., illus. \$75.

Mathematical Methods of the Theory of Elasticity. V. Z. Parton and P. I. Perlin. Mir, Moscow, 1985 (U.S. distributor, Imported Publications, Chicago). Two volumes. Vol. 1, 320 pp., illus. \$10. Vol. 2, 360 pp., illus. \$10. Translated with revisions from the Russian edition (1981) by Ram. S. Wadhwa.

Medieval Cosmology. Theories of Infinity, Place, Time, Void, and the Plurality of Worlds. Pierre Duhem. University of Chicago Press, Chicago, 1986. xxxii, 602 pp. \$35. Selections from Duhem's *Le Système du Monde* translated and edited by Roger Ariew.

Meditations on Hunting. José Ortega y Gasset. Scribner, New York, 1986. 132 pp. Paper, \$7.95. Translated by Howard B. Wescott. Reprint, 1972 edition.

Microbiology. Michael J. Pelczar, Jr., E. C. S. Chan, and Noel R. Krieg. With Merna Foss Pelczar. 5th ed. McGraw-Hill, New York, 1986. x, 918 pp., illus. \$37.95.

Molecular Biology of the Photosynthetic Apparatus. Katherine E. Steinback et al., Eds. Cold Spring Harbor Laboratory, Cold Spring Harbor, NY, 1985. xx, 437 pp., illus. \$75. From a meeting, Cold Spring Harbor, NY.

Nutrition, Aging, and Health. Eleanor A. Young, Ed. Liss, New York, 1986. xii, 280 pp., illus. \$58. Contemporary Issues in Clinical Nutrition, vol. 9.

Nutritional Problems and Education. Selected Topics. Geoffrey H. Bourne, Ed. Karger, Basel, 1986. xii, 207 pp., illus. \$103. World Review of Nutrition and Dietetics, vol. 47.

The Older Adult as Learner. Aspects of Educational Gerontology. D. Barry Lumsden, Ed. Hemisphere, New York, 1985. xiv, 250 pp., illus. \$31.95.

Optical Holography. Principles, Techniques and Applications. P. Hariharan. Cambridge University Press, New York, 1986. xii, 319 pp., illus. Paper, \$24.95. Cambridge Studies in Modern Optics, 2. Reprint, 1984 edition.

The Origins and Relationships of Lower Invertebrates. S. Conway Morris et al., Eds. Clarendon (Oxford University Press), New York, 1985. xii, 397 pp., illus. \$69. Systematics Association Special vol. 28. From a symposium, London, Sept. 1983.

The Other Mind of Europe. Goethe as a Scientist. J. P. S. Uberoi. Oxford University Press, New York, 1984. 94 pp., illus., + plates. \$12.95.

Parasite Antigens. Toward New Strategies for Vaccines. Terry W. Pearson, Ed. Dekker, New York, 1986. xii, 413 pp., illus. \$79.50. Receptors and Ligands in Intercellular Communication, 7.

Petroleum-Derived Carbons. John D. Bacha, John W. Newman, and J. L. White, Eds. American Chemical Society, Washington, DC, 1986. x, 406 pp., illus. \$74.95. ACS Symposium Series, 303.

Photoperiodism, Melatonin and the Pineal. Pitman, London, 1985 (U.S. distributor, CIBA Pharmaceutical, Newark, NJ). x, 323 pp., illus. \$35. Ciba Foundation Symposium 117. (London, March 1985.).

Planet Earth in Jeopardy. Environmental Consequences of Nuclear War. Lydia Dotto. Published on behalf of the Scientific Committee on Problems of the Environment of the International Council of Scientific Unions by Wiley, New York, 1986. viii, 134 pp., illus. \$14.95.

Regulation of HMG-CoA Reductase. Benjamin Preiss, Ed. Academic Press, Orlando, FL, 1985. xii, 330 pp., illus. \$55.

Renewable Energy. Progress, Prospects. Stephen W. Sawyer. Association of American Geographers, Washington, DC, 1986. x, 102 pp., illus. Paper, \$6. Resource Publications in Geography.

Renewable Energy Assessments. An Energy Planner's Manual. Marcia M. Gowen with Herbert A. Wade. Pacific Islands Development Program/Resource Systems Institute, East-West Center, Honolulu, 1985. xviii, 227 pp., illus. Paper, \$17.

Reporting Science. The Case of Aggression. Jeffrey H. Goldstein, Ed. Erlbaum, Hillsdale, NJ, 1986. xviii, 121 pp. \$19.95; paper, \$9.95.

Restoring the Earth. How Americans are Working to Renew our Damaged Environment. John J. Berger. Knopf, New York, 1985. x, 241 pp. \$16.95. A Borzoi Book.

Risk and Reason. Risk Assessment in Relation to Environmental Mutagens and Carcinogens. Per Oftedal and Anton Brogger, Eds. Liss, New York, 1986. xvi, 189 pp., illus. \$38. Progress in Clinical and Biological Research, vol. 208. From a symposium, Oslo, June 1985.

Robot Technology. Theory, Design and Applications. Anthony C. McDonald. Prentice-Hall, Englewood Cliffs, NJ, 1986. xvi, 382 pp., illus. \$32.95.

Scaling Phenomena in Disordered Systems. Roger Pynn and Arne Skjeltorp, Eds. Plenum, New York, 1985. xii, 580 pp., illus. \$92.50. NATO Advanced Science Institutes Series B, vol. 133. From an institute, Gello, Norway, April 1985.

Schistosomiasis. The St. Lucia Project. Peter Jordan. Cambridge University Press, New York, 1985. xvi, 442 pp., illus. \$49.50.

The School Achievement of Minority Children. New Perspectives. Ulric Neisser, Ed. Erlbaum, Hillsdale, NJ, 1986. x, 198 pp., illus. \$19.95. Based on a conference, Ithaca, NY, 1982.

Science and Technology in Countries of Asia and the Pacific. Policies, Organization, and Resources. Unesco, Paris, 1985 (distributor, Unipub, Ann Arbor, Mich.). 704 pp. Paper, \$43.25. Science Policy Studies and Documents, no. 52.

The Unfinished Universe. Louise B. Young. Simon and Schuster, New York, 1986. 240 pp., illus. \$17.95.

World Resources 1986. A Report by the World Resources Institute and the International Institute for Environment and Development. Basic Books, New York, 1986. xiv, 353 pp., illus. \$32.95; paper, \$16.95.

Writings of Charles S. Peirce. A Chronological Edition. Vol. 3, 1872-1878. Christian J. W. Kloesel et al., Eds. Indiana University Press, Bloomington, 1986. xxviii, 633 pp., illus. \$40.

Xenobiotic Conjugation Chemistry. Gaylord D. Paulson et al., Eds. American Chemical Society, Washington, DC, 1986. x, 358 pp., illus. \$49.95. ACS Symposium Series, 299. From a symposium, Miami Beach, FL, April 1985.

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Biologist-Immunologist/Lawyer, J.D. 1986. Seeks entry-level position in small to medium-sized intellectual property law firm, or corporate patent department. Willing to relocate. Box 132, SCIENCE. X

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Cell Biologist, Ph.D., with extensive research experience (cell cycle control/cytodifferentiation/cytoskeleton), many publications, seeks research position in/near New York City. Box 131, SCIENCE. X

Toxicologist, Ph.D. Seeks challenging consulting, industrial, or academic position; 25 plus years of experience in research, program management, regulatory affairs, environmental litigation. Excellent communication skills; references available. Box 124, SCIENCE. 7/11, 18

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Researcher Biotechnology, M.S. with industrial experience. Desire challenging position in industry or academia. Laboratory experiences include molecular biology, recombinant DNA, strain development, fermentation, radioisotopes, and separations techniques: LC, HPLC, agarose/polyacrylamide electrophoresis, and ultrafiltration. Designed, built, and operated supercritical extraction system. Box 129, SCIENCE. 7/11, 18, 25; 8/1, 8/8, 15

Toxicologist. Ph.D. Industrial background in environmental and mammalian toxicology. Ten years of experience in pesticide registration and regulatory affairs. Seeks senior position. Box 130, SCIENCE. X

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Lawler, Matusky and Skelly Engineers, environmental science and engineering consulting firm, is seeking an individual with a M.S. degree. This is an entry-level position which requires knowledge of fate of toxic substances in the aquatic environment, fisheries, in impact assessment, and biometrics. Good oral and written communication skills mandatory, computer skills desirable.

Send résumé with salary history and requirement to:

Director of Personnel

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One Blue Hill Plaza
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The Department of Pharmacology at The University of Texas Health Science Center, San Antonio, Texas, invites applications for a tenure-track faculty position from individuals with research experience in the neurobiology of cardiovascular regulation. This individual must have a Ph.D. and several years of postdoctoral training. The appointee will join a department with an active research program in cardiovascular regulation and will participate in the teaching of medical, dental, and graduate students. Send résumé, research interest, and names of three references to: **Dr. Vernon S. Bishop, Department of Pharmacology, University of Texas Health Science Center, 7703 Floyd Curl Drive, San Antonio, Texas 78284-7764. The University of Texas Health Science Center at San Antonio is an Affirmative Action/Equal Opportunity Employer.**

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Cornell University is an Affirmative Action/Equal Opportunity Employer.

ASSISTANT PROFESSOR, ANATOMY. Full-time, tenure-track. The Department of Basic Science, California College of Podiatric Medicine, seeks a Ph.D. to coordinate and teach a course in human gross anatomy. Applicants must have a strong commitment to teaching. Starting salary commensurate with experience. Range: \$22,800 to \$28,600. A complete curriculum vitae and the names of three individuals who can be contacted for references should be sent by 1 September to: **Barbara M. Kriz, Ph.D., Chairperson, Search Committee, Department of Basic Science, California College of Podiatric Medicine, 1210 Scott Street, San Francisco, California 94115. An Affirmative Action/Equal Opportunity Employer.**

ASSISTANT PROFESSOR, MICROBIOLOGIST. The Southeastern College of Osteopathic Medicine invites applications for a faculty position in microbiology. The successful candidate will be expected to help teach a course in medical microbiology, supervise microbiology teaching laboratories, and pursue individual research interests. Please submit a letter of application, a résumé, and the names of three references to: **Harold E. Laubach, Ph.D., Assistant Dean for Basic Sciences, Southeastern College of Osteopathic Medicine, 1750 N. E. 168 Street, North Miami Beach, FL 33162. SECOM is an Affirmative Action/Equal Opportunity Institution.**

POSITIONS OPEN

ASSISTANT PROFESSOR/TENURE-TRACK POSITION. Eppley Institute for Research in Cancer, University of Nebraska Medical Center (UNMC). We are currently seeking an individual with a research program in one of the following areas: carcinogenesis, membrane biology, cell/molecular biology, biochemical genetics, mutagenesis, DNA repair, or cell differentiation. The successful candidate will hold a joint appointment in a basic science department and will contribute to furthering graduate education on the UNMC campus. The Eppley Institute, which is committed to interdisciplinary research in various phases of the cancer problem, includes biochemists, biologists, chemists, nutritionists, pathologists, pharmacologists, virologists, and immunologists. Interested applicants should forward a complete curriculum vitae, three letters of recommendation, and a brief statement of their future research plans to: **Dr. Edward Bresnick, Director, Eppley Institute for Research in Cancer and Allied Diseases, University of Nebraska Medical Center, Omaha, NE 68105.**

BROWN UNIVERSITY ASSISTANT PROFESSOR—NEUROBIOLOGY

The Division of Biology and Medicine of Brown University is seeking a neurobiologist, with a research interest in the organization and function of the vertebrate central nervous system, for a tenure-track position at the rank of assistant professor. An M.D., Ph.D., or equivalent degree and at least 2 years of postdoctoral experience are required. The successful candidate is expected to participate in the teaching of mammalian neuroanatomy or neurophysiology to medical, graduate and undergraduate students, and to develop an independent, externally funded research program. Undergraduate advising is a regular obligation of members of the faculty. This appointment will begin on or about 1 July 1987. Applicants should submit curriculum vitae and a concise description of research plans by 15 September 1986 and should arrange for three letters of reference to be sent to: **Dr. James T. McIlwain, Section of Neurobiology, Box G, Brown University, Providence, Rhode Island 02912. We encourage applications from women and minority candidates. Brown University is an Equal Opportunity/Affirmative Action Employer.**

ASSISTANT TO ASSOCIATE PROFESSORIAL POSITION MICROBIOLOGY THE CITY UNIVERSITY OF NEW YORK (CUNY) MEDICAL SCHOOL/SCHOOL OF BIOMEDICAL EDUCATION OF THE CITY COLLEGE OF CUNY

The CUNY Medical School and CCNY School of Biomedical Education are responsible for an innovative 7-year program leading to a combined B.S./M.D. degree. The goals of the school are to train primary care physicians who will provide medical care to underserved communities and to provide access to a career in medicine for black and hispanic students and students of other ethnic backgrounds whose communities have been historically underserved by primary care physicians.

Applications are invited for appointment to a 12-month, tenure-track position. The appointment will be at a rank and salary commensurate with qualifications. The successful candidate for this position should have a Ph.D. or M.D. degree and at least 2 years of postdoctoral research experience and a commitment to developing innovative teaching programs in the areas of medical microbiology/infectious diseases. Research in molecular virology, molecular immunology, or mechanisms of bacterial pathogenesis would complement existing research programs. The position is available immediately. Letters of application must include curriculum vitae and three references. Applications must be postmarked no later than 30 September 1986, and should be addressed to: **Dr. Carol Wood Moore, Chair, Microbiology Search Committee, CUNY Medical School,**

**CITY COLLEGE OF CUNY
Convent Avenue at 138th Street
New York, NY 10031**

An Affirmative Action/Equal Opportunity Employer, M/F

POSITIONS OPEN

DEPARTMENT OF PSYCHOLOGY

We are seeking authorization for a tenure-track **ASSISTANT PROFESSOR** position in psychobiology beginning September 1987. Area is open, but research of candidates should reflect an interest in both biological and behavioral approaches. Postdoctoral experience desired. Send curriculum vitae, recent reprints, courses qualified to teach, and letter of recommendation to: **Professor Elliot S. Valenstein, Search Committee, The University of Michigan, Neuroscience Laboratory Building, 1103 East Huron Street, Ann Arbor, MI 48104-1687.** *The University of Michigan is an Affirmative Action/Equal Opportunity Employer.*

ASSISTANT PROFESSOR-LEVEL POSITION IN PHYSIOLOGY. New York College of Osteopathic Medicine invites applications from qualified Ph.D.'s for a full-time assistant professor position in the Department of Physiology (yearly renewable contract/multiple year contracts available, salary commensurate with experience). The position chiefly involves research (90 percent time allocation) with minimal teaching duties (no more than 20 percent). The research interest of applicants should be in the area of cardiac cellular electrophysiology. Modern laboratory space and start-up funds will be provided to the successful candidate. Applications, including curriculum vitae, statement of research plan and track record, and the names and addresses of three references should be mailed to: **Dr. Arnold L. Nagler, Associate Dean, New York College of Osteopathic Medicine, Old Westbury, New York 11568.** Deadline for receipt of applications is 15 August 1986.

BIOENGINEERING FACULTY POSITION

The Pennsylvania State University is seeking an **assistant or associate professor** in bioengineering beginning fall, 1987. A Ph.D. in bioengineering or a related engineering field is required. The research field is open, but we are particularly interested in someone with a strong background in the biomechanical area, medical imaging, or biosensors. Successful applicant will be expected to develop an area of research, supervise graduate students, and participate in teaching at the graduate level. Please send résumé and names and addresses of three or more references to: **Dr. K. Kirk Shung, Chairman, Search Committee, 21B EE West Building, University Park, PA 16802.** Application deadline 1 October 1986, or until a suitable candidate is identified. *An Equal Opportunity/Affirmative Action Employer.*

BIOLOGIST/ADMINISTRATOR: Immediate opening for individual capable of coordination and scheduling of professional and support staff engaged in multiple projects, including long-term ecological studies. Ph.D. required. Experience in environmental consulting, project, and/or office management desirable. Send résumé to: **Dr. James O'Hara, Environmental and Chemical Sciences, Inc., P.O. Box 1393, Aiken, SC 29802.** *An Equal Opportunity Employer.*

BOTANIST—University of New England (UNE) has fall, 1986 opening for person to teach botany, phycology, and general courses in Field-Oriented Marine Biology Program. Ph.D. and undergraduate teaching experience required. Coastal ecology or limnology expertise preferred. Forward cover letter plus curriculum vitae by 25 July 1986 to: **Director of Personnel, University of New England, 11 Hills Beach Road, Biddeford, Maine 04005.** UNE is an *Equal Employment Opportunity/Affirmative Action Employer.*

POSTDOCTORAL POSITION available in electrophysiology of cardiac tissue and cardiomyocytes. Applicants should have experience in intracellular techniques. A background in whole patch and patch clamp procedures is preferred, but not required. The successful candidate will be expected to give several lectures in the freshman medical physiology course. Salary is competitive. The successful applicant will work under the direct supervision of **Dr. Kenneth Rossner**, Department of Physiology. Applications, including curriculum vitae, statement of research interests, and the names and addresses of three references should be mailed to: **Dr. Arnold L. Nagler, Associate Dean, Search Committee, New York College of Osteopathic Medicine, Old Westbury, NY, 11568.** Deadline for receipt of applications is 15 August 1986.

RADIOCHEMIST

(Work Location: Mercury, Nevada)

Establish and direct a laboratory for the radioanalysis of low-level environmental samples. A Ph.D. with eight years of experience, including five years of environmental work and three years in supervision, are desired. A strong background in gamma spectroscopy and transuranic chemistry is required. Continuous interface with other laboratories and agencies demands excellent communications and collaborative skills.

EQUAL OPPORTUNITY EMPLOYER M/F

Liberal Fringe Benefits
Replies held confidential
Must be a U.S. citizen

SEND RESUMES TO:

**Trudie L. Rainey
Employment Section Chief
Reynolds Electrical &
Engineering Co., Inc.
Post Office Box 14400
Las Vegas, NV 89114-4400
Telephone: (702) 295-1900**

MANAGER CLINICAL RESEARCH

Amgen, an industry leader in biotechnology is developing products for human therapeutics, diagnostics, animal health and specialty chemicals. Continued product development progress requires an expansion of our clinical research group.

We have an immediate opportunity for an experienced **Clinical Research Manager**. The position requires a Ph.D. and 4-5 years of experience with a biological/pharmaceutical drug manufacturer managing protocol preparation, clinical monitoring, data reduction/analysis and PLA preparation. Candidates must be willing to travel, and possess excellent communications and presentation skills.

Amgen offers an attractive compensation and benefits program along with a high paced stimulating environment. Our facilities are located in an attractive community about an hour northwest of Los Angeles.

Qualified candidates should submit a resume to: **William Puchlevic, AMGEN, 1900 Oak Terrace Lane, Thousand Oaks, CA 91320.**

AMGen

Equal Opportunity Employer

POSITIONS OPEN

ASSISTANT or ASSOCIATE PROFESSOR—Ph.D. biochemist in connective tissue research. This is a tenure-track position for head of the Biochemistry Section in the Orthopaedic Research Laboratory of Columbia-Presbyterian Medical Center. New laboratory space and significant funds for equipment are available. Highly competitive 12-month academic salary depends on experience and background. Candidate should be knowledgeable in advanced analytical biochemical techniques for quantification of collagen and/or proteoglycans of various soft connective tissues. Experience in use of scanning and/or transmission electron microscopes is desirable. The successful candidate will be encouraged to interact with the Department of Biochemistry in the Division of Health Sciences of Columbia University. A 1 January 1987 starting date is anticipated. Candidate should send, by 1 October 1986, curriculum vitae with three reference names to: **Dr. Van C. Mow, Director, Orthopaedic Research Laboratory, Columbia-Presbyterian Medical Center, Department of Orthopaedic Surgery, 622 West 168 Street, PH 5, Room 129, Columbia University, New York, NY 10032.** *Columbia University is an Equal Opportunity/Affirmative Employer.*

BOTANIST. Assistant professor, full-time, 1-year appointment with potential for shift to tenure-track. Appointment to begin 27 August 1986. A Ph.D. or satisfactory progress toward its completion with teaching experience in general botany and ecology is desired. Other teaching responsibilities will include semester courses in plant morphology, plant taxonomy, general biology for nonmajors, and laboratory supervision in a general biology course for majors. Applicants should send curriculum vitae with emphasis on content of courses taught and evidence of laboratory and field expertise, and three letters of recommendation by 28 July 1986 to: **Dr. James Phifer, Vice-President for Academic Affairs, Coe College, Cedar Rapids, IA 52402.** *Affirmative Action/ Equal Opportunity Institution.*

POSTDOCTORAL FELLOW—Ph.D. APPLIED MECHANICS OR BIOMECHANICS. This is a 1-year position for research in biomechanics of soft tissues and diarthrodial joints and bioengineering studies in joint prostheses in the new Orthopaedic Research Laboratory of Columbia University. Renewable second-year fellowship is possible. Fellowship stipend range \$24,000 to \$28,000, depending on experience. Candidate should be knowledgeable in theoretical and/or experimental applied mechanics, finite element analysis, and some aspects of biomechanics. Interdisciplinary research project work is expected. A 1 September 1986, or 1 January 1987, starting date is anticipated. Interested candidates should send curriculum vitae with three reference names to: **Dr. Van C. Mow, Director, Orthopaedic Research Laboratory, Columbia-Presbyterian Medical Center, Department of Orthopaedic Surgery, 622 West 168 Street, PH 5, Room 129, Columbia University, New York, NY 10032.** *Columbia University is an Equal Opportunity/Affirmative Action Employer.*

SENIOR RESEARCH ASSOCIATE—Ph.D. APPLIED MECHANICS OR BIOMECHANICS. This is a 3-year position for research in biomechanics of soft tissues and diarthrodial joints and bioengineering studies in joint prostheses in the new Orthopaedic Research Laboratory of Columbia University. Salary is commensurate with an entry-level assistant professor in mechanical engineering. In addition, supplemental pay for 3 months in the summer is guaranteed for the duration of the appointment. Candidate should be knowledgeable in theoretical and/or experimental applied mechanics, finite element analysis, and some aspects of biomechanics. Independent and interdisciplinary research project work is expected. Upon the completion of the 3-year appointment, a joint tenure-track appointment between the Department of Orthopaedic Surgery and the Department of Mechanical Engineering may be established. A 1 September 1986 starting date is anticipated. Candidate should send curriculum vitae with three reference names to: **Dr. Van C. Mow, Director, Orthopaedic Research Laboratory, Columbia-Presbyterian Medical Center, Department of Orthopaedic Surgery, 622 West 168 Street, PH 5, Room 129, Columbia University, New York, NY 10032.** *Columbia University is an Equal Opportunity/Affirmative Employer.*

POSITIONS OPEN

ASSOCIATE DEAN FOR RESEARCH AND BASIC SCIENCES

We seek an individual with proven abilities in biomedical research and administration for the position of associate dean for research and basic sciences at the University of Kentucky College of Medicine.

The associate dean has line authority to all basic sciences departments and central responsibility to lead and coordinate research program planning, related training programs, and development within the College of Medicine and to coordinate college programs with medical center and university activities. The individual in this position functions as a member of an administrative team with the dean and the associate deans of Clinical Affairs, Education and Administration, and Finances. Prerequisites include a Ph.D. and/or M.D. degree and a strong record of achievement in research and administration.

Please forward letters of inquiry, curriculum vitae, bibliography, and the names of three references from whom recommendations can be solicited no later than 15 August 1986 to:

**Dr. Alan M. Kaplan
Chairman, Search Committee
Department of Medical Microbiology
and Immunology
MS 409 Medical Center
University of Kentucky
Lexington, KY 40536-0084**

Salary range is equivalent to and competitive with other institutions and will depend on prior experience. Position is available immediately. *The University of Kentucky is an Equal Opportunity/Affirmative Action Employer.*

BIOMEDICAL ENGINEERING CHAIRPERSON: Biomedical Engineering Department of the University of Miami College of Engineering is seeking nominations and applications for the position of chairperson, with a starting date between January 1987 and August 1987. Candidates should have an earned doctorate in biomedical engineering or related field, teaching, industrial or government experience, substantial record of externally funded research, and evidence of leadership ability. The department, which offers M.S. and Ph.D. degrees, closely interacts with the School of Medicine, local hospitals and industry, and is scheduled for additional growth. Applications with résumés and names of three references (with addresses) should be received on or before 15 September 1986 by: **Dr. T. Nejat Vezir-oglu, Chairperson, BME Chair Search Committee, College of Engineering, P.O. Box 248294, Coral Gables, FL 33124; telephone: 305-284-4666.** *The University of Miami is an Affirmative Action/Equal Opportunity Employer.*

CELL BIOLOGIST—VIROLOGIST

Position available for M.S. or experienced B.S. biologist or microbiologist with background in cell culture or virology. Research involves evaluation of chemical compounds for antiviral activity against exotic viruses. Work will be conducted in a P-3 level containment facility. Send résumé and salary requirements to:

**James G. Kerr
Department B152
Southern Research Institute
P.O. Box 55305
Birmingham, AL 35255-5305**
An Equal Opportunity/Affirmative Action Employer

UNIVERSITY OF EDINBURGH FACULTY OF SCIENCE BUCHANAN CHAIR OF GENETICS

Applications are invited for the Buchanan chair of genetics, which was most recently held by **Professor J. R. S. Fincham, F.R.S.** The holder of the Buchanan chair of genetics will be expected to provide academic leadership in this large and diverse department, to participate in the teaching program of the department, and to promote and undertake research. The salary will be within the professorial range. Further particulars may be obtained from: **The Secretary to the University, University of Edinburgh, 63 South Bridge, Edinburgh EH1 1LS United Kingdom**, to whom applications (12 copies) including curriculum vitae and the names and addresses of three referees, should be lodged not later than 30 August 1986. Overseas candidates need submit only one copy of the application. Please quote reference number 44/86.

POSITIONS OPEN

CELLULAR IMMUNOLOGY—RESEARCH ASSOCIATE

A 100 percent research position (1-year, but renewable annually) is available for a cellular immunologist in the Veterinary Research Laboratory at Montana State University, Bozeman, Montana. This position will require a Ph.D. in immunology, postdoctoral experience in T-cell, macrophage, and lymphokine-mediated immunity. An established publication record and a willingness to work on cell-mediated immunity to parasitic protozoa of livestock is also required. Research experience in immunity to parasitic protozoa of livestock and biochemical characterization of lymphokines is desired. The candidate will occupy a 1200-square-foot modern laboratory housing a JEOL electron microscope, tissue culture facilities, and ancillary equipment. The salary will range from \$25,000 to \$30,000, depending on the qualifications of the individual. Applicants should send a letter of application, curriculum vitae, and the names and addresses of three references to: **Dr. Donald E. Burgess, Chairman, Search Committee, Veterinary Research Laboratory, Montana State University, Bozeman, Montana 59717**, not later than 25 July 1986. *MSU is an Equal Opportunity/Affirmative Action Employer.*

CHAIRPERSON DEPARTMENT OF BIOCHEMISTRY

The Uniformed Services University of the Health Sciences is conducting a search for chairperson of the Department of Biochemistry of the F. Edward Hebert School of Medicine. Candidates should have an earned doctoral degree in biochemistry or a related field, a distinguished record of research in biochemistry, substantial experience in teaching (preferably in medical school), and demonstrated leadership and administrative abilities. The expected starting date will be between 1 June 1987 and 1 September 1987. Salary will be commensurate with qualifications. The closing date for applications will be 30 September 1986. Candidates should submit curriculum vitae and bibliography, statement of research interests and teaching philosophy, and names of three professional references to: **Randall K. Holmes, M.D., Ph.D., Associate Dean for Academic Affairs, c/o Civilian Personnel Directorate, Uniformed Services University of the Health Sciences (USUHS), 4301 Jones Bridge Road, Bethesda, Maryland 20814.** *USUHS is an Equal Opportunity/Affirmative Action Employer.*

CHAIRPERSON—ZOOLOGY

The Department of Zoology of the University of Maryland at College Park (Main Campus) is seeking nominations and applications of scientists qualified to serve as departmental chairperson. The department currently consists of 30 faculty and 100 graduate students. Research strengths are in ecology/evolutionary biology and in cellular biology. In addition, departmental researchers actively collaborate with scientists at the NIH, National Zoo, Smithsonian Institution, U.S. Department of Agriculture, and the university's Biotechnology Institute. Applicants should have a Ph.D. and have demonstrated outstanding abilities in research in some field of modern biology. Evidence of administrative ability is also required. Appointment will be made at the professor level (tenured) with appropriate salary and benefits, preferably starting 1 July 1987. For best consideration submit curriculum vitae and the names, addresses, and telephone numbers of four references by 15 September 1986 to: **Dr. Paul H. Mazzocchi, Zoology Chair Search Committee, Department of Chemistry, University of Maryland, College Park, MD 20742.** *An Equal Opportunity/Affirmative Action Employer.*

CLINICAL SPECIMEN ANALYST—MICROSCOPIST. Preparation of tissue specimens for microscopic analysis, clinical assessment of human tissues, and other biological materials. Use diversified staining techniques, microtomy, cryomicrotomy, photomicrography and related procedures like histologic methods, and immunofluorescent techniques. B.S. in biological science required. Two years of experience must include biological laboratory work using cryomicrotomy techniques. Forty hours per week, \$18,800 per year. Send résumé to: **7310 Woodward Avenue, Room 415, Detroit, MI 48202.** Reference number 31686. Employer-paid ad.

POSITIONS OPEN

CURATORIAL POSITION IN MAMMALOLOGY

Curricula vitae are being solicited for a curatorial position in mammalogy at the Natural History Museum of Los Angeles County. Responsibilities consist of sharing in curation of a major collection, in particular the large mammals; use of the collection in research on systematics of mammals, with emphasis on marine forms; and participation in the museum's public programs. Ph.D. required; salary is commensurate with experience. Send letter of interest, curriculum vitae, and names of three references before 1 September 1986 to: **Dr. Ralph W. Schreiber, Natural History Museum of Los Angeles County, 900 Exposition Boulevard, Los Angeles, CA 90007; telephone: 213-744-3366. LACM is an Equal Opportunity Employer.**

YARMOUK UNIVERSITY IRBID, JORDAN

Yarmouk University invites applications for a position of a **DEAN FOR THE FACULTY OF AGRICULTURE**, as of the beginning of the academic year 1986/1987 (September 1986), and with a contract for 3 years.

The applicant must have the rank of Professor and must be well versed in the Arabic language. Administrative experience preferred.

Yarmouk University offers the following fringe benefits: health insurance, life insurance, social security, airway tickets, and furnished accommodation at reduced rent.

Salary is determined by years of experience and seniority of professorship. Yarmouk salary for this post ranges between 900-1200 JD. per month. 1 Jordanian Dinar = \$2.80.

Applicants should submit curriculum vitae and arrange for three letters of reference to be sent directly to:

**Professor Marwan Kamal
Vice President
Yarmouk University
Irbid-Jordan**

DEAN OF RESEARCH AND GRADUATE STUDIES

Montana College of Mineral Science and Technology seeks an enthusiastic person to direct and further develop its research efforts and graduate program. A doctorate and appropriate experience in research and management are required. Starting date negotiable. Applicants should submit a letter, résumé, and names of four references to:

**Dr. Thomas Waring
Search Committee Chair
Dean of Research and Graduate Studies
Montana College of Mineral Science and Technology
Butte, Montana 59701**

Montana Tech is an Affirmative Action/Equal Opportunity Employer.

DIRECTOR OF PATHOLOGY

International Research and Development Corporation (IRDC) has a challenging opportunity available as director of our Pathology Division. You will be responsible for managing the scientific and technical operations of over 70 people in the Histopathology, Necropsy, Histology, and Clinical Pathology Departments.

Candidates should have considerable experience in toxicologic pathology, be Board-certified in veterinary pathology, and have some management experience. We offer a full-range benefits program, relocation expenses, and an open starting salary.

IRDC is one of the foremost contract research laboratories specializing in animal safety evaluation studies for the pharmaceutical, chemical, agricultural, and consumer industries. We are located near Kalamazoo, Michigan, midway between Detroit and Chicago, in an area affording a broad range of urban or rural life-styles with excellent cultural and recreational opportunities.

Please submit résumés to:

**Dr. Edwin I. Goldenthal,
Vice President and Director of Research
International Research and
Development Corporation
500 North Main Street
Mattawan, Michigan 49071**

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

PROCESS DEVELOPMENT ENGINEER MAMMALIAN CELL CULTURE

An industry leader in advanced biotechnology, **Amgen** develops products for significant applications including human therapeutics human diagnostic animal health care and specialty chemicals. Several of our product development programs have progressed to a stage requiring larger scale process development efforts. We currently have an immediate opportunity for a **Process Development Engineer**.

Candidates should have a Ph.D. degree in Biochemical Engineering or related field and several years of relevant experience in the pharmaceutical or biotechnology industry. Experience in fermentation, biochemistry, and cell culture techniques is essential, preferably with knowledge of CGMP's. Responsibilities include development of process scale-up programs and documentation leading to a GMP production process utilizing mammalian cells.

Amgen is located in an attractive community about an hour northwest of Los Angeles, and offers a stimulating and challenging scientific environment, as well as an attractive compensation and benefits program. Qualified candidates should direct a resume including three references to:

**Recruitment, Dept. 37a, AMGEN, 1900 Oak Terrace Lane,
Thousand Oaks, CA 91320**



Equal Opportunity Employer

In Environmental Science & Management, Quality Is An Absolute

When it comes to managing our environment, there are few second chances, and no degrees of quality. Battelle is an international leader in environmental high technology and applied marine management. Using creative scientific approaches and advanced technology, Battelle's Ocean Sciences and Technology Department monitors, analyzes, traces and measures impacts of pollutants in sea water, sediments and marine animals. We are committed to quality in everything we do. If you are a similarly committed professional, we invite you to join us.

Quality Assurance Manager

The successful candidate will administer an ongoing departmental quality assurance program, as well as develop and implement procedures related to proper and safe laboratory practices and equipment accountability. Specific responsibilities include advising management in interpreting good laboratory practice regulations, reviewing protocols for regulatory compliance, and interfacing with sponsors, in addition to training and evaluating quality assurance staff. To qualify, applicants must have a B.S. or higher degree with emphasis in Chemical or Biological Sciences and a minimum of 3 years' experience in a research quality assurance program. Strong communication skills are also required.

We offer exceptional opportunity for career development, competitive salaries and generous benefits, along with an extraordinary oceanside location, midway between Boston and Cape Cod.

For prompt, confidential consideration, please send resumes and references to: Ms. Joan Sundstrom, Battelle, 397 Washington Street, Duxbury, MA 02332.

An equal opportunity employer, M/F.



PROTEIN CHEMISTS

Syntro Corporation, an advanced biotechnology company, has immediate openings for entry level and staff scientists in our **BIOCHEMISTRY GROUP**. Applicants should have a degree in Biochemistry, Chemistry or related fields and an understanding of current protein purification and sequencing techniques required. Familiarity with micro sequencing technology and HPLC preferred. Scientists should have demonstrated research and supervisory experience.

Syntro, located in the heart of the San Diego scientific community, offers a competitive package in an outstanding research environment, as well as excellent opportunities for professional growth. If you are interested in joining an outstanding team of scientists working in the forefront of technology, please send resume and references to:

Director of Organizational Development
SYNTRO CORPORATION
10655 Sorrento Valley Road
San Diego, CA 92121
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SYNTRO

MANAGER R&D

Baxter Travenol Laboratories, Inc., a progressive leader in the health care industry, has an immediate need for a Manager of Research and Development. This position will provide scientific leadership in the area of analytical chemistry and the review of stability data from an analytical and pharmaceutical perspective.

This position, in addition to providing scientific leadership, will supervise a large laboratory staff and assist in stability planning. Budget development and control as well as interfacing with all levels of management within the R&D department will be required.

Qualified candidates will have a Ph.D. in Pharmaceutical Sciences with major emphasis in Pharmaceutical Analysis and Drug Stability. This position requires 3-5 years experience in the Pharmaceutical industry preferably in the area of Shelf-Life Stability and/or Method Development. Additionally, familiarity with FDA stability guidelines and IND/NDA process is required. Knowledge of Automated Computerized Data Acquisition and Lab Management systems is a plus.

We are a Fortune 500 company providing excellent salaries and benefits including pension plan and employee stock purchase. For confidential consideration, please send your resume to:



Baxter Travenol Laboratories, Inc.
Human Resources — Dept. DC
6301 Lincoln Avenue
Morton Grove, IL 60053

equal opportunity employer

HP Genenchem is a joint venture formed by Hewlett-Packard and Genentech. We are currently seeking qualified candidates for two key positions in our Automated Biochemistries product line.

Product Manager

To work closely with R & D engineers and other marketing professionals in developing and managing our marketing program for Automated Microassay Systems and future products.

Successful candidate will have a technical background in the life sciences or bioscience instrumentation and a record of achievement in product marketing.

Application Scientist

To develop bioscience applications of Automated Biochemistry instrumentation, including robotics. Will investigate opportunities for new instruments, applications software, and related items. Will work closely with R & D engineers and marketing to define and develop new products and applications.

Successful candidates will have a doctorate in biochemistry, immunology or equivalent, user experience with related instruments/applications, and strong communication skills.

HP Genenchem offers an exciting start-up environment and growth potential. Send resume and a statement of interest to: **Vice President Marketing, HP Genenchem, 460 Point San Bruno Blvd., South San Francisco, CA 94080.** We are an Equal Opportunity/Affirmative Action Employer.

HP GENENCHEM
CAUCCUUGAGGUGAAAUGAGAACUGUCACGAAAUG

RESEARCH & DEVELOPMENT OPPORTUNITIES

Diagnostic Immunoassays

Kallestad Laboratories, located in suburban Minneapolis, is currently expanding its R&D function creating opportunities for individuals with experience in non-isotopic, quantitative immunoassays. Opportunities exist for:

- **SCIENTIST - (B.S. or M.S. level)**
- **PROJECT LEADER - (M.S. or PhD level)**
- **MANAGER - (M.S. or PhD level)**

Your industrial experience in protein purification, conjugate preparation, antibody evaluation, ELISA's, non-isotopic tracers and familiarity with medical laboratory instruments may qualify you for one of our positions. We offer competitive salaries and benefits including relocation, excellent working conditions and a challenging opportunity in this exciting growth stage of the company. If you have the above qualifications and are looking to make a change to a company that will fully utilize your talent, send detailed resume or C.V. in confidence c/o R. Gay. If you do not have an updated resume, or C.V., call (800) 328-4400 toll free.

Kallestad
LABORATORIES INCORPORATED

2000 Lake Hazeltine Drive
Chaska, MN 55318
No Agencies Please

Affirmative Action/Equal Opportunity Employer

Saudi Arabia

The **King Faisal Specialist Hospital and Research Centre** in Riyadh, Saudi Arabia offers exceptional opportunities for experienced and qualified Cytogenetic Technologists. The Hospital is a 500-bed specialty referral complex, dedicated to providing high quality health care to the citizens of Saudi Arabia.

Positions are available for Supervisor Cytogenetics and staff tech. Both positions require BS degree. **Supervisor position** requires 5 years experience and the **staff tech position** requires 2 years experience.

Commitments are for 24 months. Staff level positions are single status. Salaries are attractive and the benefits are exceptional. The selected candidates will be employed by and have a contract with the Government of Saudi Arabia.

For further information and/or to apply, please send resume to: **HCA International Company, Dept. S-0771, P.O. Box 550, Nashville, TN 37202.** HCA is an Equal Opportunity Employer.

**HCA
International
Company**

NATIONAL SCIENCE FOUNDATION (NSF)

NSF's Division of Polar Programs is seeking qualified applicants for the position of Program Manager, Polar Biology and Medicine Program. This position will be filled in either the competitive civil service or excepted service, on a permanent basis, at the GM/GH-15 level, \$52,262 to \$67,940 per annum. Applicants should have a Ph.D. in one of the biological sciences with a strong knowledge of the biomedical science, plus several years of research experience. Applicants should also have experience or familiarity with current polar research, as well as administrative experience. The person selected for this position must be able to pass the physical examination required for travel to Antarctica.

Applications must be received by July 25, 1986. For information on how to apply, contact Stuart Solomon, 202/357-7840. Hearing impaired individuals should call 202/357-7492.

For further information contact:

Dr. Peter E. Wilkniss, Division Director, Division of Polar Programs, 202/357-7766.

NSF is an Equal Opportunity Employer.

CALIFORNIA BIOTECHNOLOGY INC.

ANIMAL PHYSIOLOGIST

California Biotechnology Inc. is seeking an Animal Physiologist to assume responsibilities as a Staff Scientist in our Biological Testing facility. Responsibilities will include development and management of biological assays designed to test therapeutic efficacy of recombinant proteins and peptides.

The successful candidate will have a Ph.D. in animal physiology or biochemistry and one to four years experience in biological assays. Experience in inflammation, wound healing, drug delivery or cardiovascular research would be an advantage.

California Biotechnology Inc. is a rapidly growing biotechnology and drug delivery company engaged in the development of health care products. We offer a stimulating research environment with a competitive compensation and benefits package. Submit resumes/curriculum vitae with two letters of reference to:

**Human Resources/MF
California Biotechnology, Inc.
2450 Bayshore Parkway
Mountain View, CA 94043**

Research Directors for multi-disciplinary efforts in drug delivery.

INTERx Research Corporation, subsidiary of Merck & Co., Inc., is primarily responsible for identification and resolution of drug delivery problems within Merck Sharp & Dohme Research Laboratories. This charge is being addressed through multidisciplinary approaches involving clinical and biological research as well as the identification and feasibility testing of innovative controlled release systems.

Director of Biological and Analytical Research

Candidates must have a Ph.D. (or equivalent) in relevant disciplines such as clinical pharmacology, bioanalysis, pharmacokinetics, biochemistry, or biology as well as a working understanding of pertinent physical sciences including mathematics and chemistry. In addition 8-12 years of postdoctoral experience including a strong record of scientific accomplishment is required. The successful candidate would be responsible for directing the efforts of 10-15 persons in biological (including clinical and animal) research activities and analytical research and support services.

Director of Pharmaceutics and Controlled Release Research

Candidates must have a Ph.D. (or equivalent) in disciplines such as chemistry, engineering, pharmaceutics, physics, etc., which provide in-depth understanding of the mathematics, chemistry, and pharmaceutics associated with drug delivery systems. Additionally, 8-12 years postdoctoral experience, a strong record of innovative scientific accomplishment, and a basic understanding and appreciation of the biological sciences are necessary. The successful candidate would be responsible for leadership and direction of 10-15 persons charged with research in identification and feasibility testing of new controlled release systems for achieving improved drug delivery.

Both positions require outstanding scientific capabilities as well as managerial abilities. Responsibilities and opportunities include providing leadership and innovation in ongoing programs and the identification and development of new programs which will

ultimately lead to products exhibiting superior drug delivery characteristics for both humans and animals. Successful candidates for each position must be able and willing to collaborate and cooperate fully with fellow scientists.

INTERx is located in Lawrence, Kansas, a city of about 80,000 persons, which is about 45 miles west of Kansas City. INTERx research facilities are located adjacent to biomedical research laboratories of the University of Kansas.

Send resume to:

Director, Search

INTERx

Subsidiary of Merck & Co., Inc.

**2201 West 21st Street
Lawrence, KS 66046**

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



MERCK & CO., INC.

POSITIONS OPEN

DIRECTOR, LABORATORY ANIMAL MEDICINE

Tufts University Schools of Medicine, Dental Medicine, and Veterinary Medicine; New England Medical Center Hospital; USDA Human Nutrition Research Center on Aging at Tufts University.

We desire a senior level, Board-certified laboratory animal veterinarian to direct and manage our animal care and use program on the Tufts Health Sciences campus in Boston. Newly renovated facilities, faculty appointment in the School of Veterinary Medicine, and a competitive salary make this a unique opportunity in a major urban biomedical community. Some teaching and research responsibilities/opportunities.

Apply with a letter of interest, current curriculum vitae, and the names, addresses, and telephone numbers of three persons who can provide references to:

Dr. Carol Reinisch, Chair
Department of Comparative Medicine
School of Veterinary Medicine
Tufts University
136 Harrison Avenue
Boston, MA 02111

Application review begins 15 July 1986. Desired starting date: 15 September 1986, or soon thereafter.

ELECTRON MICROSCOPE TECHNICIAN

Management, maintenance, and operation of TEM and SEM facility including user training. Specimen preparations and general knowledge of biological electron microscopy. Supervision of records and supplies. Annual salary range: \$28,000 to \$33,000. Apply by 25 July 1986, referencing Job number 16703-S to: UCSD, SPO, 501 Warren Campus, Q-016, La Jolla, CA 92093. *Affirmative Action/Equal Opportunity Employer.*

UNIVERSITY OF CALIFORNIA, SAN DIEGO

EUKARYOTIC MOLECULAR BIOLOGIST ASSISTANT/ASSOCIATE PROFESSOR IN

DEPARTMENT OF BIOCHEMISTRY LOYOLA UNIVERSITY OF CHICAGO STRITCH SCHOOL OF MEDICINE

The Department of Biochemistry of the Stritch School of Medicine is seeking to fill a faculty position at the assistant/associate professor level in the area of eukaryotic molecular biology. The applicant will be expected to initiate a vigorous and innovative research program, participate in medical school and graduate school teaching, and interact collaboratively with other molecular/cellular biologists within the medical center. Preference will be given to applicants interested in the molecular biology of differentiation and cancer, or in the molecular biology of the nervous system. However, excellent applicants in other areas of eukaryotic molecular biology are invited. Start-up funds are available.

Send curriculum vitae, research interests and goals, recent reprints, and the names of three references to:

Dr. Richard Schultz, Chairman
Department of Biochemistry
Loyola University
Stritch School of Medicine
2160 South First Avenue
Maywood, IL 60153

Loyola University of Chicago is an Equal Opportunity/Affirmative Action Employer.

FACULTY POSITION IN PLANT MOLECULAR BIOLOGY

ASSISTANT/ASSOCIATE PLANT PHYSIOLOGIST, 11-month, tenure-track, beginning 1 January 1987. The successful candidate will be expected to develop a research program utilizing plant cell transformation and other molecular techniques to study basic problems in plant molecular biology, with emphasis on tropical plants of agricultural importance. Candidates must have a Ph.D. in a relevant field of plant science and present evidence of research excellence and the ability to attract extramural funding. In addition, the associate rank requires 5 years of experience as assistant professor or equivalent. Submit curriculum vitae, statement of future research interests, and three confidential letters of recommendation to: **Chairman, Department of Plant Molecular Physiology, HITAH, University of Hawaii, 3190 Maile Way, Honolulu, Hawaii 96822**, by 15 October 1986. *An Equal Opportunity Employer.*

POSITIONS OPEN

FACULTY POSITION (Term)

DEPARTMENT OF PHYSIOLOGY UNIVERSITY OF SASKATCHEWAN

Applications are invited for a 5-year term appointment in the Department of Physiology, College of Medicine at the University of Saskatchewan. Applicants must have a Ph.D., D.D.S., D.V.M. or M.D., and postdoctoral training. Areas of preference include respiratory, neuromuscular, renal, and blood physiology. Independent research development will be expected; however, opportunities for collaborative research activity are available within the established units of the department. The successful applicant will be required to assume a major teaching responsibility in departmental programs for medical and health science students. Although appointment may be at the assistant professor level, more senior professionals are encouraged to apply since appointments shall be commensurate with the experience of the candidate. This position is available 1 July 1986. Address enquiries to:

N. M. McDuffie
Professor and Head
Department of Physiology
College of Medicine
University of Saskatchewan
Saskatoon, Saskatchewan
S7N 0W0 Canada

The Department of Veterinary Microbiology and Pathology at Washington State University invites applications for tenure-track **FACULTY POSITIONS** in: veterinary virology (two positions), veterinary pathology (two positions), and molecular biology (two positions). Rank and salary negotiable. Start-up funds, technical assistance, and opportunities for significant research support through the Washington Technology Center are available. Successful applicants will be expected to develop and/or maintain funded research programs of high quality in infectious diseases or animal models of human genetic diseases and to participate in the graduate and professional school teaching responsibilities of the department. The Ph.D. degree and evidence of recent research productivity are essential. A D.V.M. degree (or equivalent) is essential for both pathology positions and one of the virology positions. Positions are available 15 August 1986, subject to anticipated funding, or start date can be negotiated. Application deadline: 15 August 1986, or until positions are filled. Submit a résumé with statement of research interests, a list of publications, and arrange to have three letters of reference sent to: **Dr. Roger Breeze, Chairman, Department of Microbiology and Pathology, College of Veterinary Medicine, Washington State University, Pullman, WA 99164-7040.**

Washington State University is an Equal Opportunity/Affirmative Action Employer.

UNIVERSITY OF REGINA FACULTY OF SCIENCE HEAD, DEPARTMENT OF BIOLOGY

Nominations and applications are invited for the position of head of the Department of Biology. The successful candidate will probably be external to the University of Regina, will have an established reputation as a scholar, and will have demonstrated a capacity for leadership.

The department currently has 13 full-time faculty members and, in addition to undergraduate programs, offers a graduate program leading to the M.Sc. and Ph.D. degrees. The research interests of the members of the department are in botany, zoology, microbiology, cell biology, and genetics. A number of vacancies are anticipated during the next few years.

Applications or nominations, accompanied by a curriculum vitae, and the names of three referees, should be sent to:

Dr. R. G. Rystephanick, Chairman
Biology Head Search Committee
Faculty of Science
University of Regina
Regina, Saskatchewan
S4S 0A2

In accordance with Canadian immigration regulations, this advertisement is directed to Canadian citizens and permanent residents. If no suitable candidate is identified, the search may, at a later date, be extended to non-Canadian applicants. The position is to be filled on 1 January 1987, or as soon as possible thereafter.

POSITIONS OPEN

The University of Iowa's College of Dentistry is presently conducting a search to fill a full-time **FACULTY POSITION** in the Dows Institute for Dental Research with major responsibilities for research and teaching in the newly established Specialized Caries Research Center. The position is available immediately; screening begins immediately. Applicants must have D.D.S. and/or Ph.D. A research interest augmenting present research activities of center faculty is desirable, for example, microbiology and/or immunology and/or salivary biochemistry. Academic rank and salary will be commensurate with qualifications and experience. Letters of application should be submitted to: **Dr. James S. Wefel, Dows Institute for Dental Research, University of Iowa, College of Dentistry, Iowa City, Iowa, 52242.** *The University of Iowa is an Equal Opportunity/Affirmative Action Institution.*

DEPARTMENT OF BIOCHEMISTRY MICHIGAN STATE UNIVERSITY

The Department of Biochemistry seeks applicants for tenure-track **FACULTY POSITIONS** at academic ranks commensurate with experience. Applications are sought from well-trained biochemists with highly productive research records. We encourage applications from investigators working toward the mechanistic understanding of fundamental questions in protein biochemistry, cellular and molecular biology, and plant biochemistry.

The Department of Biochemistry has a large family conducting research in a wide variety of areas including physical biochemistry, enzymology, plant biochemistry, intermediary metabolism, toxicology, immunochemistry, and cellular, molecular, developmental, and neurobiology, affording its members both a stimulating scientific atmosphere and good opportunities for research collaboration. The department occupies a modern research building with well-equipped research laboratories, and faculty may be appointed in any of four colleges (Natural Science, Agriculture and Natural Resources, Human Medicine, and Osteopathic Medicine).

Applicants should have demonstrated productivity and evidence of potential for independent research. In order to assure consideration, applications should be received preferably by 1 September 1986. Applicants should have a curriculum vitae, a description of research accomplishments and future interests, and three letters of reference on their behalf sent to: **Dr. Jack Preiss, Chairperson, Department of Biochemistry, Box S, Michigan State University, East Lansing, Michigan, 48824.** *Michigan State University is an Equal Opportunity/Affirmative Action Employer.*

FACULTY POSITION SCHOOL OF HUMAN BIOLOGY

The School of Human Biology at the University of Guelph invites applications for a tenure-track position at the assistant professor level. The person we are seeking is a Ph.D. or equivalent with an active research program in human evolutionary biology, physical anthropology or a related area, and an ability to interact with a strong physiology group. The successful candidate's responsibilities will include teaching of undergraduate and graduate courses in human biomechanics, supervision of graduate students, and pursuance of an independent research program.

The School of Human Biology is in a phase of growth and interactive development. The school's strengths group themselves into the two general areas of (i) human applied physiology and structure-function relationships and (ii) human evolutionary biology, development, and morphology. Specific current research interests include neurophysiology of motor control, muscle metabolism, cardiovascular and pulmonary physiology, quantitative biomechanics, ergonomics, physical anthropology, morphology, human and medical genetics, and biological basis of behaviour. Applications for this position (which is subject to budgetary approval) should include curriculum vitae and names of three referees. Applications, which will be accepted until the position is filled, should be sent to:

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

RESEARCH SCIENTIST

The Pharmaceutical Research & Development Division of Rorer Group Inc. has an immediate opening for a research scientist in our Biology Department. This opening which will be located in our King of Prussia, PA laboratory facilities in suburban Philadelphia is a direct result of our expanded research efforts in GI pharmacology.

The successful candidate will have a Ph.D. in Pharmacology, Physiology or related medical science. Experience in gastrointestinal research is required, preferably in the areas of secretion and inflammation. Responsibilities will include developing, managing and participating in research programs aimed at the discovery of unique agents for the treatment of GI disease.

We offer competitive compensation, a fully paid benefits package, pleasant working conditions and the opportunity for professional growth. Qualified candidates should submit a resume including salary history to **Barbara Lippmann, Rorer Group Inc., Pharmaceutical R&D Division, 500 Virginia Drive, Fort Washington, PA 19034.** An equal opportunity employer, M/F.



Rorer Group Inc.

Pharmaceutical R&D Division

FACULTY POSITION IN MOLECULAR GENETICS DEPARTMENT OF DERMATOLOGY UNIVERSITY OF MICHIGAN MEDICAL CENTER

The Department of Dermatology announces the creation of a faculty position in Molecular Genetics. The successful candidate will hold a joint appointment in the most appropriate basic science department (Human Genetics, Microbiology-Immunology or Biological Chemistry). Applicants must have the Ph.D. and/or M.D. degree, and two to four years of postdoctoral training in molecular genetics. Preference will be given to those applicants having postdoctoral training and publications in the molecular genetics of growth control.

Psoriasis is a genetic disease in which the skin displays excess cell growth and inflammation. The successful candidate will be responsible for developing a vigorous research program in the molecular genetics of psoriasis.

For over 20 years, the Department of Dermatology has been a major research center for the molecular pathology of psoriasis. Therefore, diseased and normal skin are readily available for conducting this research. The applicant will be expected to collaborate in the development of this new program with those departmental faculty who are already conducting psoriasis research. Furthermore, the development of a successful program in the molecular genetics of psoriasis will also require the ability and willingness to develop a collaborative network with members of the molecular genetics community inside and outside The University of Michigan.

The candidate will be expected to teach molecular genetics to Ph.D. and M.D. candidates and to direct the research of graduate students and M.D./Ph.D. postdoctoral fellows funded by the department's NIH training grant in cellular and molecular dermatology.

Excellent start-up funds are available for up to three years. After three years, outside grant support will be required. Up to 1200 square feet of laboratory space is available in a newly-constructed research facility which also houses the newly-developed Howard Hughes Institute for Molecular Genetics. Salary is very competitive and is dependent on experience and quality of research. Send curriculum vitae and three letters of reference to:

John J. Voorhees, M.D.
Professor and Chairman
Department of Dermatology
University of Michigan Medical Center
1910F A. Alfred Taubman Health Care Center
Ann Arbor, Michigan 48109-0314

The University of Michigan is an Equal Opportunity/Affirmative Action employer.

NATIONAL INSTITUTES OF HEALTH, PUBLIC HEALTH SERVICE

National Cancer Institute, Division of Cancer Treatment
Clinical Oncology Program, Radiation Oncology Branch

Position Title: Radiochemist/Nuclear Chemist

Qualifications: Position involves research in labelling monoclonal antibodies with metallic radionuclides for clinical use in tumor diagnosis and therapy. A qualified applicant should have:

- A Ph.D. in Nuclear Chemistry or Radiochemistry
- Experience in working with high levels of radioactivity
- Ability to do careful scientific measurements
- Knowledge of radiochemical separations/and radionuclide purification

Biological or Radiopharmaceutical experience is desirable.

Salary: Dependent upon experience and qualifications.

Location of Position: Bldg. 10, National Institutes of Health, Bethesda, Maryland

For further information contact:

Dr. Otto A. Gansow
Building 10, Room B3B69
National Institutes of Health
9000 Rockville Pike
Bethesda, Maryland 20892
Telephone: (301) 496-5936

AN EQUAL OPPORTUNITY EMPLOYER

CANCER RESEARCH SCIENTISTS

Biotherapeutics is a health care service company specializing in the development and application of advanced biotechnological approaches for the treatment of cancer. The company contracts with eligible cancer patients to perform laboratory research services designed to develop custom-tailored therapeutic options. Due to rapid growth in our Franklin (Nashville) and Memphis, Tennessee, laboratories and expansion plans for a national network of laboratories, Biotherapeutics has positions available for qualified individuals:

- 1) **Associate Scientific Director**—training and development. Senior Scientist to develop company's satellite research laboratories.
- 2) **Director, Corporate Development**—technology acquisition, corporate affairs, and investor relations.
- 3) **Section Head, Experimental Hybridomas**—evaluate new technologies and develop human antibody program.
- 4) **Section Head and Scientists, Tumor Cell Biology**—establish human tumor cell lines.
- 5) **Senior Research Scientist, Monoclonal Antibodies**—develop anti-idiotypic antibodies.
- 6) **Senior Research Scientist, Biochemistry**—radiolabeling and conjugation of therapeutic agents to monoclonal antibodies.
- 7) **Project Managers**—tumor acquisition, processing and preservation; monoclonal antibodies/immunoconjugates; cellular component development; and specific immunization. Responsibilities include in-house development and technology acquisition.
- 8) **Postdoctoral Fellows**—biological approaches to cancer research and treatment.
- 9) **Technicians**—tissue culture experience with hybridomas and human tumor cell lines.
- 10) **Veterinary Pathologist, Director of Animal Facility**—experience in rodent systems.
- 11) **Animal Care Technicians**—experienced with human tumor xenografts in nude mice.

Send C.V. and 3 letters of reference to:

Robert K. Oldham, M.D.
Biotherapeutics Inc.
400 Eddy Lane
Franklin, TN 37064
(615) 794-4700



Biotherapeutics Inc.

POSITIONS OPEN

FACULTY POSITION IN TOXICOLOGY

Full-time faculty position at the instructor level in the Physiology/Chemistry Department beginning September 1986. Responsibilities include teaching a first-level toxicology course and assignments in a biochemistry/clinical laboratory. Minimum educational requirement is a master's degree in an appropriate field. Research is strongly encouraged. Curriculum vitae, three letters of reference, copies of transcripts, and a statement of research interests should be sent to:

Dr. Howard T. Silverstein
Chairman
Physiology/Chemistry Department
Palmer College of Chiropractic
1000 Brady Street
Davenport, Iowa 52803
Equal Opportunity/Affirmative Action Employer

Applications are invited for the position of **HEAD** of the Department of Biochemistry at the Faculty of Medicine, University of Manitoba, for a 5-year term commencing 1 January 1987, or as soon thereafter as possible.

The appointment comes with a tenure-track position. Candidates should have an M.D. and/or Ph.D. degree and a substantial record and academic achievement in biochemistry and extensive experience in teaching and research, as well as proven administrative experience. The department is responsible for programs of education at the undergraduate and graduate levels. Rank and salary commensurate with qualifications and experience.

Both men and women are encouraged to apply. In accordance with Canadian immigration requirements, priority will be given to Canadian citizens and permanent residents of Canada.

Applications and nominations should be accompanied by curriculum vitae and submitted not later than 30 September 1986 to: **Dr. D. Bowden, Chair, Biochemistry Search Committee, Faculty of Medicine, University of Manitoba, 753 McDermot Avenue, Winnipeg, Manitoba, CANADA R3E 0W3.**

METEOROLOGIST—To be a team member of the oxidant modeling for New York metropolitan area project. The incumbent will assist in implementing and executing AIRSHED numerical photochemical oxidant model for simulating ozone concentrations in the metropolitan area. Requires a bachelor's degree including or supplemented by 20 semester hours in meteorology or atmospheric science. Thirty-seven-and-half-hour week; \$20,066 per year. Forward résumé to: **Albany Job Service Office, D.O.T. code 025.062-010, 488 Broadway, Albany, NY 12207, Attention: N. Wilder—refer to Job Order Number 0401237.**

MOLECULAR GENETICIST—Seeking applicants with recombinant DNA technology background. A strong research background, including publications in molecular biology, immunology, or microbiology is required. Experience in either biochemistry, tissue culture, or immunology is desirable. Salary range (GS-12) \$31,619 to \$41,105. Submit Standard Form 171 and bibliography to:

Mr. Ray Mangold
Department of the Army
Civilian Personnel Office
Fort Detrick, Frederick, MD 21701-5000
Telephone: 301-663-2314

Equal Opportunity Employer.

MOLECULAR NEUROBIOLOGIST: Positions are now available for individuals with proven proficiency in recombinant DNA techniques interested in leadership position in a program devoted to the study of neural and developmental control of gene expression in the pineal gland. Send curriculum vitae and bibliography and have three letters of recommendation sent to: **Dr. David C. Klein, Section on Neuroendocrinology, Laboratory of Developmental Neurobiology, National Institute of Child Health and Human Development, National Institutes of Health, Building 10, Room 8D-42C, Bethesda, Maryland 20892; telephone contact: 301-496-6915. An Equal Opportunity Employer.**

POSITIONS OPEN

HEAD DIVISION OF CELL BIOLOGY

The newly created **School of Basic Life Sciences** at the **University of Missouri—Kansas City** is seeking an individual with an outstanding research program and leadership ability to head the Division of Cell Biology. This person is expected to be actively engaged in research and, through hiring of junior faculty, will have the opportunity to develop a department with significant growth potential. This division has the responsibility of teaching microbiology and immunology to the professional health sciences schools as well as the graduate programs within the School of Basic Life Sciences. The Division Head reports to the Dean of the School of Basic Life Sciences and has the responsibility for promoting excellence in research and teaching and for administering the financial resources of the Division. This person must have a Ph.D. degree or equivalent in basic microbiology, cell biology, or related biological sciences and should have held a tenured position at a major university as well as a superior funding record. Candidates may be nominated or may apply by sending a letter of interest, curriculum vitae and names of three individuals to be contacted as references. Please send nominations and applications before 1 October 1986 to:

Dr. M. Martinez-Carrion, Dean
School of Basic Life Sciences
109 Biological Sciences Building
University of Missouri—Kansas City
Kansas City, MO 64110-2499

This position is contingent on pending budget allocations. *UMKC is an Equal Opportunity/Affirmative Action Employer.*

Position available, **INSTRUCTOR** level, for an experienced immunocytochemist with a Ph.D. degree in biological sciences. Must have extensive teaching and research background in electron microscopy with a working knowledge of: TEM, SEM, freeze-fracture, autoradiography, and elemental analysis. The candidate must have demonstrated, through publication, an ability to apply post-embedding and pre-embedding immunocytochemistry techniques to light and electron microscopic specimens. Experience with the preparation and application of immuno-gold probes required. Send reply to: **Dr. Richard G. W. Anderson, Department of Cell Biology and Anatomy, The University of Texas Health Science Center at Dallas (UTHSCD), 5323 Harry Hines Boulevard, Dallas, Texas 75235. The UTHSCD is an Equal Opportunity/Affirmative Action Employer.**

UNIVERSITY OF GUELPH MOLECULAR GENETICIST

The Department of Animal and Poultry Science is seeking applications for a tenure-track position at the **assistant/associate professor** rank.

Applicants should have a Ph.D. and preferably postdoctoral experience, with experience in recombinant DNA technology and willingness and ability to apply these techniques to the whole animal. Collaboration with faculty in this and other departments in multidisciplinary projects involving molecular genetics will be encouraged. The appointee will be expected to be part of a team approach to genetic improvement of farm animals and to support the integration of activities in animal biotechnology and molecular genetics with animal breeding. In addition, the successful applicant will participate in the graduate and undergraduate programs of the department and will interact with the poultry and swine industries. The department has fully equipped laboratories and active research in molecular and cell biology, as well as excellent facilities for computing and farm animal research. The University of Guelph has a proven commitment to the genetic improvement of livestock as evidenced by the centre of that name and the recently established chairs in animal biotechnology and animal breeding strategies. Applicants should submit a complete résumé, transcripts, three letters of reference, and two or three recent publications to:

Dr. G. K. Macleod, Chairman
Department of Animal and Poultry Science
University of Guelph
Guelph, Ontario
Canada N1G 2W1

Closing date for receipt of applications is 15 October 1986. Citizenship is not a factor for consideration. Position subject to final budgetary approval.

POSITIONS OPEN

HEAD DIVISION OF STRUCTURAL AND SYSTEMS BIOLOGY

The newly created **School of Basic Life Sciences** at the **University of Missouri—Kansas City** is seeking an individual with an outstanding research program and leadership ability to head the **Division of Structural and Systems Biology**. This person is expected to be actively engaged in research and, through hiring of junior faculty, will have the opportunity to develop a department with significant growth potential. This division has the responsibility of teaching anatomy and physiology to the professional health sciences schools as well as the graduate programs within the School of Basic Life Sciences. The Division Head reports to the Dean of the School of Basic Life Sciences and has the responsibility for promoting excellence in research and teaching and for administering the financial resources of the Division. This person must have a Ph.D. degree or equivalent in biological sciences related to anatomy or physiology and should have held a tenured position at a major university as well as a superior funding record. Candidates may be nominated or may apply by sending a letter of interest, curriculum vitae and names of three individuals to be contacted as references. Please send nominations and applications before 1 October 1986 to:

Dr. M. Martinez-Carrion, Dean
School of Basic Life Sciences
109 Biological Sciences Building
University of Missouri—Kansas City
Kansas City, MO 64110-2499

This position is contingent on pending budget allocations. *UMKC is an Equal Opportunity/Affirmative Action Employer.*

MOLECULAR BIOLOGIST

Institute of Toxicology centered on research in chemical carcinogenesis and already existing chemical, biochemical, cell biological, and molecular biological oriented research groups is looking for a molecular biologist (Ph.D.) with a strong background in cell transfection. Salary depends on age and experience (approximately DM 50,000 to 60,000 per year). Our research groups are well funded. The successful applicant will find for his/her own work a cell culture laboratory together with a laboratory for molecular biological work. Send applications in the form of curriculum vitae with the names of two referees to: **Professor Dr. F. Oesch, Institute of Toxicology, University of Mainz, Obere Zahlbacher Straße 67, D-6500 Mainz, West Germany.**

NATURAL RESOURCE MANAGER

Salary Range: \$31,000 to \$43,400. City of Naples, Florida. Duties include development of regulations to protect waterways, shoreline, surface water, and ground water, including the responsibility of coordinating coastal and marine-oriented activities. Desired qualifications include master of science degree in biology, environmental science, environmental engineering, or related field and considerable experience in environmental investigation and analysis. Submit résumé by 25 July 1986 to: **City of Naples, Personnel Division, 735 8th Street South, Naples, FL 33940. Equal Opportunity Employer, M/F.**

NMR/MRI ENGINEER. The Nuclear Magnetic Resonance (NMR) Spectroscopy Laboratory of the University of Arkansas for Medical Sciences is seeking an individual to design, build, and implement radiofrequency circuitry and NMR instrumentation, including imaging and surface coils/probes in support of biomedical research. The successful candidate should have a degree or related experience with an interest in working in a research environment. He/she will have the opportunity to collaborate with users of the NMR laboratory on projects relating to instrumentation and technique development. The laboratory will have (July 1986) a GE CSI-4.7 T, 33-cm bore imaging/spectroscopy unit and a fully equipped GN-300 high resolution spectrometer. Also available will be a GE I.5 T clinical imager with spectroscopy capability. Send résumé and salary requirements to: **Richard A. Komoroski, Ph.D., Department of Radiology, University of Arkansas for Medical Sciences (UAMS), 4301 West Markham Street, Little Rock, AR 72205; telephone: 501-661-5740.**

UAMS is an Affirmative Action/Equal Opportunity Employer.

RESEARCH SCIENTISTS

TORONTO

Allelix Inc. is a biotechnology-based company developing products and processes for agriculture, diagnostics and specialty chemical markets. From its formation in 1983, it has grown to a staff of nearly 200 and has established important proprietary technologies for its market areas.

Our Enzyme Division seeks Research Scientists for its Applications and Support Group, which will be at an exciting interface between research and the industrial application of novel enzymes developed by recombinant and other modern techniques.

ENZYME APPLICATION SPECIALIST

This position is concerned with developing and improving industrial processes using enzymes, as well as providing support to users of those processes.

Preferred candidates will have a Ph.D or equivalent experience or qualifications in biochemistry, enzymology or enzyme applications, chemical engineering, etc. At least two years experience in the application of enzymes to industrial processes would be a definite advantage.

ENZYME BIOCHEMIST

An individual is required to purify and characterize enzymes for the study of potential products as well as developing and supervising purification and characterization of enzyme products on a production scale. Establishing quality control criteria will also form part of the position.

The ideal candidate will have a Ph.D in enzyme biochemistry, with experience in protein purification and enzyme characterization.

Located in a custom-designed and very well equipped facility on the outskirts of Toronto, we provide fully competitive salaries and benefits.

These are permanent positions and assistance with relocation expenses will be provided. Please send a detailed application, supported by three references and quoting File No. ED 8602 to Mr. Walter L. Gagen, Administrative Manager, Allelix Inc., 6850 Goreway Drive, Mississauga, Ontario, Canada L4V 1P1.

We are an equal opportunity employer.

Allelix INC

RESEARCH ASSOCIATE

An industry leader, **Amgen** develops products for human therapeutics, human diagnostics and animal health care. We have an immediate opening for an experienced **Research Associate** who will interact with other Scientists to characterize natural and recombinant proteins.

The successful candidate will have a B.S. or M.S. degree in biochemistry or immunology and several years of related experience.

Responsibilities for this position will include protein characterization, immunoassay development, antibody and protein purification, western blotting and mammalian cell culture including production and maintenance of hybridoma cell lines.

Amgen is located in an attractive community about an hour northwest of Los Angeles, and offers a stimulating highly paced environment, along with a competitive compensation and benefits package.

Qualified candidates should submit a resume in confidence to: **Recruitment, Dept. 22B, AMGEN, 1900 Oak Terrace Lane, Thousand Oaks, CA 91320.**

AMGen

An Equal Opportunity Employer

Senior Research Technicians

Molecular Genetics, Inc., a leading biotechnology company, has immediate openings for two individuals to join its plant sciences group:

Natural Products Chemist

Applicants should have a B.S. or M.S. in chemistry or related field plus at least 2 years relevant professional experience. The selected individual will be responsible for identifying and characterizing novel compounds from biological sources. Familiarity and/or expertise in a broad range of techniques for the isolation and analysis of natural products will be important for this position.

Plant Pathologist

Applicants should have a B.S. or M.S. in plant pathology plus at least two years relevant laboratory experience. Candidates should be familiar with techniques for isolation, identification and maintenance of fungi. Fungal physiology experience is desired.

Molecular Genetics, Inc. offers a competitive salary and benefits package, and the Minneapolis-St. Paul area provides excellent cultural and recreational opportunities. Qualified applicants should state the position of interest in their cover letter and submit a curriculum vitae and list of three references to: **Human Resources, Molecular Genetics, Inc., 10320 Bren Road East, Minnetonka, MN 55343.**

An Equal Opportunity/Affirmative Action Employer

Molecular Genetics Inc.

POSITIONS OPEN

NEUROPHARMACOLOGY POSTDOCTORAL position available 1 September 1986. Ph.D. in pharmacology, neuroscience, or biochemistry with laboratory experience in biochemical, analytical chemical, and/or pharmacological studies of the CNS to study the effects of drugs and stress on brain histamine dynamics. Methods include animal treatments, brain dissections, and bench chemical assays. Experience with enzymatic and/or GCMS desirable, but not essential. Send curriculum vitae, dissection abstract, and names, addresses, and telephone numbers of three references to: **Dr. L. B. Hough, Department of Pharmacology and Toxicology, Albany Medical College, 47 New Scotland Avenue, Albany, NY 12208. Equal Opportunity/Affirmative Action Employer.**

NUTRITION: Assistant or associate professor, tenure-track. Ph.D. in nutrition or related area and R.D., plus 3 years of experience required. Directing the Coordinated Undergraduate Program in Dietetics, teaching, and research. Deadline: until position is filled. Send letter, résumé, transcripts, a statement of teaching and research interests, and three references to: **Dr. Sharon Wallace, Search Committee Chair, Department of Nutrition and Food Science, University of Kentucky, Lexington, Kentucky 40506-0054.**

OCEAN FORECASTING MODELLER

Ph.D. scientist, preferably with several years of experience in oceanography, meteorology, fluid mechanics, or applied mathematics to develop research model into operational tool for forecasting Gulf Stream and Eddy Currents. Unique opportunity in an emerging field. Annual appointment for up to 2 years, beginning summer 1986. *Applications from qualified female and minority group members are especially welcome.* Please apply with résumé and references or address inquiries to: **Professor Allan Robinson, Division of Applied Sciences, Harvard University, Cambridge, Massachusetts 02138.**

PHARMACOLOGIST (Ph.D., D.O., or M.D.) to work independently and collaboratively with research faculty. Research 80 percent; teaching 20 percent. Multi-year contracts available. Salary commensurate with academic rank, training, and grant track record. Please send curriculum vitae with publications list, teaching experience, and past and present grant support information to: **SEARCH COMMITTEE, Dr. Arnold L. Nagler, Associate Dean, Preclinical Medical Education, New York College of Osteopathic Medicine, Old Westbury, NY, 11568.**

POSTDOCTORAL ASSOCIATE. Postdoctoral position available immediately for recent Ph.D. to join laboratory working on the molecular aspects of steroid hormone action in the rat uterus. Candidates should have a background in endocrinology and/or molecular biology. Research involves the study of gene expression through the use of recombinant DNA technology. Send curriculum vitae to: **Dr. Richard Lyttle, University of Pennsylvania, Division of Reproductive Biology, Medical Laboratories/G3, Room 306, Philadelphia, PA 19104.**

POSTDOCTORAL POSITION available to study molecular mechanisms by which an oncogenic herpesvirus induces growth factor(s) and receptor(s). Experience with molecular biological techniques and background in molecular biology/cell biology desirable. Send letter describing research interests, curriculum vitae, and names and addresses of three references to: **Dr. Peter Medveczky, Department of Pharmacology, University of Massachusetts Medical School, 55 Lake Avenue North, Worcester, MA 01605. An Affirmative Action/Equal Opportunity Employer.**

POSTDOCTORAL POSITION, available 1 September, to participate in studies of growth factors and growth-associated proteins in neuronal development and regeneration. Ph.D. in biochemistry preferred. Contact: **Dr. Seth Finkleshtein, Department of Neurology, Harvard Medical School, Mailman Research Center, McLean Hospital, Belmont, MA 02178; telephone: 617-855-3206. McLean Hospital is an Equal Opportunity Employer.**

POSITIONS OPEN

PLANT CELL AND MOLECULAR BIOLOGIST: The Department of Botany and Agricultural Botany, University of California, Davis, invites applications for an 11-month faculty position at the rank of assistant, associate, or full professor effective 1 July 1987. We are seeking an individual who uses modern approaches of biochemistry, genetics, and molecular biology to study basic problems in plant or fungal cell biology. Principal teaching responsibilities will include introductory botany, plant cell biology, and participation in a graduate course in the person's area of specialty. The academic and research record should indicate either the potential or demonstrated ability to establish an innovative and productive research program and to supervise graduate students. The candidate will be expected to participate in student advising and university service. Applicants must have completed a Ph.D. and should submit curriculum vitae, a statement of research and teaching interests and experience, an official graduate transcript, lists and reprints of publications, and names, addresses, and telephone numbers of at least three referees. Send to: **Dr. Thomas L. Rost, Chairman of Search Committee, Department of Botany, University of California, Davis, CA 95616; telephone: 916-752-0628/0617. Application deadline is 30 November 1986. The University of California is an Affirmative Action/Equal Opportunity Employer and invites applications from all qualified individuals.**

POSTDOCTORAL POSITION

Postdoctoral position is available in cardiovascular physiology and surgery. Research areas include: adenine nucleotide metabolism and postischemic cardiac function, regulation of glycolysis during ischemia and hypoxia, and metabolism and function in the immature myocardium. Send curriculum vitae to: **Robert M. Mentzer, M.D., Department of Surgery, Box 181, University of Virginia Medical Center, Charlottesville, VA 22908.**

POSTDOCTORAL POSITION. Available immediately to study the mechanism of regulation of translation in heat-shocked cells using synthetic hybrid mRNA's and an efficient in vitro translation system. Experience in recombinant DNA technology and molecular biology or protein chemistry and gel electrophoresis are desirable. Send a résumé and three references to: **Dr. Marilyn Sanders, Department of Pharmacology, UNIVERSITY OF MEDICINE AND DENTISTRY OF NEW JERSEY—Robert Wood Johnson Medical School, P.O. Box 101, Piscataway, NJ 08854. An Equal Opportunity Affirmative Action Employer, M/F/H/V.**

POSTDOCTORAL POSITION: To work on translational control and on the control of mRNA stability in mammalian cells. Studies deal with several defined mRNA species and involve extensive use of recombinant DNA technology. Research experience in molecular biology and nucleic acid biochemistry required. Position currently open. Apply to: **Dr. George Brawerman, Department of Biochemistry, Tufts University School of Medicine, 136 Harrison Avenue, Boston, MA 02111.**

POSTDOCTORAL POSITIONS available immediately to participate in ongoing investigations of desmosome-mediated cell-cell recognition and desmosomal assembly. Studies will include protein-protein interactions; regulation of desmosome assembly. Experience in hybridoma and tissue culture technology and/or methods of protein chemistry is essential. Send application, including curriculum vitae and the names of three references to: **Dr. Malcolm S. Steinberg, Department of Biology, Princeton University, Princeton, NJ 08544. An Equal Opportunity/Affirmative Action Employer.**

POSTDOCTORAL POSITIONS (two): Study IGF's, receptors, metabolism in nerve-muscle cultures (1). Study proteases, inhibitors and ECM in synapse formation/elimination (1). Experience nerve-muscle culture, protein separation, HPLC desired. Stipends \$20,000–\$25,500, experience-based. U.S. citizens/residents please send curriculum vitae and three letters of reference to: **Dr. Barry W. Festoff, Neurobiology (151), University of Kansas/V.A. Medical Center, 4801 Linwood Boulevard, Kansas City, Missouri 64128, Equal Employment Opportunity Employers.**

POSITIONS OPEN

Two NIH-funded **POSTDOCTORAL POSITIONS** for recent Ph.D.'s and M.D.'s (U.S. citizens) available 1 July 1986 to study the cellular and molecular mechanisms of pulmonary fibrosis or phagocytic cell-mediated tissue injury. Research projects deal with: (i) the regulation of fibroblast growth and collagen metabolism by mediators derived from phagocytes and T lymphocytes; studies of fibroblast metabolism including regulation of collagen synthesis at the transcriptional and translational level, with analysis of collagen types and, (ii) the regulation of the biochemical and physiologic responses of stimulated phagocytic cells and initiation of tissue injury. Send curriculum vitae and two references to either: **Sem H. Phan, Ph.D., M.D. or Joseph C. Fantone, M.D., Department of Pathology—M0602, The University of Michigan Medical School, Ann Arbor, Michigan 48109-0602; telephone: 313-764-8086.**

POSTDOCTORAL POSITION—PEPTIDE CHEMISTRY. Background in peptide synthesis and/or conformational analysis desirable. Successful candidate will join active group involved in design, synthesis, and conformational analysis of enkephalin and cholecystokinin analogs. Send résumé and three letters of recommendation to: **Dr. Henry I. Mosberg, College of Pharmacy, University of Michigan, Ann Arbor, MI 48109-1065. The University of Michigan is a non-discriminatory, Affirmative Action Employer.**

POSTDOCTORAL RESEARCH POSITION is available immediately in program that concerns the molecular definition of mycobacterial antigens. Project includes development of hybridomas, affinity chromatography, protein purification, and the preparation and immunological testing of synthetic peptides. Salary is in accordance with NIH guidelines. M.S. and predoctoral experience may also be considered. Send résumé and references to: **Dr. P. Minden, Department of Molecular Biology, MB4, Research Institute of Scripps Clinic, 10666 North Torrey Pines Road, La Jolla, CA 92037.**

PREDOCTORAL AND POSTDOCTORAL POSITIONS IN FISH NUTRITION—to assist in nutrient digestibility and essential fatty acid requirement determinations in channel catfish. A Ph.D. in nutrition, nutritional biochemistry, or aquaculture with some background in nutrition is required for the postdoctoral position. Starting salary is \$17,000 per year. An M.S. in nutrition or aquaculture with a strong background in chemistry, biochemistry, or nutrition is required for the Ph.D. graduate assistantship position. The stipend is \$7,000 per year. Send résumé, transcripts, and three letters of reference to: **Dr. R. P. Wilson, Department of Biochemistry, Mississippi State University, Drawer BB, Mississippi State, MS 39762. MSU is an Equal Opportunity/Affirmative Action Employer.**

RESEARCH ASSISTANT

CAMPBELL INSTITUTE for RESEARCH and TECHNOLOGY (CIRT) has an immediate opening for a research assistant in the Mushroom Research Group. This individual will be responsible for developing various biochemical and/or physiological techniques for factors which influence quality and productivity of *Agaricus* mushrooms. This person should have an M.S. in either biochemistry or a related area, and should have expertise in GC, HPLC, and other analytical techniques. Send curriculum vitae and transcripts to: **Dr. Duane Berry, C.I.R.T., Box 311, Napoleon, Ohio 43545.**

*CIRT is a division of Campbell Soup Company
An Equal Opportunity Employer*

RESEARCH ASSOCIATE. An NIH grant-funded position is available immediately for a Ph.D. level research associate to study solute transport mechanisms involved in secretion of aqueous humor by cellular electrophysiology, transport enzyme biochemistry, and tracer flux measurements. Candidates should have a doctoral degree and experience in a related research area. Salary will be commensurate with experience. Please send curriculum vitae and the names of three references to: **Dr. Nick Delamere, University of Louisville, Department of Ophthalmology, 301 East Muhammad Ali Boulevard, Louisville, Kentucky 40202. Affirmative Action/Equal Opportunity Employer.**

DIRECTOR Medical Instrumentation Program

The Indianapolis Center for Advanced Research, Inc. (ICFAR) is a unique research and development organization affiliated with Indiana University-Purdue University at Indianapolis which also includes the Indiana University School of Medicine. Noted for numerous contributions to the field of ultrasound technology, the Center's Medical Instrumentation Program continues to expand the scope of its efforts in both life/physical science research and medical instrumentation development. ICFAR is currently seeking a highly qualified candidate to serve as Director of this progressive program in its recently renovated research facilities in downtown Indianapolis.

Qualified candidates will hold a Ph.D. in Engineering, Acoustics, or Life Sciences. Individuals receiving preference will exhibit experience and management capabilities in the research and development of successful product-driven projects.

The Director of the Medical Instrumentation Program coordinates multiple life/physical science research projects, instrumentation development projects, and entrepreneurial projects with an emphasis on ultrasound. Responsibilities include the recruitment, training, and management of research scientists and assistants to meet specific project requirements. The Director maintains extensive interaction with medical school faculty, research collaborators, and various outside consultants. Additional responsibilities include national peer group communication through formal presentations, technical reports, and professional manuscripts. ICFAR Program Directors are also eligible for University faculty appointments.

ICFAR offers a highly competitive salary commensurate with experience and an excellent employee benefit package including the TIAA/CREF retirement plan.

Please submit curriculum vitae, letters of reference, and list of publications to:

Thomas D. Franklin, Jr., Ph.D.
President, ICFAR
611 North Capitol Avenue
Indianapolis, IN 46204



**Indianapolis Center for
Advanced Research, Inc.**

An Equal Opportunity/Affirmative Action Employer

Research Associate

The 3M Company, a world technology leader, has an immediate opening for a research associate with expertise in immunochemistry. Candidate should possess a BS/BA or MS and at least two years of laboratory research experience in analytical and preparative methods for characterization of monoclonal antibodies and antigens. Tissue culture and industrial experience applicable. Knowledge of microbial surface antigens a plus.

This is an exceptional opportunity to participate in a challenging research program tied in with pharmaceutical, diagnostic, and medical objectives. 3M offers an interactive multidisciplinary environment with abundant opportunity for personal and professional advancement.

Interested persons should send their resumes in complete confidence to P.I. Capiz no later than July 25, 1986.

**Staffing & Employee Resources/3M
224 1W 3M Center
St. Paul, MN 55144**

We Are An Equal Opportunity Employer M/F/H/V



THE NEXT DIMENSION IN DIAGNOSTIC TESTING

Just eighteen months from concept to patent. Microgenics is the biotechnology company that has advanced the diagnostic testing process. Our test system is based on protein engineering by recombinant DNA techniques. Exciting opportunities are available for exceptional Immunochemists and Biologists.

IMMUNOCHEMISTS

Instrument Application Chemists. Experience in the development of immunodiagnostic assays and 510K validation procedures is essential to this position. The ideal candidate is experienced in homogeneous EIA and is familiar with adapting diagnostic reagents to automated chemistry analyzers. A PhD and prior supervisory experience are also required.

Serologist. We require a specialist in monoclonal antibody preparation to both high molecular weight antigen epitopes and peptide epitopes. The successful candidate will be capable of establishing the facilities for both monoclonal and polyclonal antibody production. Prior experience in antibody characterization and familiarity with large scale culture techniques is desirable. PhD and supervisory experience is preferred.

Diagnostic Development. A track record of success in the development and ultimate market

introduction of enzyme immunoassays will secure this position. Qualified candidates will possess a PhD, are familiar with the execution of validation protocols and clinical trials. Familiarity with RIA and homogeneous immunoassays would be an asset. Supervisory experience is required.

BIOLOGISTS

Cell Biologist-Cell Culture. The successful candidate will assist in the production of recombinant proteins from eukaryotic sources. A minimum of one year experience in the establishment and maintenance of eukaryotic cell cultures is required as is a working knowledge of eukaryotic expression systems and viruses. BS is required; MS is preferred.

Molecular Biologist-Protein Biochemistry. Accept responsibility for the development and optimization of protocols for the purification of heterologous proteins. A working knowledge of immunochemical techniques would be an asset. Applicants must have a minimum of two years directly related experience. A BS is required; MS/PhD is preferred.

Our professionals realize the benefits of scientific challenge, equity participation, and a location that is conveniently located twenty miles east of San Francisco. To learn more, please forward a resume for consideration to: Personnel Department, Microgenics Corporation, 2341 Stanwell Drive, Concord, CA 94520. We are an equal opportunity employer.



MICROGENICS

POSITIONS OPEN

RESEARCH ASSOCIATE POSITION MOLECULAR BIOLOGIST U.S. DEPARTMENT OF AGRICULTURE (USDA)-AGRICULTURAL RESEARCH SERVICE (ARS)

This position is located at the Massachusetts Institute of Technology, Cambridge, Massachusetts. Incumbent will design and perform experiments to determine how the secretion/release of serum ferritin is coupled to iron storage, including a search for ferritin mRNA species with signal peptides determining protein secretion. Will also use gene fusion techniques to identify the regions of the ferritin mRNA's response to iron. Salary is at least \$26,381, with fringe benefits. Successful candidate will be hired for up to 2 years. Candidates must have a recent (within 3 years) Ph.D. in molecular biology/biochemistry. Must be a U.S. citizen. Interested candidates should send a résumé, transcripts, and three references to: **Dr. Hamish Munro, USDA, ARS, Human Nutrition Research Center on Aging at Tufts, 711 Washington Street, Boston, MA 02111; telephone: 617-956-0310.** Applications will be accepted until 2 September 1986, or until position is filled, and should be marked 6E043. **MALES BORN AFTER 31 December 1959 MUST BE REGISTERED WITH THE SELECTIVE SERVICE SYSTEM. USDA is an Equal Opportunity Employer. Women and minorities are urged to apply.**

RESEARCH ASSOCIATE, Ph.D. Immediate position available to set up laboratory for neuropsychopharmacological drug assays for research involving biochemical and behavioral influences of catecholamines and related neurotransmitters in human and nonhuman primates. Academic appointment possible. Send curriculum vitae and three references to: **Daniel E. Casey, M.D., Psychiatry Service, VA Medical Center, Portland, OR 97207. Affirmative Action/Equal Opportunity Employer.**

RESEARCH ASSOCIATE POSITION is available immediately for schistosomiasis and cysticercosis research. Candidate is expected to have a strong research background in parasitology. Salary: \$16,000 to 18,000. Send curriculum vitae, statement of research interests, and names of three individuals willing to write letters of recommendation to **Dr. Betty Jones, Department of Biology, Morehouse College, Atlanta, Georgia 30314. An Affirmative Action/Equal Opportunity Employer.**

RESEARCH ASSOCIATE PROFESSOR OF ENVIRONMENTAL HEALTH UNIVERSITY OF CINCINNATI MEDICAL CENTER

The Department of Environmental Health, University of Cincinnati Medical Center, is currently seeking applications for a faculty position at the research associate professor level in cellular genetic toxicology. Applicants must have postdoctoral training in environmental health sciences with specialization in human cytogenetics. Experience with contemporary techniques in cellular genetic toxicology and environmental mutagenesis is required. Applicants should also have research and teaching experience in human cytogenetics and biological monitoring as it relates to occupational and environmental health sciences and a record of success in obtaining research funding. Applications, including at least three letters of reference, should be made by 1 August to: **Dr. Roy E. Albert, Director, Department of Environmental Health, University of Cincinnati Medical Center, 3223 Eden Avenue, Cincinnati, Ohio 45267-0056. An Affirmative Action/Equal Opportunity Employer.**

SENIOR RESEARCH ASSOCIATE

Protein biochemist holding Ph.D. degree and at least 2 years of postdoctoral training to be an active participant in well-developed, but innovative study of biologically relevant protein-lipid interactions. Problem area deals primarily with separation, isolation, and characterization of unique human liver secretory proteins having a variety of biological functions. Co-workers consist of an interactive group already of critical size for productivity. Candidates should have appropriate biochemistry, cell biology, and possibly applied immunochemistry experience. Submit complete résumé and names of three references to: **G. I. Research Unit, Cleveland Clinic Foundation Research Institute, 9500 Euclid Avenue, Cleveland, OH 44106-0410. An Equal Opportunity Employer.**

POSITIONS OPEN

RESEARCH ASSOCIATE POSITIONS PLANT BIOCHEMISTRY/MOLECULAR BIOLOGY U.S. DEPARTMENT OF AGRICULTURE (USDA)-AGRICULTURAL RESEARCH SERVICE (ARS)

Three postdoctoral positions available in (i) cDNA synthesis, cloning, expression, and characterization of a fungal lipase gene, (ii) HPLC isolation and characterization of biologically active plant cell wall oligosaccharides and (iii) structural analysis of plant cell walls by selective enzymatic degradation. \$26,381 per year, plus health and life insurance. Candidates must have recent (within 3 years) Ph.D. and be a U.S. citizen. Please send résumé and names of references to: **Dr. M. J. Haas, ERRC/USDA/ARS, 600 East Mermaid Lane, Wyndmoor, PA 19118; telephone: 215-233-6459.** Applications must be received by 31 July 1986 and should be marked 6E042. *ARS is an Equal Opportunity Employer. Women and minorities are urged to apply.* Males born after 31 December 1959 desiring federal employment must be registered with the selective service system.

RESEARCH ASSOCIATE-LIPID BIOCHEMIST. A new biotechnology company in Denver, Colorado, is seeking a research scientist with a recent Ph.D. and at least 2 years of postdoctoral experience and a strong background in lipid biochemistry to work in a group studying the mechanism of intracellular signaling for down-regulation of cholesterol biosynthesis. Starting annual salary will be \$50,000. Send your curriculum vitae along with the names, addresses, and telephone numbers of three references to: **Dr. Michael Sinensky, Head, Sterol Metabolism Research Program, 1899 Gaylord Street, Denver, Colorado 80206.**

RESEARCH SCIENTIST. 40 hours per week, \$1600 per month. Fundamental research in coherent structures in jets and shear layers employing computerized conditional sampling and image processing techniques. Requires Ph.D. in turbulence field of mechanical engineering; 1 year of experience in the job or 2 years of research experience in turbulent jet flow. Related experience may be as research assistant or associate in pre- or postdoctoral position. Apply at: **The Texas Employment Commission, Houston, Texas, or send résumé to: The Texas Employment Commission, TEC Building, Austin, TX 78778. J.O. number 4423177. Ad paid for by an Equal Opportunity Employer.**

RESEARCH SCIENTIST: Growing biopharmaceutical firm located in suburban Philadelphia seeking aggressive immunologist eager to develop novel in vitro and animal model systems to test new immunotherapy agents. Ph.D. in immunology or biochemistry with strong record of research accomplishments in the area of cellular or molecular immunology required. Reply to: **Dr. Peter Daddona, Director—Development and Applied Sciences, Centocor, Inc., 244 Great Valley Parkway, Malvern, PA 19355. An Equal Opportunity Employer.**

RESEARCH SCIENTIST. Apply advanced knowledge and sophisticated experimental skill in invertebrate tissue culture, mutagenesis, turnover of radiolabeled lipids and proteins, gene transfer techniques, nucleic acid chemistry, immunological techniques, and membrane biochemistry; to direct original research on the biogenesis and embryonic development of the sodium pump in both invertebrate and vertebrate models, and to improve understanding of biochemical basis of certain classes of birth defects; publish and report on results. Minimum of 6 years of experience in job offered, plus 2 years of postdoctoral research in membrane biochemistry. Applicant must possess either Ph.D. in membrane biochemistry or M.D. Forty hours per week; \$42,000 per annum. Columbia University. Send résumé to: **Box 127, SCIENCE.**

RESEARCH TECHNICIAN POSITION available immediately for scanning electron microscopy research for the Atlanta University Center. Candidate is expected to have a B.S. or M.S. and 1 to 3 years of experience. Salary: \$20,500. Send curriculum vitae and three names of reference to: **Dr. Betty Jones, Department of Biology, Morehouse College, Atlanta, Georgia 30314.**

POSITIONS OPEN

RESEARCH SCIENTISTS NEW VENTURE OPENINGS

BioGrowth, Inc., a recently organized and funded biotechnology company, is building its staff and has openings for the following scientists:

MOLECULAR BIOLOGISTS with in-depth technical knowledge and proven experience with state-of-the-art cloning and expression system development. This should include RNA isolation, library construction and screening, M13 DNA sequencing, and vector construction.

RETROVIROLOGISTS with emphasis in mammalian cell expression.

Prefer 2 to 4 years of hands-on industry experience in addition to strong technical background.

We are located in the Bay Area and offer excellent salary and benefits. For confidential consideration, send your résumé, salary requirements, a letter describing your qualifications, and the names of three references to: **Vice President and Technical Director, BioGrowth, Inc., 505 Ortega Street, San Francisco, CA 94122.**

RESEARCH TECHNICIAN. We seek qualified technical support personnel to implement experiments using molecular biology techniques. Working knowledge and experience in biochemical instrumentation, recombinant DNA technology, and long-term tissue culture techniques essential. Applicants who have demonstrated prior or independent research experience in cell biology, molecular biology, or biochemistry will be considered. B.S./B.A. required in contemporary biological discipline. We offer a professional environment, an excellent salary/compensation package—including tuition reimbursement, and a superb opportunity for intellectual development. Please send résumé to: **E. L. Kleinert, Personnel Department, Memorial Sloan-Kettering Cancer Center, 1275 York Avenue, New York, NY 10021. Equal Opportunity Employer, M/F/H.**

UNIVERSITY OF ILLINOIS at URBANA-CHAMPAIGN SCIENCE EDITOR

The News Bureau within the Office of Public Affairs seeks an experienced professional as science editor. This individual will work with the senior science editor to generate and coordinate national media coverage of the campus in the physical sciences, computer science, and engineering. Candidates should have a master's degree in journalism or a pertinent discipline, or equivalent professional experience; demonstrated excellence in understanding complex information and communicating it to the public; well-established contacts in the national media, and an understanding of major research-oriented universities. Specific experience in the physical sciences, computer science, or engineering is desired.

This is a full-time, 11-month, academic-professional position, available immediately. Salary dependent upon experience. To ensure equal consideration, a letter of application, résumé, and clips must be received by 31 July 1986 by:

**Connie Cassida, Search Coordinator
University of Illinois News Bureau
131 Davenport House
807 South Wright Street
Champaign, IL 61820
telephone: 217-333-1085**

The University of Illinois at Urbana-Champaign is an Equal Opportunity/Affirmative Action Employer.

VISITING ASSISTANT PROFESSOR IN MICROBIOLOGY. Position requires teaching molecular genetics and virology to graduate, medical, dental, and undergraduate students, and research in molecular virology. Ph.D. degree, postdoctoral research, and teaching experience required. Position from 26 August 1986 to 25 August 1987. Application deadline 10 August 1986. Send curriculum vitae and references to: **Dr. Richard Crandall, Chairman, Search Committee, Department of Immunology and Medical Microbiology, Box J-266, JHMC, College of Medicine, University of Florida, Gainesville, Florida 32610. Equal Employment Opportunity/Affirmative Action Employer.**

THE FIRST WORD IN... PHARMACEUTICAL MANUFACTURING

As a \$3.5 billion international leader in the manufacture of health care products, Abbott Laboratories continues a strong commitment to pharmaceutical research. We are expanding upon our traditional base of strength while affording and creating constant challenge and innovation.

Ph.D. CHEMIST

The qualified candidate will develop synthetic and separation processes for new peptides, natural products and other organic compounds. Responsibilities will include leading the development of new purification technology including large-scale prep HPLC and providing support for existing processes. Will also perform process research at the bench and in the pilot plant aimed at the improvement of existing chemical and purification processes.

A Ph.D. with scale-up experience in organic chemistry and chromatographic techniques is essential. Knowledge and experience in the area of peptide chemistry and prep HPLC with pilot plant and manufacturing exposure are definite assets.

Abbott Laboratories is headquartered in an attractive suburban setting on the Lake Michigan shoreline, just 30 miles north of Chicago. We provide excellent salaries, full benefits including profit sharing and stock retirement plan, and exceptional opportunities for professional growth and advancement. For consideration, send resume with salary history to: **Brian McMenamin/Corporate Placement, Dept. S/7-11.** Abbott is an Affirmative Action Employer.

 **ABBOTT**
ABBOTT PARK IL 60064

"HEALTH CARE WORLDWIDE"

THE FIRST WORD IN...SUCCESS.

Biotechnology

Angenics, Inc. is a rapidly growing diagnostic company specializing in the development of fast field tests for industrial, veterinary and human health care applications. These tests are based on the use of monoclonal antibodies with novel readout devices and systems. Recent technical advances and commitments from major marketing partners have created the need for immediate expansion of Angenics' research, product development and manufacturing capabilities. We are seeking:

Senior Research Scientist

This individual will be responsible for coordinating the efforts of a multidisciplinary team of scientists working on a variety of research projects. Responsibilities include planning and execution of research projects and interdisciplinary problem solving.

Applicant will have a Ph.D. in molecular biology, biochemistry, immunology, or related field. Minimum ten years' research and project management experience is required.

Senior Development Scientist

This individual will be responsible for the commercialization of multiple product lines. Responsibilities include development of products using our core technologies and overseeing the transition of products from the laboratory to the marketplace. The ability to communicate and work effectively across departmental lines is essential.

The applicant will have a Ph.D. in molecular biology, biochemistry, immunology, or related field and must have been responsible for the commercialization of diagnostic products. Minimum ten years' development and project management experience is required.

Quality Control Director

This individual will be responsible for the establishment and supervision of QC procedures for all product lines. Applicant must have minimum of ten years experience with an in-depth knowledge of diagnostic test systems or related fields. Ph.D. or equivalent experience required.

Principal Investigator (Research or Development)

Ph.D. and a minimum of three years research experience in the biological or biochemical sciences required. Candidates will be engaged full time in research or product development and will be responsible for directing the activities of a project group.

Scientists

MS with three years experience or BS with 5 years experience in the biological or biochemical sciences required. Candidates should be self-directed, highly-motivated individuals and will work as senior members of a project team.

Angenics, Inc. has established a creative, interactive environment and seeks individuals who want to work toward the generation of exciting and original products. We offer competitive salary and benefits as well as equity participation to afford each individual the opportunity to share in the Company's growth and success.

For immediate consideration please send curriculum vitae, list of publications, and/or resume to **Angenics, Inc., 100 Inman St., Cambridge, MA 02139, Attn: Susan Rothfuss.**

ANGENICS

POSITIONS OPEN

RESEARCH SCIENTIST POSITION available immediately in research laboratory to study lipoprotein metabolism in steroid tissues using combined biochemical and physiological techniques. Salary grade GS-9 (\$21,804). U.S. citizens only. Send résumé and names of three references to: **Dr. Salman Azhar, Grecc-182B, VA Medical Center, 3801 Miranda Avenue, Palo Alto, CA 94304.**

SENIOR RESEARCH TECHNICIAN

Selected candidate will be responsible for the operation of the Peptide Synthesis Unit in the Department of Biochemistry and will independently perform peptide synthesis procedures.

Minimum qualifications are a B.S. degree in chemistry or biochemistry, plus 3 to 5 years of laboratory experience in automatic or manual solid phase peptide synthesis, peptide cleavage, analysis, and purification.

Send résumé to: **Mary Q. Lammi, Placement Services, University of Massachusetts Medical Center, 55 Lake Avenue North, Worcester, MA 01605. An Affirmative Action/Equal Opportunity Employer.**

SYSTEMATIC ICHTHYOLOGIST

Applications are invited for an **Assistant/Associate Curator** in the Division of Fishes, Field Museum of Natural History. Twelve-month, career-track, full-time appointment, with both research and curatorial responsibilities. Applicants must have Ph.D. with primary interest in, and commitment to, an active research program in systematic ichthyology and the curation of a major, world-class ichthyological collection. Other duties may include participation in exhibition and education functions of Field Museum. Opportunities exist for work with graduate students. Salary and level of appointment dependent upon qualifications and experience.

Send curriculum vitae, description of research program, reprints of publications, and three letters of reference by 15 September 1986 to: **Dr. J. Kethley, Chairman, Search Committee, Department of Zoology, Field Museum of Natural History, Roosevelt Road at Lake Shore Drive, Chicago, Illinois 60605. An Equal Opportunity Employer**

CONFERENCE

16th CONFERENCE ON TOXICOLOGY

A conference will be held 28 to 30 October 1986, at the Radisson Inn, Dayton, Ohio, sponsored by the Air Force Armstrong Aerospace Medical Research Laboratory/Toxic Hazards Division and the Naval Medical Research Institute/Toxicology Detachment, Wright-Patterson AFB, Ohio.

Topics in environmental, occupational, and predictive toxicology will be featured.

Abstracts for poster presentations are being solicited and must be received by 1 August 1986.

Attendance is by invitation only. To request an invitation or to obtain further information, contact: **Linda Cooper, Conference Coordinator, Northrop Services, Inc., P.O. Box 12313, Research Triangle Park, NC 27709; telephone: 919-549-0652.**

SYMPOSIUM

HANS SELYE SYMPOSIUM: NEUROPEPTIDES AND STRESS October 16 to 18, 1986 Montreal, Canada

Sessions on the following topics: CRF receptors in brain and pituitary; implications for the stress response; brain peptides, stress, and autonomic function; neuropeptides, stress, and GI function; stress, neuropeptides, and immune function; opioids and stress.

Organizing committee includes **Yvette Taché (Chair), Marvin Brown, Marc Cantin, Carmine Clemente, John Morley, and Sandor Szabo.**

Sponsored by the Hans Selye Foundation, MRC, and the University of California, Los Angeles, Brain Research Institute.

Contact: **Joyce Fried, Brain Research Institute, University of California, Center for the Health Sciences, Los Angeles, CA 90024; telephone: 213/825-5061.**

FELLOWSHIPS

POSTDOCTORAL POSITIONS available September 1986. A position is available in our newly approved training program in **medical genetics**. The basic program is a 2-year experience in clinical genetics/dysmorphology. Applicants wishing to pursue an academic career will be encouraged to spend additional time in basic research. A position is also available for basic training in **biochemical/molecular genetics**. Applicants must be U.S. citizens or have a permanent resident visa. Send curriculum vitae to: **Director, Medical Genetics Training Program, University of California, San Diego, M-009-F, La Jolla, CA 92093. The University of California is an Affirmative Action/Equal Opportunity Employer.**

The Department of Zoology, University of Toronto, Erindale College, invites applications for an **N.S.E.R.C. UNIVERSITY RESEARCH FELLOWSHIP (URF)**. The department will sponsor the successful candidate in his/her application to N.S.E.R.C. for the fellowship. Applicants currently holding a fellowship are also invited to apply for a possible transfer. We require a behavioral/evolutionary ecologist who will establish an active research program, attract graduate students, and contribute to undergraduate teaching. The research fellowship will be tenable at Erindale College beginning 1 July 1987. Applicants should send, by 1 August 1986, their curriculum vitae, a short statement of immediate research plans, and the names and addresses of three referees to: **Chairman, URF Search Committee, Department of Zoology, University of Toronto, Erindale College, Mississauga, Ontario L5L 1C6 Canada. In accordance with Canadian immigration requirements, this advertisement is directed to Canadian citizens and landed immigrants. The University of Toronto encourages both women and men to apply for positions.**

POSTDOCTORAL FELLOWSHIP

The Laboratory of Developmental Neurobiology, National Institute of Child Health and Human Development, National Institutes of Health, invites applications for a staff fellow to join an established research program on the development and cellular physiology of the mammalian CNS, using tissue culture and advanced electrophysiological techniques. Proven experimental ability, a strong background in electrophysiology, and an interest in programming laboratory computers are highly desirable. Send curriculum vitae and three letters of reference to: **Dr. Philip Nelson, NIH, Building 36, Room 2A-21, 9000 Rockville Pike, Bethesda, MD 20892. An Equal Opportunity Employer.**

POSTDOCTORAL FELLOWSHIPS available at the University of California at Santa Barbara to study molecular mechanisms in marine algae: (i) DNA-transformation vector systems, (ii) development of diagnostic and therapeutic peptide products, (iii) propagation and genetic improvements, (iv) development of immunological labels, and (v) genetic cloning and regulation of photosynthetic light-harvesting complexes. Fellowships run for 2 years with competitive stipends; earliest start is July 1986. Applicants must have demonstrable experience in relevant fields, such as molecular genetics, peptide biochemistry, developmental algology, characterization of cell-surface antigens using monoclonal antibodies, or molecular probes and photosynthetic architecture, depending on topic. Send curriculum vitae, copies of relevant publications, and the names and telephone numbers of three references to: **Marine Biotechnology Program, Department of Biological Sciences, University of California, Santa Barbara, CA 93106. An Equal Opportunity/Affirmative Action Employer.**

POSTDOCTORAL FELLOWSHIPS and research associateships are anticipated to be available in the Faculty of Medicine, University of Manitoba, over the next 6 months in various areas of medical research including, molecular biology, neurosciences, cardiac sciences, hepatorenal sciences, immunology, and human genetics. *Both women and men are encouraged to apply. In accordance with Canadian immigration requirements, priority will be given to qualified Canadian citizens and permanent residents of Canada.* Application with curriculum vitae or inquiries should be forwarded to: **Dr. F. Stevens, Associate Dean (Research), A108—753 McDermot Avenue, Winnipeg, Manitoba, CANADA R3E 0W3**

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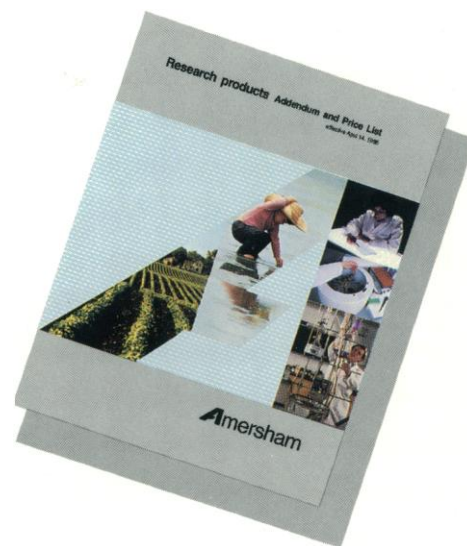
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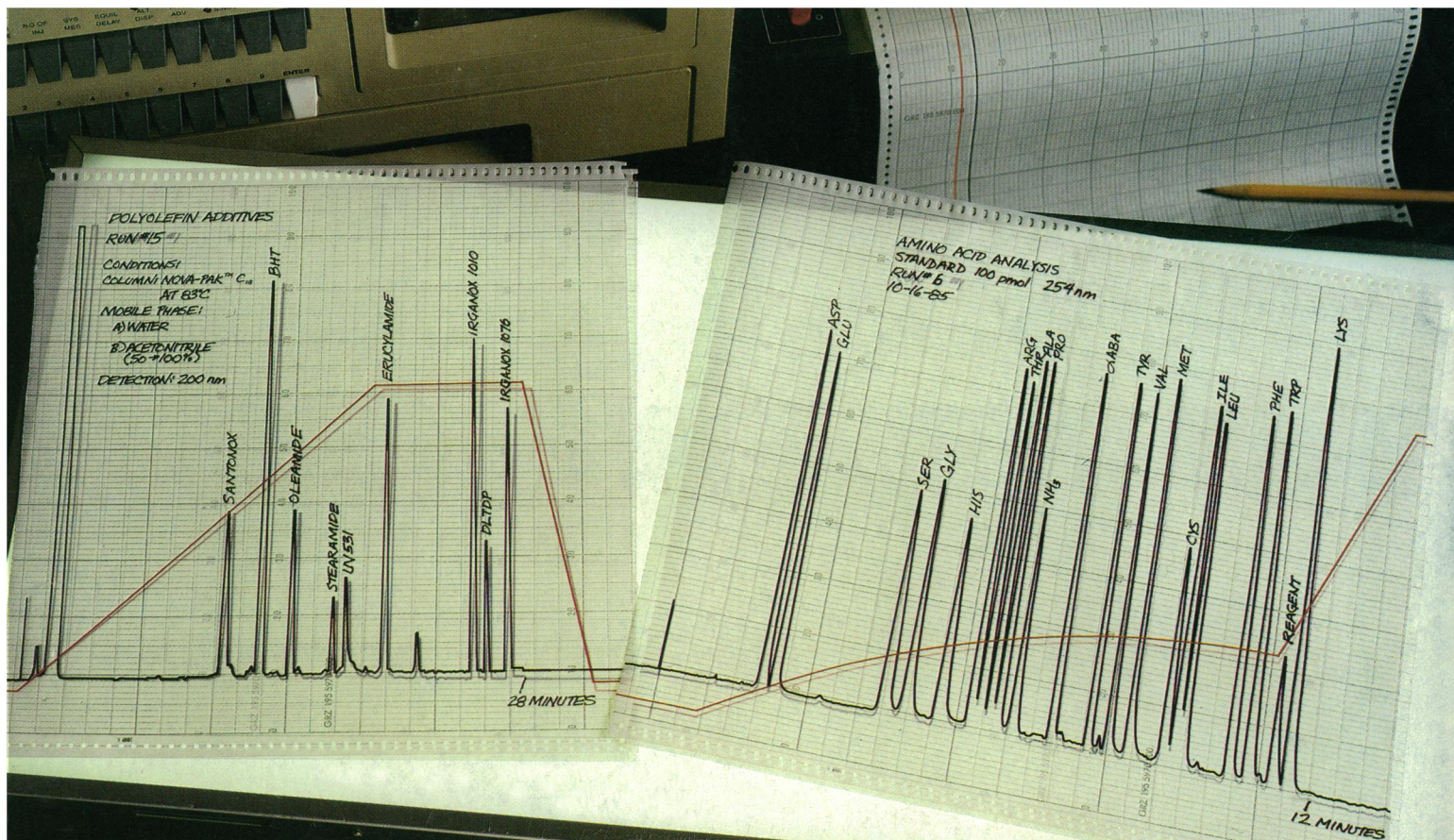


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