

thesis she fails to convince the reader that she has not confused rationalization with motivation.

Similarly, Schrepfer does not articulate the political framework of the developments she discusses, which weakens her argument that the Second World War marked a discontinuity in political processes. Though class constituencies of preservationism may have indeed shifted and reform ideology and rhetoric found new language, it is not at all clear that postwar politics represented a break with prewar politics of interest-group administrative government. This form of government had been developing since the turn of the century and was fully in place with the New Deal. The preservationism of the 1950's and 1960's, with its citizen activism and militancy, appears less as the appearance of a new form of politics than as the clamorous entry of a new interest group into an old form of politics.

RONALD C. TOBEY

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Atomic Processes

Atoms in Astrophysics. P. G. BURKE, W. B. EISSNER, D. G. HUMMER, and I. C. PERCIVAL, Eds. Plenum, New York, 1983. xviii, 356 pp., illus. \$49.50. Physics of Atoms and Molecules.

This volume commemorates the 60th birthday of Michael J. Seaton of University College London. It contains a collection of papers by Seaton's students and colleagues that review some of the research in which Seaton has played a pioneering role. Because Seaton has been the dominant figure in the application of atomic physics to astronomy over the last quarter century, the topics include many of the most important ones in the field.

Seaton's great contributions are due in part to his ability to work in both atomic physics and astrophysics. Most of the readers of this book are likely to be narrower in perspective, falling into one of two camps: atomic physicists, who produce atomic data, and astrophysicists, who consume the data. (This reviewer is one of the latter.) Despite its title, the book is primarily concerned with the calculation of atomic processes, and much less with the astrophysical applications of the atomic data. As a result, the book will be of great value to astrophysicists who want to learn more about the calculational techniques em-

ployed by atomic physicists and to graduate students in atomic physics. The book does not primarily address the pressing problem of communicating the atomic data needs of astrophysicists to the atomic physicists.

In general, the book provides excellent reviews of the topics covered. Most of the sections have very detailed bibliographies. For the most part, notation is consistent throughout the book. The level of the book is closer to that of an advanced textbook than to that of a collection of professional reviews, in that fairly detailed derivations of important results are usually given rather than just the results themselves.

The book emphasizes the calculation of collisional processes. There is an excellent review of electron-ion (or atom) collision calculations, including discussion of the basis of the close-coupling equations and techniques for their numerical solution. The coupling of these solutions to valid asymptotic solutions and the form of the electron-atom and electron-molecule potentials at large distances are also discussed. The close-coupled equations are not useful for calculating collisional processes for the highly excited states that produce radio recombination lines in astrophysics, and the semi-classical techniques pioneered by Seaton for this problem are described. As Seaton first pointed out, protons may be more important than electrons in collisional exciting closely spaced energy levels, and these proton excitation processes are discussed. The utility of quantum defect theory in extrapolating sparse experimental or theoretical data is reviewed.

One very useful feature of the book is that it provides a helpful introduction and general discussion of the various computer program packages for atomic calculations. These programs (IMPACT, SUPERSTRUCTURE, RMATRX, and so on) can provide consistent and extremely accurate atomic data. By consolidating the numerical methods used into a small number of general-purpose programs, these packages have helped to reduce the proliferation of atomic data calculated at different levels of approximation. (Seaton described this proliferation of calculations as the "one man—one cross section" problem.) In most cases, the programs use standardized input and output and have preprocessors that allow the code to be optimized for the specific task and computer (and array processor) being used. Recent extensions of these programs to include relativistic effects are discussed.

Though the applications of the atomic

data are not discussed extensively, there is an introduction to electron-ion collisional processes in diffuse plasmas, a review of the excitation of forbidden lines in aurora, and a more detailed review of the observations and theory of planetary nebulas. This last section has a nice, concise summary of recent infrared and ultraviolet observations of these systems.

CRAIG L. SARAZIN

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Books Received

Abscisic Acid. Frederick T. Addicott, Ed. Praeger, New York, 1983. xiv, 608 pp., illus. \$49.95.

Adolescent Gynecology. A Guide for Clinicians. Alfred M. Bongiovanni, Ed. Plenum, New York, 1983. xx, 258 pp. \$32.50.

Advances in Heterocyclic Chemistry. Vol. 32. A. R. Katritzky, Ed. Academic Press, New York, 1982. x, 404 pp., illus. \$74.50.

The Body at Work. Biological Ergonomics. W. T. Singleton, Ed. Cambridge University Press, New York, 1983. x, 430 pp., illus. \$59.50.

Botany. Principles and Applications. Roy H. Saigo and Barbara Woodworth Saigo. Prentice-Hall, Englewood Cliffs, N.J., 1983. xx, 538 pp., illus. \$27.95.

Cancers Induced by Therapy. Israel Penn, Ed. Published for the Imperial Cancer Research Fund by Oxford University Press, New York, 1982. iv pp. + pp. 565-790, illus. Paper, \$26. *Cancer Surveys*, vol. 1, No. 4.

Chemical and Geochemical Aspects of Fossil Energy Extraction. Papers from a symposium, Las Vegas, Aug. 1980. T. F. Yen, F. K. Kawahara, and R. Hertzberg, Eds. Ann Arbor Science (Butterworths), Woburn, Mass., 1983. x, 266 pp., illus. \$37.50.

Disposal and Recovery of Municipal Solid Waste. A Review of Realistic Options Facing the Public Authorities and Industry. Michael E. Henstock, Ed. Ann Arbor Science (Butterworths), Woburn, Mass., 1983. x, 194 pp., illus. \$49.95.

Drinking Water Supplies. Protection Through Watershed Management. Raymond J. Burby, Edward J. Kaiser, Todd L. Miller, and David H. Moreau. Ann Arbor Science (Butterworths), Woburn, Mass., 1983. xxii, 274 pp., illus. \$29.95.

The Effects of Punishment on Human Behavior. Saul Axelrod and Jack Apsche, Eds. Academic Press, New York, 1983. xii, 356 pp., illus. \$34.50.

Eight Evacuated Collector Installations. Interim Report for the IEA Task on the Performance of Solar Heating, Cooling and Hot Water Systems Using Evacuated Collectors. William S. Duff and ten others. American Solar Energy Society, New York, 1983. xviii, 232 pp., illus. Paper, \$16.50.

Electron Correlations in Solids, Molecules, and Atoms. Proceedings of an institute, Turnhout, Belgium, July 1981. Jozef T. Devreese and Fons Brosens, Eds. Plenum, New York, 1983. xii, 436 pp., illus. \$55. NATO Advanced Study Institutes Series B, vol. 81.

Foundations of Quantum Mechanics I. G. Ludwig. Translated from the German by Carl A. Hein. Springer-Verlag, New York, 1983. xii, 428 pp. \$48. Texts and Monographs in Physics. Revision of German edition (1954).

Freud, Biologist of the Mind. Beyond the Psychoanalytic Legend. Frank J. Sulloway. Basic Books, New York, 1983. xxvi, 612 pp., illus. Paper, \$13.50. Reprint of the 1979 edition.

Fusion Technology 1982. Proceedings of a symposium, Sept. 1982. Published for the Commission of the European Communities by Pergamon, New York, 1983. Two volumes. lvi, 1532 pp., illus. Paper, \$250.

A Gauge Theory of Dislocations and Disclinations. Aida Kadić and Dominic G. B. Edelen. Springer-Verlag, New York, 1983. viii, 290 pp. Paper, \$12.50. Lecture Notes in Physics, vol. 174.

Gender and Psychopathology. Ihsan Al-Issa, Ed. Academic Press, New York, 1982. xiv, 384 pp. \$32.60. Personality and Psychopathology, 33.

Genetic Disease. Diagnosis and Treatment. Proceedings of a conference, Monterey, Calif., 1981. Albert A. Dietz and Virginia S. Marcum, Eds. (Continued on page 486)

BOOKS RECEIVED

(Continued from page 452)

American Association for Clinical Chemistry, Washington, D.C., 1983. xviii, 318 pp. \$35; to members, \$25.

Geography of the Biosphere. An Introduction to the Nature, Distribution and Evolution of the World's Life Zones. Peter A. Furley and Walter W. Newey with a contribution from R. P. Kirby and J. McG. Hotson. Butterworths, Boston, 1983. xii, 414 pp., illus. \$82.50.

H-Y Antigen and the Biology of Sex Determination. Stephen S. Wachtel. Grune and Stratton, New York, 1982. xvi, 302 pp., illus. \$44.

IARC Monographs on the Evaluation of the Carcinogenic Risk of Chemicals to Humans. Supplement 4, Chemicals, Industrial Processes and Industries Associated with Cancer in Humans. International Agency for Research on Cancer, Lyons, 1982 (U.S. distributor, WHO Publications Centre USA, Albany, N.Y.). vi, 292 pp. Paper, \$30.

The Impaired Physician. Stephen C. Scheiber and Brian B. Doyle. Eds. Plenum, New York, 1983. xviii, 212 pp. \$24.50.

In Pursuit of Truth. Essays on the Philosophy of Karl Popper on the Occasion of His 80th Birthday. Paul Levinson, Ed. Humanities Press, Atlantic Highlands, N.J., and Harvester Press, Sussex, England, 1982. xii, 338 pp. \$25.

The Inconstant Gene. Lawrence S. Dillon. Plenum, New York, 1983. viii, 582 pp., illus. \$65. The Evolution and Functioning of the Genetic Mechanism.

Lipoprotein Kinetics and Modeling. Papers from a conference, Phoenix, Ariz. Mones Berman, Scott M. Grundy, and Barbara V. Howard, Eds. Academic Press, New York, 1982. xxiv, 486 pp., illus. \$67.50.

Malaria and the Red Cell. Papers from a symposium, London, Apr. 1982. Pitman, London, 1983 (U.S. distributor, CIBA Pharmaceutical Company, West Caldwell, N.J.). x, 258 pp., illus. \$35. Ciba Foundation Symposium 94.

Management Guide to Modern Industrial Lighting. Stanley L. Lyons. Butterworths, Boston, ed. 2, 1983. 140 pp., illus. \$29.95.

Man's Impact on Vegetation. W. Holzner, M. J. A. Werger, and I. Ikusima, Eds. Junk, The Hague, 1983 (U.S. distributor, Kluwer Boston, Hingham, Mass.). xiv, 370 pp., illus. \$98. Geobotany 5.

Manual of Laboratory Pharmacokinetics. Stephen H. Curry and Robin Whelpton. Wiley, New York, 1983. xii, 190 pp., illus. \$21.95.

Nitrosamines and Human Cancer. Papers from a conference. Peter N. Magee, Ed. Cold Spring Harbor Laboratory, Cold Spring Harbor, N.Y., 1982. xvi, 600 pp., illus. \$67. Banbury Report 12.

Numerical Ecology. Louis Legendre and Pierre Legendre. Translated and expanded from the French edition (1979). Elsevier, New York, 1983. xvi, 420 pp., illus. \$83. Developments in Environmental Modelling, 3.

Obstetrical Intervention and Technology in the 1980s. Dion Young, Ed. Haworth Press, New York, 1983. xvi, 204 pp., illus. \$24.95. Women and Health, vol. 7, Nos. 3/4.

The Ohio Valley. Your Guide to America's Heartland. George Laycock and Ellen Laycock. Doubleday, Garden City, N.Y., 1983. xii, 388 pp., illus. Paper, \$10.95. Dolphin Books.

The Psychology of Being Human. Brief/Update Edition. Zick Rubin and Elton B. McNeil. Harper and Row, New York, 1983. xx, 524 pp., illus. Paper, \$19.50. Shortened version of 3rd edition.

The Psychopath and Milieu Therapy. A Longitudinal Study. William M. McCord. Academic Press, New York, 1982. xviii, 300 pp. \$29.50.

Quantum Electrodynamics of Strong Fields. Proceedings of an institute, Lahnstein, Germany, June 1981. W. Greiner, Ed. Plenum, New York, 1983. x, 902 pp., illus. \$110. NATO Advanced Study Institutes Series B, vol. 80.

Séminaire de Théorie des Nombres, Paris 1980-81. Séminaire Delange-Pisot-Poitou. Marie-José Bertin, Ed. Birkhäuser, Boston, 1982. vi, 364 pp., illus. \$22.50. Progress in Mathematics, vol. 22.

Tata Lectures on Theta I. Containing Introduction and Motivation: Theta Functions in One Variable; Basic Results on Theta Functions in Several Variables. David Mumford with the assistance of C. Musili, M. Nori, E. Previato, and M. Stillman. Birkhäuser, Boston, 1983. xiv, 236 pp., illus. \$20. Progress in Mathematics, vol. 28.

Technocracy Versus Democracy. The Comparative Politics of International Airports. Elliot J. Feldman and Jerome Milch. Auburn House, Boston, 1982. xlvii, 300 pp., illus. \$22.95.

A Topical Guide to the American Journal of Physical Anthropology. Volumes 22-53 (1946-1980). M. Yaşar Işcan. Liss, New York, 1983. xiv, 220 pp. \$24.

Personnel Placement

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Environmental Planner. B.S. in biology, M.Sc. in environmental studies; seeks position as planner or technician with applied research in ecology. Skills: vegetation analysis, environmental assessment. Box 200, SCIENCE. 7/29; 8/5

Enzymologist/Molecular Biologist. Ph.D. with 2 years of postdoctoral work. Experienced in protein purification, recombinant DNA technology, tissue culture, and immunology. Seeks an industrial or research position within the greater New York area. Box 203, SCIENCE. 7/29; 8/5, 12, 19

Microbiologist/Electron Microscopist. Ph.D. Nine years of undergraduate and professional school experience. Variety of publications. Seeking research/teaching position in academic or industrial institution. Box 198, SCIENCE. 7/29; 8/5, 12, 19

POSITIONS OPEN

One full-time position as **ASSISTANT ADJUNCT PROFESSOR** in the Obstetrics/Gynecology Department, Division of Reproductive Biology and Medicine, School of Medicine, Davis, California. Biostatistics or biomathematics Ph.D. required.

Responsibilities include initiating biostatistical analysis of a variety of data concerning reproduction and fertility, including use of survival analysis for predicting fertility.

Applications not accepted after 31 August 1983. Send curriculum vitae and two references to: **Dr. David F. Katz, Reproductive Biology and Medicine, Suber House, University of California, Davis, Calif. 95616.**

The University of California, Davis, School of Medicine, is an Equal Opportunity/Affirmative Action Employer.

YALE UNIVERSITY, New Haven, Connecticut 06511. Professor R. James Cross, Chairman, Faculty Search Committee, Department of Chemistry, P.O. Box 6666.

TWO ASSISTANT PROFESSOR openings are available. While we welcome applications from candidates irrespective of their research interests, the makeup of the present staff and the immediate teaching demands will introduce a strong bias in favor of an appointment of an experimental or theoretical physical chemist or an inorganic chemist. Candidates are invited to submit résumés and three letters of recommendation. It will be desirable to have these materials available to our staff in late September; it will be necessary to have them by 31 October 1983. An *Affirmative Action/Equal Opportunity Employer.*

ASSISTANT PROFESSOR IN BIOCHEMISTRY

The University of Washington invites applications for academic positions in the Department of Biochemistry. Applicants should have postdoctoral experience, and must demonstrate the ability to develop a strong research program in an area at the forefront of biochemistry and to teach at the undergraduate or graduate level. Send curriculum vitae, a succinct statement of research plans, and four professional references before 1 October 1983 to: **Dr. William Parson, Chairman, Search Committee, Department of Biochemistry, University of Washington, Seattle, Wash. 98195.** The University of Washington is an *Equal Opportunity/Affirmative Action Employer.*

The **DEPARTMENT OF PHYSIOLOGY** has an opening for an **ASSISTANT or ASSOCIATE PROFESSOR** who will participate in teaching of medical students and add research strength to a program concerned with gastrointestinal effector function. Preference will be given to individuals with an actively funded research program in either gastrointestinal blood flow or central neural influence on gastrointestinal function. The position requires a Ph.D., M.D., or equivalent degree and a minimum of 2 years of postdoctoral experience. Send curriculum vitae and arrange for three letters of recommendation to be sent to: **Chairman, Physiology Search Committee, Department of Physiology, School of Medicine, University of Nevada, Reno, Nevada 89557.** Deadline for receipt of applications is 1 October 1983. *Affirmative Action/Equal Opportunity Employer.*

ASSISTANT RESEARCH SCIENTIST. NIH-supported work on the ocular physiology and pharmacology of the eye related to carbonic anhydrase chemistry. Ph.D. and experience in relevant anatomy and biochemistry required. Salary: \$15,000 minimum; maximum negotiable. Position available 23 September 1983. Forward applications to: **Dr. Thomas H. Maren, Department of Pharmacology, Box J-267, JHMH, University of Florida College of Medicine, Gainesville, Fla. 32610,** by 18 August 1983. An *Equal Opportunity/Affirmative Action Employer.*

BIOENGINEERING POSITION AVAILABLE. Bioengineer to develop and operate an infant volumeter, to determine composition of weight gain in small infants. Knowledge of factors affecting pressure-volume curves in air is essential. Applicant will work with M.D.'s and other bioengineers doing advanced research in neonatal nutrition, including direct handling of infants for measurements. Requirements include minimum of 1 year of experience working with infant volumeter; M.A. in bioengineering or chemical engineering. This is a full-time position as staff associate. Salary: \$24,960. Send résumés to: **Dr. Ralph B. Dell, Babies Hospital, Room 116 South, 3959 Broadway, New York, N.Y. 10032.** Columbia University is an *Affirmative Action/Equal Opportunity Employer.*

POSITIONS OPEN

ASSISTANT OR ASSOCIATE PROFESSOR OF BIOSTATISTICS HARVARD SCHOOL OF PUBLIC HEALTH

The Harvard School of Public Health, Department of Biostatistics, is seeking faculty members at the assistant or associate professor rank. Duties will involve teaching, interdisciplinary health science collaborations, and methodological research in biostatistical science. Some of these appointments will be joint with the Dana-Farber Cancer Institute, Harvard Medical School. It is planned to recruit faculty members having special interests in each or a combination of the following areas: clinical trials, environmental problems, and statistical computing. Ideal candidates at the assistant professor level will have one or more postdoctoral years in a health sciences environment with a strong record of productivity; applicants for associate professor should have a distinguished record of research in the health sciences. *Expression of interest is particularly invited from qualified women and minority candidates.*

Applicants should send complete curriculum vitae and the names of three to five references to:

Professor Marvin Zelen
Search Committee Chairman
Department of Biostatistics
Harvard School of Public Health
677 Huntington Avenue
Boston, Mass. 02115

ASSOCIATE EDITOR

Washington, D.C., nonprofit scientific institution is seeking a person with approximately five or more years of scientific experience preferably in research, to edit scientific manuscripts, check proofs, and advise authors. Candidates should have a M.S. degree or equivalent in a physical or biological science. Ph.D. preferred, plus a demonstrated facility in English. Please submit résumé with cover letter, indicating salary requirement, to:

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CONSULTING POSITIONS available. Applicant should have background in aquatic weed control and trophic evaluation with (M.S.) desired for staff limnologist position to market and supervise lake management work. Engineer: requirements should include: B.S.-M.S. degree with Florida P.E. certification and demonstrated competence in drainage design. Send curriculum vitae to: **C. M. Courtney, Director, Applied Environmental & Engineering Services, Inc., 990 North Barfield Drive, Marco Island, Fla. 33937.**

DEAN

The University of Minnesota invites applications and nominations for the position of **Dean of the School of Medicine**. The dean is the chief executive officer of the school and leader of the faculty with direct responsibilities in planning and development, resource management, and personnel administration. He/she is expected to stimulate high levels of academic and scientific excellence in the faculty and to provide leadership in development of curricular and investigative efforts in emerging areas of modern medical science and practice. The dean reports directly to the Vice President for Health Sciences and serves as the primary representative of the Medical School within the University and externally.

Candidate must have an M.D. degree or a Ph.D. degree in an area of biomedical science, be a nationally recognized leader, and have demonstrated a high level of administrative skill and scholarly achievement.

The closing date for nominations and/or applications is 1 October 1983.

Nominations and applications with curriculum vitae should be sent to:

Alfred F. Michael, M.D., Chair or
David W. Hamilton, Ph.D., Vice Chair
Search Committee for Dean of the Medical School
University of Minnesota
420 Delaware Street, SE
Box 501H Mayo Memorial Building
Minneapolis, Minnesota 55455

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

29 JULY 1983

POSITIONS OPEN

Stanford University invites nominations and applications for a newly endowed **CHAIR, The Edgar F. Kaiser, Sr., Professorship in Health Policy** at the School of Medicine. We seek a creative researcher who has demonstrated outstanding scholarship in an area related to health services or health policy. We expect the appointee to be an innovative person who will assume a leadership role in interdisciplinary activity involving both research and teaching. Substantive knowledge of medicine, public health, or health services delivery, as well as strong quantitative and communication skills are essential.

Nominations or applications accompanied by curriculum vitae should be submitted by the application recruiting deadline of 15 October 1983 to: **Thomas A. Gonda, M.D., Chairman, Health Policy Search Committee, Department of Psychiatry, Room TD-120, Stanford Medical Center, Stanford, Calif. 94305.** *Stanford University is an Equal Opportunity Employer and welcomes nominations of women and minority group members and applications from them.*

IMMUNOLOGIST—Department of Cell Biology, University of New Mexico School of Medicine. Prefer research interests in cellular immunology, cell surface biochemistry, and receptor-ligand interactions. Applicants must have 3 years of postdoctoral training and be capable of establishing an independent program. Rank and salary depend on qualifications. Send curriculum vitae, in-press manuscripts, statement of research goals, and names of three references to: **Dr. T. B. Tomasi, Director, Cancer Center, University of New Mexico, Albuquerque, N.M. 87131.**

POSITIONS OPEN

The University of Michigan Medical School, **Department of Radiology**, has on occasion open **FACULTY POSITIONS** within the department and its affiliated hospitals. Physicians filling these positions will take part in the programs of patient care, teaching, and research in the Department of Radiology. They will supervise the activities of house officers and aid in the teaching of house officers and medical students. Qualified applicants must be American Board of Radiology-certified and Board-eligible. Previous training or work experience in an academic institution as well as demonstration of previous academic research and teaching experience are desirable. Academic rank will depend on qualifications and experience.

Interested applicants should contact: **William Martel, M.D., Chairman, Department of Radiology, The University of Michigan Medical School, Ann Arbor Michigan 48109.** *A nondiscriminatory, Affirmative Action Employer. Code 1.*

MOLECULAR BIOLOGIST—Department of Cell Biology, University of New Mexico School of Medicine. Seeking molecular biologist to fill tenure-track position at assistant or associate professor level. Minimum of 3 years of postdoctoral research experience in eukaryotic molecular biology and capable of establishing vigorous and independent research program. Curriculum vitae, representative reprints, statement of research goals, and names of three references to: **Chairperson, Department of Cell Biology, Cancer Center, University of New Mexico, Albuquerque, N.M. 87131.**

Biochemist/Enzymologist

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As a leading producer of B-lactam and aminoglycoside antibiotics, Bristol-Myers Industrial Division has the ideal setting for a PhD Scientist seeking to establish a career in the pharmaceutical industry. In meeting our commitment to continued exploration and development of new and existing fermentations using the latest technologies, we have joined fermentation development, genetic engineering and computerized pilot plant facilities into a single laboratory unit. In this integrated facility, you find all the support you need to pursue innovative research and to achieve meaningful results.

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POSITIONS OPEN

POSITION AVAILABLE: CARDIOVASCULAR PHYSIOLOGIST. The primary appointment is in the Department of Medicine (Cardiology) as assistant professor of medicine with joint appointment in physiology or pharmacology. Candidates should have a Ph.D., a strong background of basic research in the circulation, and interest in collaborative studies in a clinical department. Send résumé, names of three references, and a short summary of research goals to: **Robert Zelis, M.D., Cardiology, Pennsylvania State University, Hershey Medical Center, Box Number 850, Hershey, Pa. 17033**, by 1 November 1983, or telephone: 717-534-8407. *An Affirmative Action/Equal Opportunity Employer.*

THE WEIZMANN INSTITUTE OF SCIENCE is pleased to announce the availability of the **Charles H. Revson Career Development Chairs**.

The Revson Chairs are intended for promising scientists who are eligible for appointment as senior scientists at the Weizmann Institute.

The Revson Chairs are intended for either scientists who reside in Israel or for those who are considering making their residence in that country.

The appointments for Revson Career Development Chairs are for 3 years. Appointees found suitable at the end of this period will be invited to continue their employment as permanent members of the Weizmann Institute's scientific staff.

Application forms and further information are available from:

The Charles H. Revson Foundation Program
c/o The Academic Secretary
Weizmann Institute of Science
Rehovot 76100, Israel

POSITIONS OPEN

DIRECTOR DEPARTMENT OF PATHOLOGY

Cuyahoga County Hospital, a major teaching hospital of Case Western Reserve University School of Medicine, is inviting applications for the position of director of pathology. Candidates should have appropriate backgrounds in academic pathology with a major interest in research and teaching, as well as the ability to run a large, diverse Department of Pathology and a pathology training program. Applications or nominations with accompanying curriculum vitae, should be addressed to:

Dr. James R. Carter, Jr.
Chairman, Pathology Search Committee
Cuyahoga County Hospital
3395 Scranton Road
Cleveland, Ohio 44109

Cuyahoga County Hospital and Case Western Reserve University are Equal Opportunity/Affirmative Action Employers.

VISITING LECTURER IN PHYSIOLOGY. The Department of Animal Physiology at the University of California, Davis, invites applications for a visiting lecturer in physiology, the level depending on background and experience. Appointment will be made for 1 year beginning 1 January 1984, with reemployment possible for a second year. This is a 9-month, full-time appointment. Minimum qualifications include a Ph.D. in systemic physiology. The successful applicant will be expected to contribute to the department's teaching and advising program in systemic physiology for undergraduate students. Applicants should submit curriculum vitae, bibliography, recent reprints, transcripts (if Ph.D. conferred within last 5 years), and the names and addresses of at least three references to: **Chair, Visiting Lecturer Search Committee, Department of Animal Physiology, University of California, Davis, Calif. 95616**. Closing date for receipt of applications is 1 October 1983.

The University of California is an Equal Opportunity/Affirmative Action Employer and invites applications from all qualified individuals.

POSITIONS OPEN

The University of Kentucky is seeking nominations and applications for **DEAN of the College of Medicine and VICE CHANCELLOR for Clinical Professional Services**. The dean is the executive officer of the college and is charged with overseeing the educational, research, and service components of the college mission. The dean of the college also serves as vice chancellor for clinical professional services, who directs the Medical Center clinical professional program through the role of chairman of the Hospital Clinical Board and, additionally, is responsible for coordination, development, and review of clinical programs at the University clinical facilities and at off-site, affiliated locations. Nominees and applicants must hold an M.D. or Ph.D. degree in a health-related science and have the following qualifications: concern for academic and professional excellence, scholarly distinction in education and research appropriate for a senior tenured appointment in the college, a clear understanding of the governance and mission of a medical school in an academic health center, and demonstrated administrative ability. Nominations and applications should be postmarked no later than 15 August 1983. Correspondence should be directed to:

Emery A. Wilson, M.D.
Chairman, Search Committee
Department of Obstetrics and Gynecology
University of Kentucky Medical Center
Lexington, Ky. 40536

The University of Kentucky is an Equal Opportunity/Affirmative Action Institution.

IMMUNOLOGY DEPARTMENT doing research in immunoregulation and on macrophages has two vacant positions at the assistant member level, one for a **molecular immunologist**, the other for a **biochemist/cell biologist**. Individual initiative in one or both program areas is desired. Send curriculum vitae, bibliography, and three references to:

Frank L. Adler, Ph.D., Chairman
Division of Immunology
St. Jude Children's Research Hospital
332 North Lauderdale, P. O. Box 318
Memphis, Tenn. 38101

BECKMAN POSTDOCTORAL SCHOLAR PROGRAM

The Gene Research Laboratories (GRL) of the University of California, Irvine, announce a **BECKMAN POSTDOCTORAL SCHOLAR fellowship program**. The emphasis of this program is in the areas of molecular genetics, recombinant DNA technology, and cell biology. Several positions for research in the laboratories of GRL investigators are available for candidates who have demonstrated exceptional research promise at the predoctoral or postdoctoral level. Each Beckman Scholar will have the opportunity to interact with scientists in the various laboratories of the Health Care Group of Beckman Instruments through a joint GRL-Beckman seminar program. Limited consulting arrangements are possible. Outstanding applicants will be invited to the GRL for seminar presentations. The principal investigators of the GRL and their research interests are:

Dr. Kevin Bertrand: Regulatory and structural genes determining bacterial tetracycline resistance.

Dr. Dennis Cunningham: Cell surface receptors and the generation of biological signals.

Dr. George Gutman: Immunology; antibody structure and gene organization.

Dr. G. Wesley Hatfield: Molecular genetic characterization of: (i) attenuation in *Escherichia coli*, and (ii) human genes of clinical importance.

Dr. Harris Moyed: Genetic control of antibiotic susceptibility.

Dr. Kathleen Postle: Molecular genetics of *E. coli* cell envelope, iron transport, and gene regulation.

Dr. Suzanne Sandmeyer: Structure and function of transposable elements in yeast.

Dr. Rozanne Sandri-Goldin: Control of gene expression in herpes simplex virus.

Dr. Bert Semler: Directed mutagenesis and expression of cloned animal virus genes.

Dr. Steven Sharp: Molecular biology of eukaryotic tRNA gene expression.

Dr. Eric Stanbridge: Identification and characterization of human oncogenes and oncogene suppressor sequences.

Dr. Paul Sypherd: Fungal morphogenesis.

Applications, including three letters of reference, should be sent to:

Director, Gene Research Laboratories
Department of Microbiology
University of California
Irvine, Calif. 92717

An Affirmative Action/Equal Opportunity Employer

AMERICAN RED CROSS ESTABLISHED INVESTIGATOR AWARDS

The American Red Cross announces a new program of Established Investigator Awards to be held at its regional blood centers and designed to strengthen and expand research in the blood banking sciences. Appropriate research areas include, but are not limited to, preservation of blood cells, tissues and organs; blood banking applications of biomedical engineering including instrumentation and automation; epidemiology; transplantation and transfusion immunology; hematopoiesis; molecular biology of plasma proteins and cell membranes; computer sciences, operations research and human factors affecting blood center operations.

A doctoral degree or its equivalent is required with a minimum of five years of postdoctoral experience. Emphasis will be given to the applicant's background, research accomplishments as evidenced by publications in professional journals, current activities, research plans and potential for enhancing regional capabilities and recognition in research and development. Salaries are competitive and negotiable and the tenure of the award is five years and is renewable. American Red Cross Established Investigators will be eligible for research support from internal Red Cross funds but should be capable of obtaining funding from other agencies.

For application forms and further information, contact:
Dr. G. A. Jamieson, Associate Director, Research and Development Services, American Red Cross Blood Services, 9312 Old Georgetown Road, Bethesda, Maryland 20814.

EOE, M/F

POSITIONS OPEN

RESOURCES FOR THE FUTURE (RFF) DIRECTOR, CENTER FOR ENERGY POLICY RESEARCH

Nonprofit, nonadvocacy organization for research and education seeks a director for its Center for Energy Policy Research to begin fall 1983.

Director will lead a 20-person professional and support staff. Duties include planning and conduct of the program, marshaling of resources, and review of manuscripts and proposals. The director will also carry the title of senior fellow and have the opportunity to do research and engage in other scholarly activities.

RFF is an Equal Opportunity Employer; women and minority candidates are encouraged to apply. Letter of application and résumé should be submitted on or before 6 September 1983 to:

Emery N. Castle, President
Resources for the Future
1755 Massachusetts Avenue, NW
Washington, D.C. 20036

POSITION IN HUMAN ANATOMY

Applications are invited for a position in the Department of Human Anatomy. Ability to establish an independent research program and attract extramural funding in the area of cellular biology essential. Primary teaching responsibilities will be in gross anatomy. One or 2 years of postdoctoral experience required. Appointment at the assistant or associate professor level depending on individual's qualifications. Send complete curriculum vitae, including a statement of research interests and five letters of reference to: **Dr. Andrew G. Hendrickx, Search Committee Chair, Department of Human Anatomy, School of Medicine, University of California, Davis, Calif. 95616.** Application deadline is 1 October 1983. Only complete applications will be considered. *The University of California is an Affirmative Action/Equal Opportunity Employer.*

MUSEUM COLLECTION MANAGER, malacology. Graduate training in zoology and museum experience with large mollusk collection. Duties include care of large research collection, including identification and arrangement, supervision of technicians, and maintenance of records for data processing. Starting salary: \$20,100. Send applications with curriculum vitae and names of references to: **Dr. James H. McLean, Los Angeles County Museum of Natural History, Los Angeles, Calif. 90007.** Telephone: 213-744-3377. Closing date: 15 August 1983. *An Equal Opportunity Employer.*

PHYSIOLOGY/NEUROSCIENCES

A full-time position to teach courses in general physiology and neurosciences is available. Applicants should have an advanced degree in physiology or anatomy and have a strong commitment to teaching and research. Please send curriculum vitae to:

Dr. Douglas Poorman, Dean
Southern California College of Optometry (SCCO)
2001 Associated Road
Fullerton, Calif. 92631

SCCO is an Equal Opportunity Employer, M/F.

THE ERNA AND JAKOB MICHAEL VISITING PROFESSORSHIPS, 1984/1985

The Weizmann Institute of Science, Rehovot, Israel, offers a limited number of visiting professorships in the natural and exact sciences.

The Erna and Jakob Michael Visiting Professorships are intended for candidates already holding the rank of full professor and will be for a duration of 3 months to 1 year.

For further information, please contact: **The Academic Secretary, The Weizmann Institute of Science, Rehovot 76100, Israel.**



MICROBIAL GENETICIST

Research opportunity with U.S. Department of Agriculture, Agricultural Research Service, Eastern Regional Center, Wyndmoor, (suburb of Philadelphia), PA for microbiologist with training in microbial genetics/toxicology.

As part of a team of active scientists within the Food Safety Laboratory, individual will conduct research on the genetics and synthesis of enterotoxins. Specific research areas include: (1) identification and characterization of plasmid-linked enterotoxin genes; (2) effects of food processing operations on enterotoxin gene stability; and, (3) development of rapid methods for detecting enterotoxins.

Successful candidate will have a broad knowledge of microbial genetics supplemented by a knowledge of *in vivo* and *in vitro* techniques for identifying enterotoxins and have specific experience with the isolation and characterization of plasmids.

Salary is based on qualifications and experience. Salary ranges: (GS-11) \$24,508-31,861; (GS-12) \$29,374-\$38,185.

U.S. citizenship is required and usual federal government benefits apply. For application requirements contact:

Personnel Office
U.S. Department of Agriculture
Eastern Regional Research Center
600 E. Mermaid Lane
Philadelphia, PA 19118
Telephone: 215-233-6573

Completed applications must be received by September 16, 1983.

An Equal Employment Opportunity Employer

RESEARCH MANAGER

Outstanding career opportunity for a PhD in toxicology or related sciences and a minimum of 8 years of experience in technical research administration. Background should reflect significant experience in contract/grant research management, funding sources development and interdisciplinary professional relations. U.S. Citizenship Required.

Major responsibilities will involve supervision of professional and technical staff of 15, management of ongoing research projects and expansion of toxicologic research and testing activities.

Our multidisciplinary research institute is located in a large Midwestern metropolitan area and occupies modern laboratory facilities.

Applicants seeking consideration should forward resume including list of publications, salary history and requirements in complete confidence to:

Sci Box-196

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

Research Group Manager/ Research Associate Pharmacology Department

Hoechst-Roussel Pharmaceuticals, Incorporated, fast-growing subsidiary of American Hoechst, a Fortune 250 chemical/pharmaceutical company, has an exceptional opportunity for a professional whose PhD in Pharmacology/Physiology is enhanced by extensive laboratory experience and outstanding performance.

This position involves planning, developing and conducting animal studies in the anti-inflammatory analgesic area where a background in Immuno-Pharmacology is highly desirable. Responsibilities include the evaluation of data and personnel as well as both heavy developmental and research duties.

Besides the required degree and experience, you must be able to handle multiple research projects simultaneously, and your

familiarity with surgical and experimental techniques must be supported by a thorough understanding of the theoretical implications of your work. Ability to supervise technical and professional personnel essential.

Position located at our modern corporate complex in a pleasant suburban setting provides excellent salary and fully-paid benefits. Please submit curriculum vitae with salary history, in confidence, to:

Paula Fallon
American Hoechst
Corporation
Route 202-206 North
Somerville, NJ 08876

An affirmative action
employer M/F/H

Hoechst



**ANNOUNCING A SYMPOSIUM
MIGRATION: MECHANISMS AND
ADAPTIVE SIGNIFICANCE
HELD IN CELEBRATION OF THE CENTENNIAL
OF THE UNIVERSITY OF TEXAS AT AUSTIN
OCTOBER 30–NOVEMBER 2, 1983
At The Port Aransas Marine Laboratory
of The University of Texas, Austin
Marine Science Institute**

The University of Texas at Austin will host an international symposium on the mechanisms and adaptive significance of migration as it occurs in organisms from plankton to primates. The symposium will include invited and submitted contributions by outstanding scientists from around the world. Topics of primary interest include homing and orientation, physiological mechanisms and adaptations, life history strategies, and the evolution of migration and dispersal. Symposium sessions will be held on aquatic migration of phytoplankton, zooplankton, benthic organisms, and vertebrates, aerial migration of insects and birds, and terrestrial movements of vertebrate populations. Each session will include several invited speakers. The schedule also allows contributed posters and a limited number of brief oral presentations. The symposium proceedings will be published.

Convenors include:

Martin Angel
National Institute of Oceanography, UK
Hugh Dingle
University of California, Davis
Sidney Gauthreaux, Jr.
Clemson University, South Carolina
S. I. Heaney
Freshwater Biological Association, Ambleside, UK
William Herrin
Florida State University
William C. Leggett
McGill University, Montreal, Canada
William Lidicker
University of California, Berkeley
M. A. Rankin
University of Texas, Austin

Persons interested in participating in the Symposium should contact the

**Chairman, Migration Symposium Committee
The University of Texas at Austin
Marine Science Institute
Port Aransas Marine Laboratory
P.O. Box 1267
Port Aransas, TX 78373**

Deadline for Abstracts is August 15, 1983. Registration fee will be \$50.00. (\$25.00 for students). Attendance may be limited.

POSITIONS OPEN

Joint Oceanographic Institutions Inc., a consortium of U.S. academic oceanographic institutions, is seeking a mid-level **CONTRACTS ADMINISTRATOR** to undertake responsibilities associated with a major 10-year program of scientific ocean drilling. Candidates should have an appropriate educational background and at least 5 years of significant experience in the field, preferably involving academic institutions. Familiarity with federal procurement regulations and nonprofit organization contracting procedures is essential. Experience with ships or other large-scale marine operations would be of value. Send résumé to: **John H. Clotworthy, Vice President, Joint Oceanographic Institutions Inc., 2100 Pennsylvania Avenue, NW, Room 316, Washington, D.C. 20037.**

An Equal Opportunity Employer

**HARVARD UNIVERSITY
POSITION IN MAMMALOLOGY**

Applications are invited for a joint appointment, at the nontenured level, as an assistant/associate professor in the Department of Organismic and Evolutionary Biology and assistant/associate curator in mammalogy in the Museum of Comparative Zoology. It is expected that the appointee will teach, carry out research on the biology of mammals, and share in the curatorial responsibility for the mammalian systematic and anatomical collections.

Letters of application, curriculum vitae, and the names and addresses of three references should be submitted to: **Search Committee in Mammalogy, The Biological Laboratories, Room 145, Harvard University, Cambridge, Mass. 02138**, by 15 September 1983.

Harvard is an Affirmative Action/Equal Opportunity Employer.

NEUROSCIENCES

The Kinsmen Laboratory (Department of Psychiatry, University of British Columbia) invites applications from outstanding individuals with a commitment to excellence in research and teaching in neuroscience for one or two tenure-track positions. Each appointee will be expected to develop an independent research program in an emerging field of neuroscience. Applicants should have a Ph.D. and/or M.D. degree and have shown clear evidence of a capacity for productive original research. The laboratory offers excellent research facilities and collaborative, interdisciplinary research is encouraged, as is collaboration with clinical psychiatrists and neurologists. The laboratory is located in the psychiatric hospital; adjacent hospitals have research clinics in epilepsy, movement disorders, and Alzheimer's disease, as well as a PET-NMR imaging center. Applicants should send curriculum vitae, list of publications, a brief summary of research plan, and the names and addresses of three references to: **Dr. E. G. McGeer, Division of Neurological Sciences, Department of Psychiatry, The University of British Columbia, 2255 Wesbrook Mall, Vancouver, British Columbia, Canada V6T 1W5. In accordance with Canada Employment and Immigration Regulations, priority for these positions will be given to Canadian citizens and permanent residents.**

**PLANT GENETICS
PROGRAM MANAGER**

Our Fortune 500 client is seeking a Ph.D. in plant genetics to recommend and develop research programs to expand participation in agricultural markets, particularly corn. With a multidisciplinary team taking a basic approach using tools of classical plant breeding, physiological genetics, and molecular biology, the manager will execute programs utilizing internal resources and outside contract research.

Candidates should possess a working knowledge of plant breeding, physiological genetics, and molecular biology and have 5 to 7 years of relevant research and supervisory experience. Excellent compensation package commensurate with responsibilities.

Qualified candidates should send, in confidence, current curriculum vitae and the names of three references to:

**Kincannon & Reed
200 South Hanley
St. Louis, Mo. 63105**

POSITIONS OPEN

PATHOLOGY/INFORMATION SCIENTIST. The Dartmouth Hitchcock and VA Medical Centers are seeking to fill an innovative position which blends clinical pathology and information science. The position is at the assistant or associate professor level. Applicants should have an active interest in teaching and research, graduate or other advanced training in statistics, computer applications and information science, and be Board-eligible or Board-certified in pathology. The Department of Pathology is responsible for service coverage in the Mary Hitchcock Memorial Hospital and the White River Junction VA Hospital. Please send curriculum vitae, names of three references, and salary requirements by 31 August 1983 to: **George D. Sorenson, M.D., Department of Pathology, Dartmouth Hitchcock Medical Center, Hanover, N.H. 03756. Equal Opportunity/Affirmative Action Employer.**

PLANT MOLECULAR BIOLOGIST. The Department of Botany and Agricultural Botany, University of California, Davis, invites applications for a faculty position at the assistant, associate, or full professor level, effective 1 July 1984. We are seeking a molecular biologist who is using recombinant DNA techniques to address important problems in higher plant biology. In addition, candidates should be interested in cooperating with existing faculty to help maintain our strength in basic and applied areas of botany. The position is an 11-month, tenure-track appointment with commitments of 35 percent teaching and 65 percent research. Applicants should have a Ph.D. in an appropriate area of biology or biochemistry and be prepared to teach in graduate or undergraduate courses concerning gene expression and plant development, to direct graduate student research, and to participate in student advising and University service. Applicants must submit curriculum vitae, a statement of research and teaching interests and backgrounds in each, official undergraduate and graduate transcripts (if within 10 years of graduation date), lists and reprints of published works and submitted manuscripts, and names and addresses of at least three references. Send to: **Dr. Bruce Bonner, Chair of Search Committee, Department of Botany, University of California, Davis, Calif. 95616.** Application deadline is 31 October 1983. *The University of California is an Affirmative Action/Equal Opportunity Employer and invites applications from all qualified individuals.*

THE UNIVERSITY OF TEXAS AT DALLAS—BIOLOGY PROGRAMS periodically seeks **POSTDOCTORAL APPLICANTS** interested in pursuing research in collaboration with faculty. Applicants should have interest and experience in one of the following areas: molecular biology and genetics of mammalian mitochondria; DNA repair processes in prokaryotic and in cultured mammalian cell systems; receptor-mediated endocytosis using protein toxins (experience in protein toxins, and/or somatic cell genetics, and monoclonal antibody membrane biochemistry desirable). Please send résumé (indication of sex and ethnicity for Affirmative Action statistical purposes is requested but not required) to: **Dr. R. C. Clowes, Programs in Biology, The University of Texas at Dallas, P. O. Box 688, Richardson, Texas 75080.**

The University of Texas at Dallas is an Affirmative Action/Equal Opportunity Employer.

Neurobiology Research Unit seeks individual with Ph.D. or M.D. degree interested in basic research examining changes in peptide receptors in CNS injury and shock. Experience in receptor work required. Appointment as **Postdoctoral Fellow or Research Assistant Professor**, depending upon experience. Send curriculum vitae and three references to: **Civilian Personnel Office, Attention: A. I. Faden, M.D., Uniformed Services University of the Health Sciences, 4301 Jones Bridge Road, Bethesda, Md. 20814. Equal Opportunity Employer.**

POSTDOCTORAL POSITION available 1 September 1983. Involves research on the role of local nonsteroidal regulators in control of ovarian function. Applicants should have a Ph.D., M.D., or equivalent. Preference will be given to applicants with experience in protein-peptide-biochemistry. Interested applicants should send résumé and names of three references to: **Dr. C. P. Channing, Department of Physiology, University of Maryland School of Medicine, 660 West Redwood Street, Baltimore, Maryland 21201.** The position is supported by an NIH training grant. Applicants must be U.S. citizens or foreign nationals having in their possession a permanent residence visa. *An Equal Opportunity Employer.*

Molecular Biologist

Whatman, a world leader in filter and chromatography products, is seeking an individual with experience in the biotechnology field, specifically **GENETIC ENGINEERING and PURIFICATION PROCESSES**. Candidate will have an MS or PhD plus 2-5 years experience in genetic engineering (industrial) and purification businesses and systems design.

We offer an excellent salary and comprehensive benefits package. Please forward resume and salary history in confidence to: Louise Crandell.



Whatman Inc.

9 Bridewell Place
Clifton, New Jersey 07014
An Equal Opportunity Employer, M/F

M.S.—Ph.D. in CHEMISTRY/ COMPUTER SCIENCE/ ENGINEERING MEDICAL DIAGNOSTIC PRODUCT DEVELOPMENT

The Ames Division of Miles Laboratories, Inc., a leading company in diagnostics product research and development, is seeking innovative R&D scientists and engineers who have interdisciplinary skills and are committed to technical excellence. Currently, we have challenging and highly responsible opportunities in the area of product development relating to new chemistry/instrument diagnostic systems.

RESEARCH SCIENTIST

This opportunity with growth potential involves responsibility for the experimental design and direction of multi-parametar studies to evaluate performance and establish specifications of reagent/instrument systems. The position requires strong interest in analytical chemistry and instrument design. The individual will work as a project team member in an interdisciplinary environment. Communication skills and the ability to interact with people are essential. Qualified candidates will have an M.S. or Ph.D. in chemistry, computer science or engineering, knowledge of clinical chemistry would be a plus. Preference will be given to persons with 2-6 years R&D experience.

R&D PROJECT MANAGER

This highly visible position involves overall responsibility for planning and directing the coordination of development activities for new diagnostic systems from the point of identified market needs through product definition and feasibility studies. The person will interact with marketing, R&D and manufacturing in developing innovative, competitive product concepts and provide technical direction to product planning programs. Qualified candidates will have an M.S.—Ph.D. in analytical chemistry, physical chemistry or engineering with a proven record in diagnostics product development and R&D management. A high level of technical expertise, creativity and strong communication skills are required.

Situated 90 miles from Chicago, our South Bend/Elkhart, Indiana location provides access to leading cultural and multi-university facilities. Close proximity to lower Michigan and the Great Lakes furnishes unique recreational opportunities. Miles offers an excellent starting salary, superior benefits program and company paid relocation. For confidential consideration, send your resume to:

Kimberly Keller
Personnel Representative
Department A 105

Miles Laboratories, Inc.

P.O. BOX 40
Elkhart, Indiana 46515

An Equal Opportunity Employer M/F/H



Deputy Director/ General Sciences (Salary Open)

Duties: Reporting to the Laboratory Director and working with the cognizant Associate Directors, the Deputy Director for General Sciences will provide overall leadership and direction for several Laboratory divisions in high energy and nuclear physics, accelerator physics, fusion research, and other programs as designated by the Director. Major responsibilities include the management oversight and coordination of interdivisional programs and activities, the establishment and implementation of goals and objectives consistent with the Laboratory's mission, interaction with policy and advisory committees to ensure the highest quality of scientific achievement, and management liaison with the University of California, the U.S. Department of Energy, and other appropriate and related external agencies. Working with the Laboratory Director, the cognizant Associate Directors, the Deputy Director for Energy Sciences and the Associate Director for Planning and Development, the Deputy Director for General Sciences will formulate plans and proposals for the U.S. Department of Energy on the institutional growth of the Laboratory.

Requirements: Must have a distinguished record of scientific achievement and management of scientific programs. Proven leadership in managing interdisciplinary programs in fields such as: high energy physics, nuclear physics, and fusion research is required. The selected candidate should also have proven success in interacting with a combination of academic institutions, scientific laboratories, private industry, and the Federal government (especially the U.S. Department of Energy). Must have a Ph.D. in the Physical Sciences. Requires exceptionally strong management skills including decision-making, problem-solving, verbal and written communication skills, staffing, funding, facilities planning and utilization, and in the establishment and monitoring of performance expectations that result in achievement. "Position is subject to the financial disclosure requirements of the California Political Reform Act of 1974." Refer to Job #A/2105.

Deputy Director/ Energy Sciences (Salary Open)

Duties: Reporting to the Laboratory Director, and working with the cognizant Associate Directors, the Deputy Director for the Energy Sciences will provide overall leadership and direction for several Laboratory divisions with programs in the Basic and Applied Energy Sciences including major programs in Materials and Biological Sciences. Major responsibilities will include the management oversight and coordination of interdivisional programs and activities, the establishment and implementation of goals and objectives consistent with the Laboratory's mission, interaction with policy and advisory committees to ensure the highest quality of scientific achievement, and management liaison with the University of California, the U.S. Department of Energy, and other appropriate and related external agencies. Working with the Laboratory Director for General Sciences and the Associate Director for Planning and Development, the Deputy Director for Energy Sciences will formulate plans and proposals for the U.S. Department of Energy on the institutional growth of the Laboratory.

Requirements: Must have a distinguished record of scientific achievement and management of major scientific programs. Proven leadership in managing interdisciplinary programs in Energy Sciences is also necessary. The selected candidate should also have proven success in interacting with a combination of academic institutions, scientific laboratories, private industry, and the Federal government (especially the U.S. Department of Energy). Must have a Ph.D. in the Physical Sciences or Engineering. Requires exceptionally strong management skills including decision-making, problem-solving, verbal and written communications skills, staffing, funding, facilities planning and utilization, and in the establishment and monitoring of performance expectations that result in achievement. "Position is subject to the financial disclosure requirements of the California Political Reform Act of 1974." Refer to Job #A/2104.

Please submit two copies of resumé, including salary history and the names and addresses of references to: Chairman, Search Committee, Lawrence Berkeley Laboratory, Employment Office, One Cyclotron Road, Building 65, Berkeley, CA. 94720. Refer to appropriate job #. Resumes must be received in the Employment Office by SEPTEMBER 15, 1983, 5:00 PM. An equal opportunity employer, m/f/h.



**LAWRENCE
BERKELEY
LABORATORY**

Technical Information Specialist

Pharmacia P-L Biochemical, division of Pharmacia Inc., is seeking a Technical Information Specialist to communicate procedures, specification and application information to scientists both within and outside the company.

MS in Biochemistry, molecular Biochemistry or microbiology preferred. 2-3 years laboratory experience in state-of-the-art molecular biology techniques (recombinant DNA, sequencing).

We offer competitive salary and company paid fringe benefits. Please send resume and salary history to: **Personnel Department, Pharmacia Inc., 800 Centennial Avenue, Piscataway, N.J. 08854**



We are an equal opportunity employer, m/f

Pharmacia

Pharmacology

We are a leading pharmaceutical firm located in suburban Philadelphia with immediate openings in our rapidly expanding Research Division.

High potential individuals with a MS in Pharmacology and 0-2 years' experience or a BS with 3-5 years' experience are required. Specific job duties will include pharmacological research and development for gastrointestinal, cardiovascular, and anti-inflammatory compounds.

These positions offer an excellent salary and full benefit package. Qualified candidates are invited to write in confidence, indicating background and salary requirements to:

EUGENE J. CARROLL
Employment Manager

WILLIAM H. RORER, INC.
500 Virginia Drive
Ft. Washington, PA 19034

Equal Opportunity Employer, M/F



Toxicology

CIBA-GEIGY is the seventh largest chemical company in the world. Our Pharmaceuticals Division, located in Summit, New Jersey, currently has 3 positions available in its Chemical Toxicology unit:

MANAGER-CHRONIC TOXICITY

The ideal candidate will have a DVM or a PhD in a biological science with a minimum of 5 years' practical experience in implementing and conducting chronic-type studies in rodents and non-rodents as well as acute inhalation studies in rodents. Fundamental knowledge of GLPs and EPA guidelines is essential. The candidate must demonstrate excellent writing skills for preparing comprehensive scientific reports.

SCIENTIST II

The qualified applicant must have an MS in one of the biological sciences and 5 years' experience in conducting skin sensitization, dermal irritation, dermal toxicity, eye irritation and other acute/subacute toxicity studies. Additional requirements are the ability to draft reports, maintain accurate records, and organize data. Fundamental knowledge of GLP s is essential.

SCIENTIST I

As a principal investigator in acute rodent inhalation studies, the selectee will possess a BS degree in one of the biological sciences with a minor in Chemistry, and 5 years' practical experience conducting inhalation studies including obtaining and analyzing air samples.

CIBA-GEIGY offers an excellent salary and comprehensive benefits package. Please forward resume, indicating position of interest, to: V.G. Jordan, The Pharmaceuticals Division of CIBA-GEIGY Corporation, 556 Morris Avenue, Summit, New Jersey 07901. An Equal Opportunity Employer m/f.

CIBA-GEIGY

POSITIONS OPEN

PLANT MOLECULAR BIOLOGIST University of Kentucky

A research specialist trained in molecular biology, virology, or the biochemistry of nucleic acids is being sought to participate in a collaborative project between the departments of biochemistry and plant pathology of the University of Kentucky. The successful candidate should have a Ph.D. and preferably postdoctoral experience in recombinant DNA technology. The project will involve modification of plant viruses and expression of foreign genes in plant cells. The initial annual salary is \$25,000. Qualified applicants should send curriculum vitae and a list of three references to: **Dr. Robert E. Rhoads, Department of Biochemistry, University of Kentucky College of Medicine, Lexington, Ky. 40536. An Affirmative Action/Equal Opportunity Employer.**

Neurobiology Research Unit seeks **POSTDOCTORAL FELLOW** with Ph.D. or M.D. degree interested in research on the role of neuropeptides in central nervous system injury. Previous research experience in spinal cord injury, experimental stroke, or neuropeptides preferred. Send curriculum vitae and three references to: **Civilian Personnel Office, Attention: A. I. Faden, M.D., Uniformed Services University of the Health Sciences, 4301 Jones Bridge Road, Bethesda, Md. 20814. Equal Opportunity Employer.**

Neurobiology Research Unit seeks **POSTDOCTORAL FELLOW** with Ph.D. or M.D. degree interested in research on the role of leukotrienes in experimental shock. Previous experience in shock or cardiovascular research preferred. Send curriculum vitae and three references to: **Civilian Personnel Office, Attention: A. I. Faden, M.D., Uniformed Services University of the Health Sciences, 4301 Jones Bridge Road, Bethesda, Md. 20814. Equal Opportunity Employer.**

POSTDOCTORAL OPENINGS (THREE) IN LIPID METABOLISM. Areas available include enzymology, tissue culture, kinetics, spectroscopic and calorimetric methods, and in vivo studies with animal models of atherosclerosis. Opportunity to collaborate with scientists from diverse disciplines in a biomedical environment. Send curriculum vitae and two letters of reference to:

**Dr. Henry J. Pownall, Chairman, Search Committee
Baylor College of Medicine
MS A601 The Methodist Hospital
6565 Fannin
Houston, Texas 77030**

POSTDOCTORAL POSITIONS IN GENETICS. Postdoctoral positions are open in the fields of mutations and carcinogenesis. Investigations of carcinogen-DNA adducts and mutation studies are currently under way. Techniques that are employed include DNA sequencing, nucleic acid synthesis, and biophysical chemistry. Those interested should apply by sending curriculum vitae and having three letters of recommendation forwarded to: **Dr. Thomas Meehan, Michigan Molecular Institute, 1910 West St. Andrews Road, Midland, Mich. 48640. An Equal Opportunity Employer.**

POSTDOCTORAL POSITION available for studies of the differentiation of bundle sheath cells, mesophyll cells, and their respective chloroplast types. Studies involve the use of two-dimensional gel electrophoresis and monoclonal antibodies to follow changes in polypeptide levels in response to cellular differentiation and light. Familiarity with or desire to learn techniques for protoplast formation, organelle isolation, two-dimensional gel electrophoresis, monoclonal antibody production, and mRNA purification essential. Forward curriculum vitae and three letters of recommendation by 15 August to: **Dr. Steven Schwartzbach, 303 Lyman Hall, University of Nebraska-Lincoln, Lincoln, Neb. 68588-0118. Telephone: 402-472-1682. Affirmative Action/Equal Opportunity Employer.**

POSTDOCTORAL POSITIONS (two) available in fall 1983 for studies of neuronal assembly organization. We are using multi-microelectrode recording to observe 10 to 20 individual neurons simultaneously, mostly on mammalian cortex, and are working toward behaving animals. We are also developing new high-resolution optical methods for the detection of local cortical activity. Applicants should send résumé, bibliography, and three letters of reference to: **George L. Grestein, Department of Physiology/G4, School of Medicine, University of Pennsylvania, Philadelphia, Pa. 19104. Equal Opportunity/Affirmative Action Employer.**

Research Openings

Endotronics, Inc., a young biotechnology company pioneering the new biotechnology of Cellular Engineering,TM is seeking innovative scientists to join our research team. We encourage our scientists to conduct basic research, publish and interact fully with the scientific community.

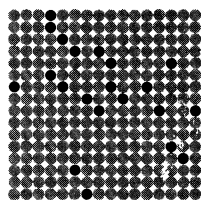
Cell Biologist — To study the effects of growth factors, hormones and drugs on normal and malignant cell lines and their effects on cell differentiation, growth and secretion. Candidates must have doctoral degree in cell biology with proven experience in tissue culture and a minimum of two years postdoctoral experience.

Immunologist — To study the role of cell surface antigens in control of the immune response. Candidates must have proven experience in in-vitro assays of antibody production, generation and use of T-cell clones, lymphoid cell separation and generation of T- and B-cell hybridomas. Doctoral degree in cellular immunology with minimum two years postdoctoral experience required.

Physiologist — To study control and maintenance of physiological function of perfused whole organs. Candidates must have proven experience in small organ perfusion, viability and metabolic product assays. Doctoral degree in physiology with minimum two years postdoctoral experience required.

Endotronics seeks to maintain an invigorating and supportive atmosphere for scientific dialogue and technological innovation. Send CV/references to: Dr. John Peluso, Director of Basic Research, Endotronics, Inc., 9531 Foley Blvd., Minneapolis, MN 55433.

An Equal Opportunity Employer, M/F



CHIRON CORPORATION

A recognized leader, and rapidly growing biotechnology company in the San Francisco Bay area, is inviting scientists with significant records of achievement and leadership potential, to join a

strong team of innovative scientists in the application of recombinant DNA technology to the medical field. CHIRON is now expanding its research and production facilities and invites applications from:

FERMENTATION ENGINEERS. MS or PhD in Biochemical Engineering or related discipline preferably with industrial experience and a proven record of accomplishment in process development. Familiarity with FDA/CGMP regulations and their implementation is desirable. Positions involve pilot-scale and production-scale yeast fermentation, process development and support of technical manufacturing operations.

PRODUCT DEVELOPMENT SPECIALISTS. MS or PhD with strong background in large-scale protein purification and industrial experience in product development. Familiarity with FDA/CGMP regulations and their implementation, and experience with large-scale fermentation is desirable. Positions involve large-scale production, purification, packaging and analysis of proteins derived from fermentation of genetically modified organisms.

CELL BIOLOGISTS. MS or PhD with a strong background in cell physiology, immunology and tissue culture. Positions involve responsibility for the development of immunological and biological assays used in purification and quality control during manufacture of new hormones, growth factors and other biologically active proteins produced by recombinant DNA techniques.

IMMUNOCHEMISTS. PhD with academic or industrial post-doctoral experience; MS with significant laboratory experience. Develop immunoassays for macromolecule gene products; interest in polypeptide hormones and growth factors. Study antigenic and immunogenic properties of virus components with monoclonal and polyclonal antibodies. Opportunity for growth and increasing responsibility for persons interested in diagnostic applications.

MOLECULAR BIOLOGISTS. PhD with significant experience in recombinant DNA methodology and in the expression of recombinant molecules in prokaryote and eukaryote systems. We are seeking individuals with strong motivation and leadership potential. Position involves responsibility for the molecular cloning and expression of genes coding for proteins of pharmaceutical interest.

MOLECULAR BIOLOGISTS. BS or MS with experience in microbiology, protein purification and recombinant DNA methodology. We are seeking highly motivated individuals to work in collaboration with other scientists in the development of products from genetically modified organisms.

PROTEIN CHEMISTS. BS or MS with experience in protein purification (specially HPLC), characterization, modification and amino acid sequence analysis. Positions involve use of sophisticated instrumentation and rare samples. Excellent opportunity to gain experience with state-of-the-art-technology.

We offer an attractive working environment close to the major universities of Northern California, excellent salaries and benefits commensurate with experience and qualifications, interaction with an outstanding group of scientific consultants and an excellent opportunity for personal and professional growth. Send *curriculum vitae*, including publication list and references, in strict confidence to: **Dr. Pablo Valenzuela, Director of Research, or Dr. Lacy Overby, Director of Diagnostics, CHIRON CORPORATION, 4560 Horton St., Emeryville, California 94608.**

Senior Immunologist

Lilly Research Laboratories has an immediate need for a senior immunologist to establish a research program in the area of regulation of the immune response with emphasis on macrophage function and/or immunopotential and to supervise a hybridoma/tissue culture laboratory.

Senior Connective Tissue Pharmacologist

Lilly Research Laboratories also has an immediate need for a senior pharmacologist to establish a research program in connective tissue disease research with emphasis on therapeutic development of anti-arthritis and anti-inflammatory agents based on an understanding of the biochemical and molecular aspects of disease models. The potential for future administrative responsibility exists for persons with appropriate experience.

Candidates should have a Ph.D. degree with postdoctoral and possibly academic experience. A significant record of progress should be reflected in a productive bibliography.

Please send curriculum vitae to:

John W. Crooks, Manager
College Relations (LRL)
Eli Lilly and Company
307 East McCarty Street
Indianapolis, Indiana 46285



An Equal Opportunity Employer, M/F

RADIO RESEARCH BOARD

POSTDOCTORAL FELLOWSHIP AUSTRALIA

GENERAL: As part of its activities designed to foster research in electronics, telecommunications, radio science and related fields in the universities and other appropriate organizations, the Radio Research Board offers a Fellowship Scheme. Under this scheme Fellowships are awarded each year for full-time research by young scientists or engineers of exceptional promise and proven merit. These are postdoctoral awards tenable for a period of 2 years in an Australian university, approved research institute or industrial laboratory as determined by negotiation between a prospective Fellow and the Board. The agreed area of research will also be determined by negotiation but the Board is prepared to consider any proposal relevant to its interests.

QUALIFICATIONS: The applicants should have a PhD degree or its equivalent and be preferably under 30 years of age.

Radio Research Board Fellowships are available to applicants of all nationalities but they are asked to indicate their future plans.

STIPEND: The stipend will normally follow that applicable to the Queen Elizabeth II awards, currently \$A23,437 (\$A25,446 over 28 years of age). The stipend is subject to income tax.

ALLOWANCES: Appropriate allowances and travel expenses are available. Host institutions may be paid an allowance toward the cost of supporting the Fellow.

APPLICATIONS: Persons interested in applying for the above Fellowship should obtain application forms and a statement of the conditions from the Secretary, Radio Research Board, PO Box 225, Dickson ACT 2602 Australia.

Applications close on 23 September 1983 and in the normal course of events candidates may expect to be advised on the outcome of their applications in December 1983.

POSITIONS OPEN

POSTDOCTORAL POSITION IN IMMUNOLOGY. Positions available for qualified Ph.D.'s to study mechanisms of transmembrane signaling in lymphocytes. Studies will focus upon flow cytometric and biochemical analysis of early changes in cell physiology resultant from ligand binding to cell surface receptor immunoglobulin and receptors for growth and differentiation inducing lymphokines, and coupling of these phenomena to subsequent changes in cell function. Stipend as per NIH criteria. Send curriculum vitae and names of three references to: **Dr. J. C. Cambier, National Jewish Hospital and Research Center, 3800 East Colfax Avenue, Denver, Colorado 80206.**

TWO POSTDOCTORAL POSITIONS

Two postdoctoral positions available immediately for research at the Jules Stein Eye Institute. Studies will focus on the biochemistry of cataractous human lenses and on cyclic nucleotide metabolism/phosphorylation in the retina. Individuals with appropriate backgrounds should send curriculum vitae and names of two references to: **Dr. Joseph Horwitz or Dr. Debora Farber, Jules Stein Eye Institute, University of California, Los Angeles, School of Medicine, Los Angeles, Calif. 90024.**

POSTDOCTORAL POSITION available immediately for studies on dopamine neurons and antipsychotic drugs in multidisciplinary research programs. Background and experience in electrophysiology, pharmacology, and neuroanatomy are highly desirable. Send curriculum vitae and three references to: **Dr. Rex Y. Wang, Department of Pharmacology, St. Louis University School of Medicine, 1402 South Grand Boulevard, St. Louis, Mo. 63104. An Equal Opportunity/Affirmative Action Employer.**

POSTDOCTORAL POSITION now available for Ph.D. in the field of biochemistry, neuroendocrinology. Successful applicant will join ongoing research investigating normal and tumor biosynthesis of vasopressin, oxytocin, and neuropeptides. Send curriculum vitae, description of research experience, and names of three references to:

**Dr. William G. North
Department of Physiology
Dartmouth Medical School
Hanover, N.H. 03756**

POSTDOCTORAL POSITION IN BIOCHEMISTRY to study the structure, mechanism of action, and regulation of lipogenic enzymes. Children's Hospital Medical Center, Research Laboratory, is seeking an individual to work with Dr. Stuart Smith. Salary: \$20,000. Send résumé and either names and telephone numbers of three references or three letters of recommendation to: **Children's Hospital Medical Center, Personnel Department, 51st and Grove Streets, Oakland, Calif. 94609. Equal Opportunity Employer, M/F.**

POSTDOCTORAL STAFF FELLOW position to conduct research on acquired immune deficiency syndrome (AIDS) available immediately. Appointment for a 2-year period. Candidates experienced in DNA cloning and sequencing, mRNA isolation, and DNA/mRNA hybridization preferred. Salary: \$20,256 to \$24,508 depending on postdoctoral experience. Send curriculum vitae, brief summary of research interest and experience, and names of three references to: **Louise M. Griggs, Centers for Disease Control (CDC), Atlanta, Ga. 30333, or telephone: 404-329-3271. CDC is an Equal Opportunity Employer.**

PROGRAMMER ANALYST MEDICAL COMPUTING

Scientific applications; 40 hours per week. Salary range: \$2000 to \$2500 per month. Job description: Medical computing. The applicant will coordinate the project efforts in application areas of patient monitoring and patient physiological testing. The patient monitoring applications will deal with special care units (trauma, shock, ICU, CCU, operating room, and recovery room). The patient physiological testing will deal with Catheterization Laboratory, Pulmonary Functions Laboratory, and stress testing. The applicant will be responsible for the design of software modules, documentation, training, programming, installation, and customer support. Degree required: Ph.D. in medical computing. Special requirements: At least 2 years experience of real-time programming and assembly language experience on Data General computers. Résumés to be sent to: **Utah Jobs Service, attention: Julia Drury, 1234 South Main Street, Salt Lake City, Utah 84147. Job Number 70340. Employer is an Equal Opportunity Employer.**

The Salk Institute

HAS IMMEDIATE OPENINGS FOR THE FOLLOWING POSITIONS:

Post-doctoral position for research in plant cell biology at the molecular level which provides an opportunity to experience and exploit monoclonal antibody and subsequently recombinant DNA technologies in plant systems. Experience in plant cell biology will be an advantage.

Post-doctoral position similar to position above except that experience in cell and protoplast culture and morphogenesis (especially in cereals) will be an advantage.

Research Assistant position in plant molecular genetics program for individual with B.S. or M.S. degree in molecular genetics, microbiology, molecular or cellular biology. Responsibilities include isolation and maintenance of nucleic acids, plus some selection and maintenance of mutant plant cells and protoplast manipulation. Experience with plant systems not essential.

Research assistant position in cell biology for individual with B.S. or M.S. in biochemistry, molecular or cell biology. Experience with mammalian cell culture will be an advantage.

The following position is available November 1983:

Post-doctoral position for research on enzyme regulation and gene expression using recombinant DNA and biochemical approaches.

We offer a comprehensive benefits package and competitive salary. If interested, please send a current resume, transcripts and names of three professional references to:

The Salk Institute

P.O. Box 85800, Dept. 0008, San Diego, CA 92138

Is there a Brain-Drain in Biotechnology?

Research study into 'Biotechnology and Future Manpower Needs' seeks to identify UK Biotechnologists working overseas

The Biotechnology Directorate of the UK Science and Engineering Research Council (SERC) has commissioned the Institute of Manpower Studies to undertake a study of the supply and demand for highly qualified biotechnologists in the UK.

Particular attention is being paid to investigating the extent that a 'brain-drain' is, or may be, a constraint on UK biotechnology. Consequently, the Research Team are keen to hear from, or about, UK biotechnologists working or about to work overseas. If you are, or know of, such a person, please write to the Team at the address below.

The Research is being carried out by David Parsons and Richard Pearson, who may be contacted for further information about the study, at:

Institute of Manpower Studies,
Mantell Building, University of
Sussex, Falmer, Brighton,
BN1 9RF England.
Tel: Brighton (0273) 686751.


INSTITUTE OF
MANPOWER STUDIES

PRODUCT DEVELOPMENT ENGINEER-HOLLOW FIBER

Travenol Laboratories, Inc., is a leading manufacturer of products for critical medical care. Responsible for dialysis product development, Travenol's Artificial Organs Division seeks expertise in the field of semipermeable hollow fiber.

Independent and aggressive interpersonal skills are needed to pursue programs for technology identification and application for this Division's highly visible product development efforts. 2-4 years experience in semipermeable hollow fiber research and development is essential, while previous exposure to medical device product development and regulatory interaction is considered advantageous. A Master's Degree in Chemical Engineering, a related discipline, or equivalent is required. Postgraduate academic achievement will also be considered. Flexibility to travel is essential.

Travenol's Corporate Engineering Development Center is located in northern Illinois. A professional environment, competitive salary and comprehensive benefits package including profit sharing, employee stock purchase program, and relocation assistance is provided for the qualified individual interested in this opportunity. Forward your resume, in confidence, to: **M. Lindahl, Dept. FP, Post Office Box 490, Round Lake, Illinois 60073.**


TRAVENOL
Equal Opportunity Employer

Université du Québec, Rimouski, Faculty Positions (Two in Oceanography)

The Université du Québec à Rimouski seeks qualified persons to fill the following positions:

Full-time professor of biological oceanography

FUNCTIONS: The successful candidate will be required to teach courses at the undergraduate and graduate levels and to undertake research oriented towards the comprehension of interaction phenomena between the pelagic and benthic realms. He or she would be expected to integrate research with existing programs involving the structural evolution of both littoral and deep benthic communities and exchanges between estuarine and marine environments.

REQUIREMENTS: Doctorate in biological oceanography or related discipline with specialization in phytoplankton research, as well as a good knowledge of benthic ecology, numerical ecology, and preferably, of estuaries. The preferred research field should be pelagic/benthic interactions. Courses are given in French.

Full-time professor of geological oceanography

FUNCTIONS: The successful candidate will be required to teach courses at the undergraduate and graduate levels and to develop new courses in subjects such as mineralogy, stratigraphy and micropaleontology, and will be expected to collaborate with existing research programs in the fields of benthic-boundary layer biogeochemistry and coastal sediment dynamics.

REQUIREMENTS: The successful candidate must possess the doctorate in geological oceanography or marine geology with specialization in mineralogy and/or micropaleontology, and direction research involving Quaternary marine deposits. Courses are given in French.

All applications will be treated confidentially. (Canadian law requires that Canadian citizens or landed immigrants be given preference). Interested persons should send their curriculum vitae, before August 26 1983, to:

Directeur
Département d'océanographie
UNIVERSITÉ DU QUÉBEC À RIMOUSKI
300, avenue des Ursulines
Rimouski, QC G5L 3A1



Université du Québec à Rimouski

DEPARTMENT OF HEALTH AND HUMAN SERVICES Public Health Service Food and Drug Administration Bureau of Foods

RESEARCH MANAGEMENT POSITION Finfish and Shellfish Safety Research Program

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

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

This is a career Federal Civil Service position. Salary (\$48,553 to \$56,643) is based on qualifications. Applications (Personal Qualifications Statement SF-171) are to be sent to Dr. Fred R. Shank, Deputy Associate Director for Nutrition and Food Sciences (HFF-201), Bureau of Foods, 200 C Street, SW, Washington, DC 20204. A current curriculum vitae and bibliography must accompany all applications.

THE FOOD AND DRUG ADMINISTRATION IS AN EQUAL OPPORTUNITY EMPLOYER.

Applications must be postmarked no later than August 26, 1983.

POSITIONS OPEN

POSTDOCTORAL POSITION is available in the Department of Pharmacology to study the mechanism of human blood platelet activation by thromboxane A₂. Previous experience in platelet research and receptor pharmacology is desirable. The applicant should have a Ph.D. in pharmacology or biochemistry and should be familiar with various laboratory procedures involving chromatography and gel electrophoresis. The starting salary is \$16,000 to \$17,000 per year. Please send curriculum vitae and the names of three references to: **Dr. Guy C. Le Breton, Department of Pharmacology, University of Illinois College of Medicine, 835 South Wolcott Avenue, Chicago, Ill. 60612.** *An Equal Opportunity/Affirmative Action Employer.*

POSTDOCTORAL/RESEARCH ASSOCIATE position available 1 September to investigate self-control of peripheral vascular functions in humans. Candidate should have a Ph.D. or M.D. and experience in cardiovascular psychophysiology. Please send curriculum vitae, three letters of recommendation, and any publications to: **Robert Freedman, Ph.D., Director, Behavioral Medicine Laboratory, Lafayette Clinic, Wayne State University, 951 East Lafayette, Detroit, Mich. 48207.**

REGENTS PROFESSORSHIP IN MOLECULAR BIOLOGY University of Kansas

We seek a distinguished scholar to hold a Regents professorship in molecular biology in its broadest sense. This individual should be an internationally recognized scholar with a productive, respected research program; be a catalyst for innovative research with colleagues; and interact with others in science, technology, and industry to enhance the economic development of the state.

Salary and other aspects of the appointment are negotiable, depending upon experience and performance. Appointment effective 1 January 1984 or as negotiated.

First consideration will be given to applications and nominations received by 15 October. Subsequent candidates will be included in a monthly review until the position is filled. Applications, nominations, and requests for further information should be sent to: **Professor Robert S. Hoffmann, Biological Science, University of Kansas, Lawrence, Kans. 66045.**

Equal Opportunity/Affirmative Action Employer

PROTEIN SEQUENCING TECHNOLOGY

St. Jude Children's Research Hospital invites applications for the position of manager of a new Protein Sequencing Facility that will support research projects of a number of faculty. Candidates should have a Ph.D. and must have research experience in the area of protein/peptide structure, preferably involving sequencing. Appointment will be to a faculty position (research associate) and the candidate will be expected to develop his/her own research program for which initial support will be available. Applications should include curriculum vitae and the names and addresses of three references and should be sent to:

**Dr. Raymond L. Blakley
Division of Biochemical and Clinical Pharmacology
St. Jude Children's Research Hospital
332 North Lauderdale
Memphis, Tennessee 38128**

SYSTEMIC AND ENVIRONMENTAL PHYSIOLOGIST. The Department of Animal Physiology at the University of California, Davis, invites applications for an assistant professor, the level depending on background and experience. This is an 11-month, full-time, tenure-track appointment. Minimum qualifications include a Ph.D. in systemic/environmental physiology and a demonstrated ability to conduct high-quality, independent, and original research in any area of systemic/environmental physiology. The successful applicant will be expected to contribute to the department's teaching and advising program in systemic and environmental physiology for undergraduate and graduate students. Applicants should submit curriculum vitae, bibliography, recent reprints, transcripts (if Ph.D. conferred within last 5 years), and the names and addresses of at least three references to: **Chair, Systemic/Environmental Physiologist Search Committee, Department of Animal Physiology, University of California, Davis, Calif. 95616.** Closing date for receipt of applications is 15 October 1983.

The University of California is an Equal Opportunity/Affirmative Action Employer and invites applications from all qualified individuals.

POSITIONS OPEN

POSTDOCTORAL POSITION—Research Associate—Available immediately. Ph.D. in biochemistry or cell biology wanted to study ACTH control of adrenal cells at the molecular level. Project involves characterization and mechanism of action of a 2K regulatory protein. Salary: \$14,000 to \$16,000. Send curriculum vitae, publications, and names of three references to: **Dr. Colin R. Jefcoate, Department of Pharmacology, University of Wisconsin Medical School, 1300 University Avenue, Madison, Wis. 53706.**

POSTDOCTORAL SCIENTIST. Position available for Ph.D. in biochemistry or related field to study lipoprotein metabolism and atherosclerosis in non-human primates under supervision of Dr. Rampratap S. Kushwaha, associate scientist. Applicant should be experienced with methods in protein biochemistry and metabolism. Minimum first year salary is \$17,784 with consideration made for prior relevant postdoctoral experience. Position available for 2 years with the opportunity for further extension or conversion to a staff position. Apply to: **Personnel Manager, Southwest Foundation for Research and Education, P.O. Box 28147, San Antonio, Texas 78284.** Include curriculum vitae, a description of research interests, and names of three references, including major professor, in initial correspondence.

An Equal Opportunity/Affirmative Action Employer

QUEEN'S UNIVERSITY AT KINGSTON, ONTARIO, CANADA

**Department of Obstetrics and Gynaecology
and Department of Physiology
REPRODUCTIVE ENDOCRINOLOGIST**

The Department of Obstetrics and Gynaecology in collaboration with the Department of Physiology is seeking a Ph.D. for a term appointment in the field of reproductive endocrinology. The position involves overall supervision of the laboratories of the Division of Reproductive Endocrinology, collaboration in work in progress in neuroendocrinology and developmental endocrinology, and the conduct of independent research in a related area as well. In addition to a solid background in RIA, teaching and supervisory skills are essential in this position.

The joint appointment in both departments will be at an academic rank appropriate to background and experience with an initial appointment for 2 years. A further term is dependent upon securing the independent funding.

Interested candidates should send their curriculum vitae and names of three referees to: **Dr. James A. Low, Head, Department of Obstetrics and Gynaecology, Queen's University, Kingston, Ontario, Canada K7L 3N6.** *In accordance with Canadian immigration policy, consideration, in the first instance, will be given to Canadian citizens and landed immigrants.*

RESEARCH ASSOCIATE. Position available immediately to study human stem cell proliferation. Research involving biochemical and immunological characterization of growth factors for bone marrow stem cells [see *Blood* 60, 583-594 (1982)]. Preference will be given to applicants with experience in cell culture and to those with a strong background in cellular immunology. Experience in analysis of mammalian cell growth factors will be helpful. Salary range: \$16,000 to \$19,000 per year, depending upon applicant's qualifications. Interested applicants should send résumé and names of three references to: **Nicholas Dainiak, M.D., or Carl M. Cohen, Ph.D., Department of Biomedical Research, St. Elizabeth's Hospital, 736 Cambridge Street, Boston, Mass. 02135.** *An Equal Opportunity Employer.*

RESEARCH SCIENTIST. Challenging position in San Francisco-based biotechnology firm for individual with expertise in hybridoma technology. Requirements include a Ph.D. in a related field plus three or more years of experience in research involving hybridoma production, analysis, and screening. Desirable expertise includes the following areas: producing monoclonal antibodies to tumor-associated antigens, in vivo and in vitro sensitization systems, large-scale screening procedures, transfection, flow cytometry, production of human-human hybridomas, experimental design and analysis and management. An excellent work atmosphere with academically oriented colleagues, excellent salary, and benefits are offered to the individual with appropriate training, expertise, and capability to direct a team whose goal is developing and testing new monoclonal antibodies. Please send curriculum vitae and three letters of recommendation to:

Box 202, SCIENCE

POSITIONS OPEN

POSTDOCTORAL POSITION available in September 1983 to study the in vivo interactions between serum factors, RES cells, and liposomes. The tenure of the position will be (two) 1-year renewable terms. Salary will be \$20,000 per year. The successful applicant will have received a Ph.D. within the last 2 years. Experience handling small animals as well as experience in cell biology and protein biochemistry would be useful. Applicants should send curriculum vitae and a list of three references to: **Dr. Marc Ostro, The Liposome Company, Inc., 1 Research Way, Princeton Forrestal Center, Princeton, N.J. 08540.**

Affirmative Action/Equal Opportunity Employer

RESEARCH SCIENTIST. The Lovelace Medical Foundation has an opening for a Ph.D. level **MICROBIOLOGIST**. We are seeking an individual with training in bacteriology or virology and immunology. Send résumé to: **Lovelace Medical Foundation, Human Resources Department, 5400 Gibson Boulevard, SE, Albuquerque, New Mexico 87108.**

SYMPOSIUM

SAFETY ASSESSMENT: THE INTERFACE BETWEEN SCIENCE, LAW AND REGULATION 12 to 14 September 1983 Washington, D.C.

Sponsored by the **INTERNATIONAL LIFE SCIENCES INSTITUTE (ILSI)**. Symposium will address: Major policy issues regarding safety assessment, the adequacy of current laws, and strategies for managing problems related to technological advances. Participants will include: Dr. Ian Munro, Canadian Health Protection Branch, Dr. Harold Grice, ILSI, Dr. Sanford Miller, U.S. Food and Drug Administration.

For complete program brochure and registration information, contact:

**Mary Rita Prah, Administrator
International Life Sciences
Institute
900 17th Street, NW, Suite 600
Washington, D.C. 20006
Telephone: 202-659-0074**

ILSI

FELLOWSHIPS

POSTDOCTORAL FELLOWSHIP in the Orthopedic Research Laboratory at West Virginia University. Requires knowledge of mechanics, FORTRAN, DEC minicomputer systems. Will analyze kinetics of human body motions. Send curriculum vitae and three references to: **R. Bruce Martin, Ph.D., Department of Orthopedic Surgery, West Virginia University, Morgantown, W.Va. 26506.**

The Weizmann Institute of Science is pleased to announce the establishment of the

JOSEPH MEYERHOFF FELLOWSHIPS 1984/1985

The Meyerhoff Fellowships are intended to attract outstanding scientists to the Weizmann Institute. They will be awarded to candidates from all over the world and are offered to senior scientists for a period of 2 months to 1 year.

Candidates are requested to apply to:

**The Meyerhoff Fellowship Program
c/o The Academic Secretary
The Weizmann Institute of Science
Rehovot 76100, Israel**

Postdoctoral Researcher Molecular Biology

Genentech, Inc., a recognized leader in the field of biotechnology research, has a challenging position open at the postdoctoral research level which will involve the study of transcription and translation of heterologous genes in yeast.

Successful candidate will have a PhD in Molecular Biology, experience with transcription and translation of procaryotic or eucaryotic organisms, and a strong record of accomplishment in this field. We invite applications from, and will give preference to, candidates who are available immediately.

We offer excellent compensation and a comprehensive benefits package in addition to a stimulating and professional team environment. For immediate consideration please send resume and the names of three references to **Human Resources**, referring to **Position SCI-344**.

Genentech, Inc.
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Genentech, Inc.

460 Point San Bruno Blvd.,
South San Francisco,
CA 94080.

We are an equal opportunity employer m f

Sr. Scientist Cellular Immunology

Genentech, Inc., a recognized leader in the field of recombinant DNA research, is seeking an outstanding Senior Scientist to direct and coordinate research on regulators of cellular immunology.

The individual who fills this position will conduct independent research, provide leadership to an inter-departmental group of Immunologists, and help guide the company's future development of immunity-related projects. Qualifications for this position are a PhD or an MD in a relevant discipline, at least 6 years post-graduate basic research experience, and strong record of accomplishment in the field.

We offer an excellent compensation and a comprehensive benefits package in a stimulating and challenging environment. For immediate consideration please forward your curriculum vitae including the names of three references to **Human Resources**. Please refer to **Position SCI-334**.

Genentech, Inc.
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LABORATORY SUPERVISOR.

Exciting Florida Opportunity.

Phenomenal growth. Solid financial base. An exciting combination of significant new products. Practically unlimited markets. Sophisticated management systems. A leap in sales from \$41 million in '81 to \$82 million in '82. These are some of the reasons for excitement at Key Pharmaceuticals.

The qualified candidate will be responsible for supervising a newly created laboratory and conducting the technical R&D aspects of an allergy/immunology program. You should have experience in protein biochemistry and immunochemistry research. An expertise in protein isolation, protein analytical analysis and immunochemical techniques is a prerequisite. Minimum 2 years experience with an MS degree, a Ph.D. or equivalent preferred.

Selected as the Number One company in Florida, we offer enviable career opportunities in the pharmaceutical marketplace, an excellent salary and benefits package and a climate ideal for professional advancement.

Please send resume with salary history to: **Hal Powell, Manager, Corporate Employment, Key Pharmaceuticals, Inc., P.O. Box 693670, Miami, Florida 33169.** (Only those resumes including salary information will be considered.)



Key Pharmaceuticals, Inc.

HIGH ENERGY PEOPLE
OPENING NEW DOORS TO HEALTH.
Equal Opportunity Employer M/F

ABBOTT DIAGNOSTICS: WHERE WHERE IDEAS BECOME REAL...

A TECHNOLOGY DRIVEN COMPANY — DRIVEN TO LEADERSHIP

Imagination. Freedom. Intelligence. Strong financial backing. The key aspects of a technology driven organization that is driving towards a variety of new products for the medical care field in 1983 and beyond.

Abbott Diagnostics Division has accelerated its efforts to lead the medical diagnostics industry with products that solve problems ... with products that answer needs.

Here is a scientific research environment that is unparalleled. An environment that has state-of-the-art equipment ... state-of-the-art technology ... and state-of-the-art thinking. This is an environment that enjoys the full, unrestricted backing of a \$2.5 billion corporation. It's also an environment that delivers. With imagination. And with outstanding results.

THESE NEW PRODUCTS SET THE PACE — A PACE WE INTEND TO KEEP

One look at the Abbott Diagnostics Division of 1983 tells you where we're going.

Successful new product introductions of the past five years include breakthroughs in immunoassays, as



well as new systems for drug and disease monitoring.

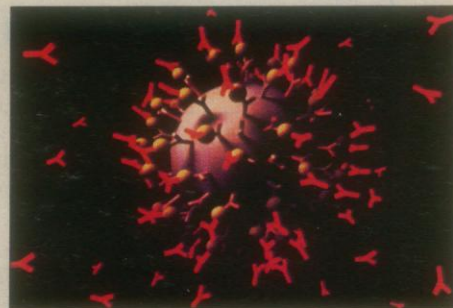
In the immunoassay field, Abbott Diagnostics has historically been a leader for reagents that diagnose hepatitis, rubella and many other diseases. Our traditional strength in Radio-immunoassay development has now been greatly enhanced through advances in life sciences and electronics technologies leading to enzyme and fluoro immunoassay systems.

Our recently introduced TDX System brings increased simplicity and sophistication to therapeutic drug monitoring by using microprocessor controlled fluorescence polarization techniques. And Abbott's CEA (carcinoembryonic antigen) reagent kits help physicians around the world monitor the effects of therapy on cancer patients. New ideas. New technologies. New products. For Abbott Diagnostics, technology means leadership.

ABBOTT PROFESSIONALS HAVE THEIR OWN IDEAS ABOUT GROWTH

Abbott Diagnostics centers its advanced R&D activities around interdisciplinary teams of scientists who bring together technical expertise, imagination and creativity. At Abbott there is a firm commitment to the free expression and exploration of ideas. We encourage you to think. And we reward smart thinking with recognition, advancement and the opportunity to see your ideas become meaningful products.

If you seek an environment that offers financial strength, tremendous professional support, and true technological leadership, consider Abbott Diagnostics Division.



Immunoassay

OPENINGS IN 1983 — SUCCESS CREATES NEW GROWTH

The following list of positions represents some of the openings that will be available during 1983 at Abbott Diagnostics. If you do not see yourself in this list, please do not hesitate to contact us. We always welcome the opportunity to talk with talented professionals.



ABBOTT
ABBOTT PARK ILL. 60064
"HEALTH CARE WORLDWIDE"

TECHNOLOGY TAKES FORM... WHERE GROWTH CONTINUES...

BIOCHEMIST — IMMUNOASSAY DEVELOPMENT

Utilizing an innovative systems approach, this position involves the purification and characterization of protein and carbohydrate antigens. Qualified candidates will have a Ph.D. in Biochemistry or related discipline, and 2-3 years of post-doctoral experience in immunoassay development with an emphasis on solid phase methodology.

BIOCHEMIST — IMMUNODIAGNOSTICS/CLINICAL CHEMISTRY

Selected candidate will pursue independent research with a focus on the development of new diagnostic test kits. A Ph.D. in Biochemistry or related area plus some previous research experience required. Knowledge of immunochemistry and liposome technology desirable.

BIOCHEMIST/ BIO-ORGANIC CHEMIST

This position involves assay development for new instrumentation and requires an individual with a Ph.D. or an MS degree plus industry experience. All applicants should have a minimum of 1 year experience in assay development, enzyme stabilization or organic chemistry (not synthesis), and a knowledge of enzymology, blood chemistries, and chromophores.

PH.D. — BIOCHEMISTRY/ IMMUNOCHEMISTRY

This position involves developing novel approaches in the area of monoclonal antibody immunoassays. The qualified candidate will have Ph.D. and post-doctoral experience. A strong knowledge of biochemical and immunochemical laboratory procedures is essential, with thorough experience in hybridoma and monoclonal antibody production as demonstrated by patents and/or publications is required.

CLINICAL CHEMIST

This position is ideal for the professional interested in new product research. Candidates will have an advanced degree in Biochemistry, Bio-Analytical Chemistry or Clinical Chemistry, Ph.D. preferred, and at least 2 years of industrial and/or laboratory experience in enzymology, organic synthesis, protein chemistry, and reagent development. Knowledge of medical instrumentation and systems development desirable.

REAGENT MANUFACTURING GROUP LEADER

This position will be responsible for the production and purification of monoclonal antibodies used in the manufacture of diagnostic kits. Applicants will have a Ph.D. or MS in Biochemistry, with experience in monoclonal antibody production, protein purification and chromatography techniques required. Also required will be strong supervisory and interpersonal skills since the individual will be responsible for training and supervising several technicians, as well as interfacing with other functional groups.

ORGANIC CHEMIST

Senior position for an organic chemist experienced in the preparation of precursors, tracers and various drug analogs for use in the production of immunodiagnostic kits. Opportunities also exist for independent research. Five or more years experience with a diagnostics company and a Ph.D. in organic chemistry are required.

TECHNICAL SUPPORT SPECIALIST

This position involves troubleshooting technical problems, upgrading product performance through the implementation of new technology, and improving processes for efficiency yield and cost reduction, while interacting with all operations areas. The qualified candidate will possess a Ph.D. or equivalent in Biochemistry, Clinical Chemistry or related disciplines with 2-5 years experience in immunoassay technology.

BIOCHEMIST — ANALYTICAL CHEMIST

Applicant should have an MS with experience or a Ph.D. in Biochemistry or Analytical Chemistry. Past research should include electrochemical measurement of electrolytes and metabolites. Experience with ion-selective electrodes including ionophore development and membrane formulation is highly desirable.

INSTRUMENTATION SCIENTIST

The individual in this key position is responsible for reagent instrument system integration. A highly analytical background involving a broad base of physical testing skills is required. An advanced degree in any of the applied physical sciences or engineering combined with a strong knowledge of chemistry, optics and electronics is essential.

PH.D. — MOLECULAR BIOLOGY

The qualified candidate will possess a Ph.D. and post-doctoral experience in modern molecular biology. This experience should include molecular cloning procedures, mRNA purification, and cDNA cloning, with a working knowledge of microbial genetics and enzyme purification also desirable. This background will allow the candidate to join an ongoing project on the cloning and expression of genes involved in antibiotic biosynthesis.

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