

simultaneously, when there is no doubt that a very interesting but looser association did exist.

The more than 9000 surviving sheets of Harriot's papers consist mostly of mathematical results and experimental and observational records—typifying in many ways the emerging “new science” of the Scientific Revolution—but they contain little that reveals their broader context and even less that reveals his aims and motives. Consequently, only by painstaking analysis of his manuscripts have historians been able to recognize their significance, reconstruct the development of his thought, and place it in historical perspective. Perhaps because of these difficulties of interpretation, and also because he recently edited *A Source Book for the Study of Thomas Harriot* (Arno Press, 1981) that contains reprints of much of the specialist literature, Shirley has chosen not to present Harriot's scientific work in depth. Indeed, he virtually ignores his mathematics. Since Harriot's scientific investigations were the principal passion of his life, this results in a meticulously documented chronicle of his life rather than a full-bodied biography. Still, Shirley's book will bring the intriguing Harriot to a broader audience and for historians serve as a solid foundation for future research.

ALAN E. SHAPIRO

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Biological Development

From Egg to Embryo. Determinative Events in Early Development. J. M. W. SLACK. Cambridge University Press, New York, 1983. x, 241 pp., illus. \$49.50. Developmental and Cell Biology Series, 13.

The development of a batch of embryos is always impressive because of the uniformity of the developmental process and the dramatic increase in complexity that occurs as the egg generates an organism with a definite body plan. *From Egg to Embryo* deals with the mechanisms that underlie the genesis of this spatial pattern. It was written to explain the mind set and the major findings of experimental embryologists to a general audience of biologists.

The book is divided into three parts. The first part delimits the problem that Slack is concerned with: the mechanisms that are responsible for regional specification in the early embryo. Slack argues,

I think quite correctly, that elucidating these mechanisms is the central problem in the field of developmental biology. This part of the book also introduces the concepts and defines the terms that experimental embryologists use. Words that serve as bridges between observations and concepts sometimes have different meanings for different workers in this field, and there has been a tendency for groups of developmental biologists to invent their own jargon. Slack has defined his terms carefully in order to avoid these problems. One might quibble with a few definitions; most of these cases reflect the Wolpertization of English developmental biology.

The second part of the book provides an overview of the experimental evidence that indicates when and how regional specification occurs during early embryogenesis in amphibians, insects, other selected invertebrates, the mouse, and the chick. This survey is very well done. It not only points out the unique contribution that each of these groups has made to experimental embryology, it also considers the outcome of a set of similar experiments on embryos of animals that develop in different ways. This allows one to try to compare the extent to which the embryos use the same developmental mechanisms. The chapter on invertebrates other than insects is not as well done as the chapters on the other groups. Many of the eggs of such invertebrates have localized cytoplasmic determinants that appear to be responsible for regional specification in the early embryo. Slack seems a bit uncomfortable with this notion.

The last part of the book presents a number of models devised by theoretical biologists that could be used to explain various aspects of regional specification. These models fall into three general classes; they deal with reaction systems that could exist in more than one stable steady state, the role of axial properties in integrating developmental events in different parts of an embryo, and the emergence of discontinuities between regions in the embryo. Such models are just beginning to have an impact on developmental biology. Variants of some of the models discussed here have played an important role as a guide to research work on regulation in *Hydra* and *Dictyostelium*. This work has involved an active collaboration between model builders and experimentalists. Unfortunately there aren't any good examples of this kind of approach involving early embryogenesis. Though Slack does a good job of describing the models he presents and explaining their limitations,

most of his attempts to use the models in the context of early embryogenesis only engender skepticism on the part of the reader.

This book would make an excellent special topics textbook in an advanced undergraduate course in developmental biology. It is much more interesting than any of the current textbooks on the market.

GARY FREEMAN

*Department of Zoology,
University of Texas, Austin 78712*

Books Received

Advances in Cancer Research. Vol. 39. George Klein and Sidney Weinhouse, Eds. Academic Press, New York, 1983. xii, 343 pp., illus. \$46.

Advances in Cellular Neurobiology. Vol. 4. Sergey Federoff and Leif Hertz, Eds. Academic Press, New York, 1983. xxii, 447 pp., illus. \$62.50.

Advances in Computers. Vol. 22. Marshall C. Yovits, Ed. Academic Press, New York, 1983. xvi, 377 pp. \$60.

Advances in Cyclic Nucleotide Research. Vol. 15. Paul Greengard and G. Alan Robison, Eds. Raven, New York, 1983. x, 522 pp., illus. \$64.

Advances in Superconductivity. B. Deaver and John Ruvalds, Eds. Plenum, New York, 1983. viii, 529 pp., illus. \$75. NATO Advanced Science Institutes Series B, vol. 100. From an institute, Erice, Italy, July 1982.

Basic Group Processes. Paul B. Paulus, Ed. Springer-Verlag, New York, 1983. xii, 356 pp. \$29.90. Springer Series in Social Psychology.

BASIC Thermodynamics and Heat Transfer. D. H. Bacon. Butterworths, Boston, 1983. x, 176 pp., illus. Paper, \$19.95.

Basic Topology. M. A. Armstrong. Springer-Verlag, New York, 1983. xii, 253 pp., illus. \$19.80. Undergraduate Texts in Mathematics.

Bibliography of the Rhinoceros. An Analysis of the Literature on the Recent Rhinoceroses in Culture, History and Biology. L. C. Rookmaaker. Balkema, Rotterdam, 1983 (U.S. distributor, MBS, Salem, N.H.). xii, 292 pp. + plates. \$25.

Computer Aided Design of Multivariable Technological Systems. G. G. Leininger, Ed. Published for the International Federation of Automatic Control by Pergamon, New York, 1983. xiv, 700 pp., illus. \$150. IFAC Proceedings Series. From a symposium, West Lafayette, Ind., Sept. 1982.

Computer Applications in Chemistry. Stephen R. Heller and Rudolph Potenzzone, Jr., Eds. Elsevier, New York, 1983. xii, 394 pp., illus. \$89.50. Analytical Chemistry Symposia Series, vol. 15. From a conference, Washington, D.C., July 1982.

Computer Methods for Circuit Analysis and Design. Jiri Vlach and Kishore Singhal. Van Nostrand Reinhold, New York, 1983. xxx, 594 pp., illus. \$42.50. Van Nostrand Reinhold Electrical/Computer Science and Engineering Series.

Computer Models of Speech Using Fuzzy Algorithms. Renato De Mori. Plenum, New York, 1983. xxvi, 482 pp., illus. \$59.50. Advanced Applications in Pattern Recognition.

Congenital Malformations of the Urinary Tract. F. Douglas Stephens. Praeger, New York, 1983. xiv, 577 pp., illus. \$45.

The Creative Theory of the Universe. Frank Jakubowsky. Published by the author, 1565 Madison Street, Oakland, Calif., 1983. vi, 202 pp. Paper, \$8.95.

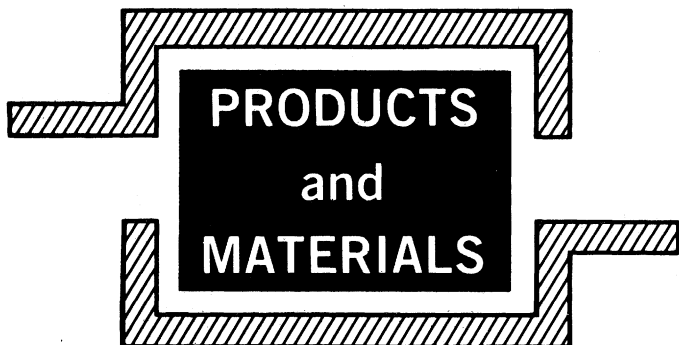
Dryland Agriculture. H. E. Dregne and W. O. Willis, Eds. American Society of Agronomy/Crop Science Society of America/Soil Science Society of America, Madison, Wis., 1983. xviii, 622 pp., illus. \$35. Agronomy, no. 23.

Electronic Inventions and Discoveries. Electronics from Its Earliest Beginnings to the Present Day. G. W. A. Dummer. 3rd ed. Pergamon, New York, 1983. x, 233 pp., illus. \$40; paper, \$18.

Energy Resources. J. T. McMullan, R. Morgan, and R. B. Murray. 2nd ed. Edward Arnold, Baltimore, 1983. vi, 191 pp., illus. Paper, \$12.95.

Fundamentals of Gas Dynamics. Robert P. Benedict. Wiley, New York, 1983. xii, 244 pp., illus. \$32.95.

Fundamentals of Mathematical Analysis. V. A. Ilyin and E. G. Poznyak. Mir, Moscow, 1982 (U.S. (Continued on page 1096)



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Ion Chromatography Software

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computer. Data from up to ten ion chromatographs (20 detectors) or conventional gas and liquid chromatographs may be processed simultaneously. Each instrument is connected to the 4416 data system through a 20-bit A/D converter. This interface collects and stores the data. Sampling rates range from one point per 10 seconds to 100 points per second. Methods that may be developed include peak detection algorithms in the software for negative peaks, changing the baseline treatments, and altering the bunching factors in a specific operation. Raw data is stored for later analysis. Nelson Analytical. Circle 588.

Pharmacology Software

Programs contain 33 of the computations and statistical procedures most frequently used to evaluate drug efficacy and safety in experiments on animals and humans. A concise description of the theory for each procedure is provided, followed by a presentation of the formulas needed and a fully worked example. Each calculation is self-contained and requires no prior programming knowledge. Included are dosage and concentration; drug stock solutions; mean, standard deviation, and confidence limits; linear regression; graded dose response; enzyme kinetics II—competitive inhibition; *t*-test II—paired data; and Mann-Whitney *U* test and others. Life Science Associates. Circle 587.

Literature

Disposable Laboratory Ware includes pipette tips, sample cups, centrifuge tubes, probe covers, and sample mailers. Helena Plastics. Circle 579.

Electrophoresis Catalog offers a portable scanning densitometer for protein separations, vertical and horizontal units, and a jacketed sequencer for temperature regulation. A technical manual introduces techniques and protocols. Hoefer Scientific Instruments. Circle 580.

Chromatography Refrigerators features two models and their accessories specifically manufactured for liquid chromatography applications. Jewett Refrigerator. Circle 583.

Energy Dispersive X-ray Microanalysis is a primer that expounds on the history and development of these research techniques. Sections include physics, the electron column, x-ray instrumentation, and analysis. KeveX. Circle 584.

CHEMICAL SYSTEMS TECHNOLOGY CENTERS

The US Army Chemical Research and Development Center (CRDC) is seeking sources among United States institutions of higher learning with graduate-level study programs for the establishment of one or more chemical systems technology centers. The program will involve comprehensive research and engineering in subjects such as chemical and biological sensors, air filtration, aerosol technology, systems analysis/dynamics, biotechnology, and catalysts applicable to detection and identification, physical protection and/or decontamination. The program is envisioned to include interaction between CRDC investigators and the technology center staff through cooperative research, personnel exchange and training programs. Interested parties are invited to request a Qualitative Requirements Information Package by writing to the address below. Once registered parties will be furnished, upon their request, more details on the technology centers and/or an invitation to attend a briefing to be held at CRDC on or about 15 April 1984 to discuss the technology centers. This will be followed by an invitation to submit an unsolicited proposal. Telephone requests will not be honored.

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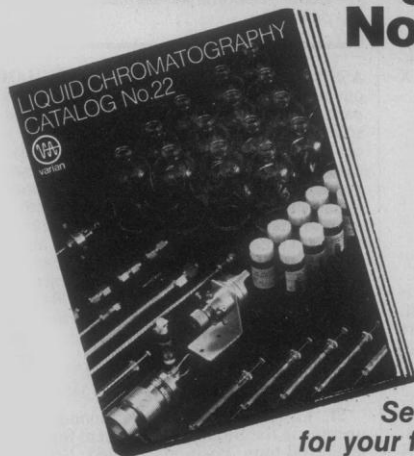
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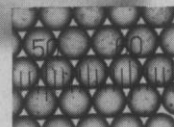
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BOOKS RECEIVED

(Continued from page 1071)

distributor, Imported Publications, Chicago). Two volumes. 640 pp., illus., and 440 pp., illus. \$18.95. Translated from the Russian edition (Moscow, 1980) by Vladimir Shokurov.

Fundamentals of Programming Languages. Ellis Horowitz. 2nd ed. Computer Science Press, Rockville, Md., 1983. xvi, 446 pp., illus. \$26.95. Computer Software Engineering Series.

The Future of Psychoanalysis. Essays in Honor of Heinz Kohut. Arnold Goldberg, Ed. International Universities Press, New York, 1983. xx, 514 pp. \$40.

Galapagos. Islands Lost in Time. Tui De Roy. Viking, New York, 1983. 72 pp., illus., + plates. Paper, \$12.95.

Genetic Rearrangement. K. F. Chater *et al.*, Eds. Sinauer, Sunderland, Mass., 1983. viii, 296 pp., illus. \$35; paper, \$20. From a symposium, Norwich, England, Sept. 1982.

Human Efflorescence. A Study in Man's Evolutionary and Historical Development. Eleanor B. Morris Wu. Green, St. Louis, 1983. x, 399 pp., illus. \$27.50.

Hypertensive Intracerebral Hemorrhage. Masahiro Mizukami *et al.*, Eds. Raven, New York, 1983. xii, 260 pp., illus. \$43.

The IBM/PC and Business Software. James E. Kelley, Jr. Banbury, Wayne, Pa., 1983. x, 342 pp. + disks. Spiral bound, \$39.95.

Methods in Enzymology. Sidney P. Colowick and Nathan O. Kaplan, Eds. Vol. 97, Biomembranes, Park K. Sidney Fleischer and Becca Fleischer, Eds. Academic Press, New York, 1983. xxvi, 681 pp., illus. \$65.

The New Cosmos. Albrecht Unsöld and Bodo Baschek. 3rd ed. Springer-Verlag, New York, 1983. xiv, 479 pp., illus. Paper, \$29.80. Heidelberg Science Library. Translated from the German edition by R. C. Smith.

New Frontiers in Mammary Pathology. Vol. 2. K. H. Hollmann and J. M. Verley, Eds. Plenum, New York, 1983. x, 455 pp., illus. \$55. From a symposium, Paris, Dec. 1981.

Principles of Scientific Sociology. Walter L. Wallace. Aldine (De Gruyter), New York, 1983. xiv, 345 pp. \$24.95.

Problems and Methods of Optimal Structural Design. N. V. Banichuk. Edward J. Haug, Transl. Ed. Plenum, New York, 1983. xxii, 313 pp., illus. \$42.50. Mathematical Concepts and Methods in Science and Engineering, vol. 26. Translated from the Russian edition by Vadim Komkov.

Problems of Drug Dependence, 1982. Louis S. Harris, Ed. National Institute on Drug Abuse, Rockville, Md., 1983 (available from the Superintendent of Documents, Washington, D.C.). xiv, 552 pp., illus. Paper, \$8.50. NIDA Research Monograph, 43. From a meeting, Toronto, June 1982.

A Programmer's Geometry. Adrian Bowyer and John Woodwark. Butterworths, Boston, 1983. xii, 140 pp., illus. \$39.95.

Progress in Sensory Physiology 4. D. Ottoson *et al.*, Eds. Springer-Verlag, New York, 1983. vi, 120 pp., illus. \$30.

Recent Advances in Animal Nutrition—1983. W. Haresign, Ed. Butterworths, Boston, 1983. viii, 242 pp., illus. \$59.95. Studies in the Agricultural and Food Sciences. From a conference.

Recombinant DNA Applications to Human Disease. C. Thomas Caskey and Raymond L. White, Eds. Cold Spring Harbor Laboratory, Cold Spring Harbor, N.Y., 1983. xiv, 371 pp., illus. \$55. Banbury Report 14. From a conference, Cold Spring Harbor, Oct. 1982.

The Reef and Man. Edgardo D. Gomez *et al.*, Eds. Marine Sciences Center, University of the Philippines, Quezon City, 1982. Two volumes. xii, 725 pp., illus., and xii, 785 pp., illus. \$75. From a symposium, Manila, May 1981.

The Reoviridae. Wolfgang K. Joklik, Ed. Plenum, New York, 1983. xvi, 571 pp., illus. \$75. The Viruses.

Synthesis and Modelling of Intermittent Estuaries. A Case Study from Planning to Evaluation. W. R. Cuff and M. Tomczak, Jr., Eds. Springer-Verlag, New York, 1983. viii, 302 pp., illus. Paper, \$22.50. Lecture Notes on Coastal and Estuarine Studies, 3.

Techniques and Concepts of High-Energy Physics II. Thomas Ferbel, Ed. Plenum, New York, 1983. viii, 358 pp., illus. \$49.50. NATO Advanced Science Institutes Series B, vol. 99. From an institute, Lake George, N.Y., July 1982.

Toxicology in the Use, Misuse and Abuse of Food, Drugs and Chemicals. P. L. Chambers, S. Gitter, and C. M. Chambers, Eds. Springer-Verlag, New York, 1983. x, 403 pp., illus. Paper, \$52.50. Archives of Toxicology, Supplement 6. From a meeting, Tel Aviv, March 1982.

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Immunology/Medicine. M.S. 1976. Broad background, M.D. equivalent, 10 years of experience, very good physical science ability, motivated, dedicated, flexible. Open to wide range of opportunities. Box 57, SCIENCE. X

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

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Microbiologist. M.S. Ten years of experience in management in health care field. Also research and clinical laboratory experience. Strong writing/editing, lecturing/training skills; publications. Seeks position in San Francisco Bay area in biotechnology industry in project coordination, clinical research, or interfacing between laboratory and management. I am hardworking and motivated. Excellent references. Box 58, SCIENCE. X

Molecular Biologist. Ph.D., Yale 1982. Research experience in recombinant DNA technology, protein-DNA interactions, large-scale isolation of proteins and DNA, organic synthesis, and protein chemistry. Seeking position with biotechnology company in product management, marketing, academic industrial liaisons. Articulate and aggressive. Box 53, SCIENCE. 3/9, 16, 23

Neuroscientist. Ph.D. 1978. Experienced neurophysiologist with extensive training in behavior. Specialization in sensory-motor integration and recovery of function. Three-year funding from NSF. Experienced teacher in neuroscience and neuroanatomy. Strong publication record. Seeking research/teaching position in academia. Box 59, SCIENCE. X

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The University of Michigan Medical School, Department of Internal Medicine, has an academic appointment available in the Section of Cardiology at the rank of **ASSISTANT PROFESSOR**. Applicant must be Board-certified/eligible in internal medicine and cardiology. He/she will be responsible for interpretation of EKG's, echocardiography, and staffing the Cardiovascular Laboratory, and in staffing the Coronary Care Unit. Applicant is also expected to participate in internal medicine rounds and instruction of house officers and students in internal medicine and cardiology. Duties are to be performed at the Wayne County General Hospital, Westland, Michigan, a University of Michigan core affiliated hospital. Invasive experience is preferred. Send curriculum vitae first-inquiry to: **R. R. Joseph, M.D., Professor and Director of Internal Medicine, Wayne County General Hospital, 2345 Merriman Road, Westland, Michigan 48185.** A nondiscriminatory, Affirmative Action Employer. 205.

University of Michigan Medical School, Department of Internal Medicine, has an academic appointment available in the Division of Rheumatology at the rank of **INSTRUCTOR/ASSISTANT PROFESSOR**. Applicant must be Board-certified/eligible in internal medicine and rheumatology. He/she will be responsible for consultations in rheumatology, rheumatological diagnostic and therapeutic maneuvers, and assisting in staffing the Rheumatology Clinic. Applicant is also expected to participate in internal medicine rounds and instruction of house officers and students. Duties are to be performed at the Wayne County General Hospital, University of Michigan, a core affiliated hospital. Send curriculum vitae first-inquiry to: **R. R. Joseph, M.D., Professor and Director of Internal Medicine, Wayne County General Hospital, 2345 Merriman Road, Westland, Michigan 48185.** A nondiscriminatory, Affirmative Action Employer. 142.

The University of Michigan Medical School, Department of Internal Medicine, has an academic appointment available in the Section of Cardiology at the rank of **INSTRUCTOR**. Applicant must be Board-certified/eligible in internal medicine and cardiology. He/she will be responsible for interpretation of electrocardiograms, echocardiography, and will assist in staffing the Cardiovascular Laboratory and Coronary Care Unit. Applicant is also expected to participate in internal medicine rounds and instruction of house officers and students. Duties are to be performed at the Wayne County General Hospital, Westland, Michigan, a University of Michigan core affiliated hospital. Invasive experience is preferred. Send curriculum vitae first-inquiry to: **R. R. Joseph, M.D., Professor and Director of Internal Medicine, Wayne County General Hospital, 2345 Merriman Road, Westland, Michigan 48185.** A nondiscriminatory, Affirmative Action Employer. 279.

University of Michigan Medical School, Department of Internal Medicine, Division of Hematology/Oncology, has one academic position available for a **HEMATOLOGIST or HEMATOLOGIST/ONCOLOGIST** with an interest in basic research or clinical research. The program has 18 faculty with both University Hospital and VAMC components. Position available 1 July 1984. M.D., Board-certified in internal medicine. Please send curriculum vitae and letter outlining research interests to: **Max Wicha, M.D., Simpson Memorial Institute, 102 Observatory Drive, Ann Arbor, Michigan 48109-0010.** The University of Michigan is a nondiscriminatory, Affirmative Action Employer. 313HO.

POSITIONS OPEN

ANATOMY FACULTY POSITION

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

ANATOMY/PHYSICAL ANTHROPOLOGY. An academic position will become available 1 July 1984 for an individual who has preferably completed some postdoctoral training and is fully qualified to teach human gross anatomy. The successful applicant will also be expected to establish and maintain a vigorous research program. This research may be in any area of biological science, but of special interest would be an individual working in the field of paleontology, evolutionary biology, or primate functional anatomy. For such an individual, the opportunities for collaborative research within the University should be particularly attractive. Interested parties should submit curriculum vitae, representative reprints, a research summary, and the names of three established references to: **Dr. Richard Brand, Washington University School of Dental Medicine, 4559 Scott Avenue, St. Louis, Mo. 63110.** An Equal Opportunity Employer.

Firelands College, 2-year regional campus of the Bowling Green State University (BGSU), Huron, Ohio, invites applications for the position listed below. Salaries are negotiable and contingent upon experience and qualifications. The position will be available 1 July 1984; the application deadline is 1 May 1984.

ASSISTANT DEAN. Duties: Develop engineering technology and other technical and general education curriculum programs; refine and improve existing technical education offerings; represent the college at meetings with industry, Chambers of Commerce, and so forth, to determine area technical education needs, and so forth. **Qualifications:** Ph.D. in academic discipline with postdoctoral education in higher education administration or Ph.D. in higher education administration preferred; education and experience in technical education; minimum of 5 years of teaching experience at postsecondary institution offering technical education; evidence of strong leadership by demonstrated experience in field of technical education; minimum of 5 years of experience in business or industry; evidence of administrative capabilities either through education or experience. **Application instructions:** Individuals interested in applying for this position must send a letter of application, résumé or curriculum vitae, official transcripts, and three recent letters of recommendation by 1 May 1984 to: **Office of the Dean, Firelands College, BGSU, 901 Rye Beach Road, Huron, Ohio 44839.**

Temple University School of Medicine has a faculty position available at the **ASSISTANT PROFESSOR** level. The candidate should have a Ph.D. degree in pharmacology with experience in neuropharmacology. The candidate should have strong undergraduate training in chemistry and the behavioral sciences and have additional training in neurotoxicology. A strong background in drugs affecting the central and peripheral nervous systems is required. Initially, the candidate will be expected to assist senior faculty in developing a graduate course in toxicology. Ultimately, the candidate will be expected to develop a strong research program in neurotoxicology and fulfill a role as teacher of both graduate and medical students. Please send curriculum vitae to: **Dr. John J. O'Neill, Professor and Chairman, Department of Pharmacology, Temple University School of Medicine, 3420 North Broad Street, Philadelphia, Pa. 19140.** Equal Opportunity/Affirmative Action Employer.

The University of Michigan Medical School, Department of Internal Medicine, has an academic appointment available in the Division of Gastroenterology at the rank of **INSTRUCTOR**. Applicant must be Board-certified/eligible in internal medicine and gastroenterology. Familiarity and ability to do all endoscopic procedures is crucial. Applicant will also be responsible for supervision of house officers and instruction of house officers and students. Research opportunities freely available. Applicant is also expected to participate in internal medicine rounds and instruction of house officers and students of University of Michigan core affiliated hospital. Excellent salary and fringe benefit package. Send curriculum vitae first-inquiry to: **R. R. Joseph, M.D., Professor and Director of Internal Medicine, Wayne County General Hospital, 2345 Merriman Road, Westland, Michigan 48185.** A nondiscriminatory, Affirmative Action Employer. 293DO.

POSITIONS OPEN

AGRICULTURAL RESOURCES MANAGEMENT (ARM) PROGRAM DIRECTOR. Master's degree required; doctoral degree preferred. Some teaching experience and experience in working in an agribusiness related area preferred; commitment to quality undergraduate education at a liberal arts college required. Duties include directing the ARM program and teaching three to four courses a year. Position available 1 September 1984. Salary and rank dependent upon credentials and experience. Preference will be given to applications received by 31 March 1984. Send letter of application, résumé, and three letters of recommendation to: **R. Melvin Henderson, Dean of Academic Affairs, Simpson College, Indianola, Iowa 50125-1299.** Women and minorities are encouraged to apply.

DEPARTMENT OF ANESTHESIOLOGY OHIO STATE UNIVERSITY

The Department of Anesthesiology at the Ohio State University (OSU) invites applications for a tenure-track appointment beginning September 1984. Level of appointment will be commensurate with background and experience.

Required: M.D., must be Board-certified or -eligible in anesthesiology. Applicants must have a strong record of research experience and will be expected to develop an independent research program.

Interested individuals should send complete curriculum vitae, recent reprints, a summary of planned research, and three references to: **Chairman, Search Committee, Department of Anesthesiology, OSU College of Medicine, 410 West 10 Avenue, Columbus, Ohio 43210.**

ASSISTANT PROFESSOR

The University of Florida College of Pharmacy and its newly formed Department of Pharmacodynamics announces a tenure-track position at the assistant professor level. The candidate must possess a Ph.D. degree and should have a strong research interest in physiology and/or pharmacology. The primary teaching responsibility will be an undergraduate microbiology course taught to students in the College of Pharmacy. This medically oriented course will focus on the fundamentals of immunology, virology, and bacteriology. Send curriculum vitae and three letters of reference to: **Dr. M. J. Katovich, Search Committee Chairperson, University of Florida College of Pharmacy, Box J-4, JHMC, Gainesville, Fla. 32610.** Application deadline is 15 April 1984 with an anticipated starting date of 1 July 1984. The University of Florida is an Equal Opportunity/Affirmative Action Employer.

ASSISTANT PROFESSOR, ANALYTICAL CHEMISTRY. This tenure-track position, subject to State funding, is available beginning fall 1984 in the Department of Chemistry, University of Maryland Baltimore County (UMBC). The candidate is expected to carry out a vigorous research program and to teach undergraduate and graduate courses in analytical chemistry in the department's B.A., M.S., and Ph.D. programs. The department has 16 full-time faculty with an ongoing record of excellence in research in physical chemistry and chemical physics, organic chemistry, inorganic chemistry, toxicological chemistry, biochemistry, and applied molecular biology. Send résumé, description of proposed research, and three letters of recommendation to: **Dr. Richard L. Karpel, Chairman, Analytical Search Committee, Department of Chemistry, UMBC, Catonsville, Md. 21228.** The university is located in the Baltimore-Washington corridor. UMBC is an Affirmative Action/Equal Opportunity Employer.

Position announcement (anticipated). Title: **ASSISTANT PROFESSOR.** Location: Department of Biochemistry, Louisiana State University, Baton Rouge, Louisiana. **Qualifications:** Ph.D. degree in biochemistry or molecular biology. More than 2 years of postdoctoral experience in research on biochemistry or molecular biology. **Major responsibilities:** Research and teaching at both graduate and undergraduate levels, directing graduate students at M.S. and/or Ph.D. levels and provide service to the state of Louisiana. Person will be expected to attract research grants and publish his (or her) research results in biochemistry related journals. **Salary:** \$30,000 per 12 months. **Anticipated available dates:** 20 August 1984. **Application deadline:** 30 March 1984. **Applications to:** **Dr. Roger A. Laine, Department of Biochemistry, Louisiana State University, Baton Rouge, La. 70805.** Telephone: 504-388-1556. Louisiana State University is an Equal Opportunity/Affirmative Action Employer.

POSITIONS OPEN

ASSISTANT PROFESSOR OF BIOLOGY

A tenure-track position (parasitology/immunology) for fall 1984. Applicants must have a Ph.D. degree and be committed to undergraduate teaching in a strong preprofessional program. New faculty are expected to develop graduate courses in an area of expertise and conduct some research. Application deadline: 1 April 1984. Send curriculum vitae and names and telephone numbers of three references to: **Dr. M. E. Warren, Department of Biology, Lamar University, P.O. Box 10037, Beaumont, Texas 77710.** *An Equal Opportunity/Affirmative Action Employer.*

ASSISTANT PROFESSOR OF PHARMACOLOGY—The Pharmacology Department, Washington University Medical School, invites applications for a tenure-track position as assistant professor. This is a multidisciplinary research oriented department which expects a modest amount of quality teaching from its faculty. Qualified applicants in any of a variety of research areas will be considered. Salary, seed money, and starting dates are negotiable. Please send curriculum vitae, names and addresses of three references, and a two to three-page statement of specific future research plans to: **Dr. Eugene M. Johnson, Department of Pharmacology, Washington University Medical School, 660 South Euclid Avenue, St. Louis, Mo. 63110.**

ASSISTANT PROFESSOR OF PHYSIOLOGY

Applications are solicited for a tenure-earning position at the rank of assistant/associate professor in the Department of Physiology, Michigan State University (MSU). Candidates must hold a doctoral degree with experience and interest in the cellular and molecular aspects of cardiovascular physiology. Opportunities are available for both collaborative and independent research and for undergraduate, graduate, and medical student teaching. Interested individuals should write a letter explaining their qualifications for the position and enclose complete curriculum vitae, bibliography, and the names and addresses of three references to:

**Cardiovascular Physiology
Search Committee
Department of Physiology
Giltner Hall
Michigan State University
East Lansing, Mich. 48824**

MSU is an Equal Opportunity/Affirmative Action Institution.

ASSISTANT STAFF INVESTIGATOR DERMATOLOGY RESEARCH

Henry Ford Hospital, a 1000-bed teaching and research health-care facility is seeking a full-time assistant staff investigator for its Dermatology Research Laboratory. The ideal candidate will have a Ph.D. in immunology, 2 years of postdoctoral experience, and a strong biochemistry background. Research includes identification and isolation of cellular, especially nuclear antigens, and T cell studies. Become a member of an expanding medical complex that offers exposure to the latest in medical technology. Our emphasis is on quality patient care and educational opportunities.

We offer a salary commensurate with experience complemented by an excellent benefit package. If this position represents the challenge you seek, send your résumé today to: **Jura Kaupas at**

**Henry Ford Hospital
Employment Center
2921 West Grand Boulevard
Detroit, Michigan 48202**
Equal Opportunity Employer, M/F/H

POSTDOCTORAL POSITION

A position is available to join our work on the molecular biology of the expression of acetylcholine receptors in nerve and muscle. Highly motivated candidates with relevant background in molecular biology and/or biochemistry should send curriculum vitae and list of three references to: **J. P. Merlie, Department of Pharmacology, Washington University School of Medicine, 660 South Euclid Avenue, St. Louis, Mo. 63110.** The position is available immediately and is funded by a research grant for a minimum of 2 years. Renewal for a third and final year is possible.

POSITIONS OPEN

ASSISTANT/ASSOCIATE PROFESSOR IN CELLULAR NEUROBIOLOGY

Applications are invited for a tenure-track position available 1 September 1984. Candidates should have demonstrated ability to conduct independent research. Preference will be given to those working in the areas of synaptogenesis, cell cytoskeleton, plasma membrane, or developmental neurobiology. Experience in electron microscopy and immunocytochemistry is desirable. Teaching experience in anatomical science courses also desirable. Rank and salary will be commensurate with qualifications. For fullest consideration, applicants should submit curriculum vitae, a brief statement of research interests and representative reprints, and names and addresses of three references should be included, by 15 May 1984 to: **Dr. G. D. Pappas, Department of Anatomy, University of Illinois College of Medicine, P.O. Box 6998, Chicago, Ill. 60680.** *The University of Illinois is an Equal Opportunity/Affirmative Action Employer and encourages applications from women and minorities.*

ASSISTANT PROFESSOR, Environmental Resources in Agriculture. Ph.D. in agronomy, plant science, or closely related area required. Applicants with an emphasis in plant breeding or plant genetics given priority. Teaching responsibilities will be in areas of crop management and plant breeding. Successful applicant will be expected to develop a competitive research program. Résumé, three letters of recommendation, and transcripts to: **Dr. G. J. Seperich, Director, Division of Agriculture, Arizona State University, Tempe, Ariz. 85287.** Application deadline: 15 April 1984. *An Equal Opportunity/Affirmative Action/Title IX Employer.*

ASSISTANT PROFESSOR OF MICROBIOLOGY AND IMMUNOLOGY

Applications are invited from highly qualified individuals for a full-time, tenure-track position. Applicants must hold a Ph.D. or equivalent degree, and have postdoctoral research experience. A strong background in immunochemistry and/or molecular immunology and experience relating cell surface markers to function are preferred. The individual will develop and maintain a strong, grant-supported independent research program and participate in training graduate students and postdoctorals. Teaching in graduate and professional level courses is required. Send curriculum vitae, a statement of research interests, and the names of three references by 15 June 1984 to: **Dr. John G. Tew, Department of Microbiology and Immunology, Box 678 MCV Station, Virginia Commonwealth University/Medical College of Virginia, Richmond, Va. 23298.** *Minorities are urged to apply. An Equal Opportunity/Affirmative Action Employer.*

CANCER RESEARCH SCIENTIST

Position open for junior career scientist to be associated with a group studying molecular mechanisms of tumor promotion and carcinogenesis. Candidates should have training at the doctoral level and demonstrated ability for independent research in areas such as recombinant DNA and oncogenes, cell transformation systems, or animal models.

Appointment will include affiliation with the University of Ottawa, Faculty of Health Sciences. After an initial period, the candidate will be expected to obtain continuing support for research from competitive grants.

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

Applicants should send résumé and the names of three referees to:

**Dr. H. C. Birnboim, Head
Department of Experimental Oncology
Ontario Cancer Treatment and Research Foundation
Ottawa Regional Centre
190 Melrose Avenue
Ottawa, Ontario, Canada K1Y 4K7**

PHYSICS DIVISION CHAIRMAN

Catawba College invites applications for the position of chairman of the Division of Mathematics and Sciences. Doctorate in physics with experience and training in computer science required. Position available August 1984. Rank and salary at associate or full professor level. Send résumé by 30 March to: **Dr. Robert E. Knott, Dean of the College, Salisbury, N.C. 28144.** *An Equal Opportunity Employer.*

POSITIONS OPEN

ASSISTANT STAFF (equivalent assistant professor, \$22,000 to \$29,500) and **POSTDOCTORAL FELLOWS** (\$16,500 to \$18,500). Require Ph.D. in molecular biology, biochemistry, immunology, or physiology for basic research on vasoactive substances, hypertension, electrolytes transport, or nephron microperfusion. Contact: **Dr. Oscar Carretero, Henry Ford Hospital, Hypertension Research Division, 2799 West Grand Boulevard, Detroit, Michigan 48202; telephone: 313-876-2010.**

ASSISTANT, ASSOCIATE OR FULL PROFESSOR OF PLANT PATHOLOGY PLANT VIROLOGY

The Department of Plant Pathology, University of California, Berkeley, announces a tenure-track position in the area of plant virology. Level of appointment will depend upon experience. A Ph.D. is required. Applicants should have training and research experience in plant virology. Preference will be given to those applicants with demonstrated expertise in the biochemical and molecular biological techniques. A commitment to applying such methods toward a solution of virus disease problems is highly desirable. Research areas could include the structure and function of plant viruses, virus nucleic acids and viroids, molecular biology of virus disease development and virus-host interaction, and etiology and epidemiology of plant virus diseases. The teaching responsibilities will include participation in a team-taught undergraduate comparative virology course and major involvement in a graduate course in plant virology. Applicants should submit curriculum vitae, transcripts, publications, and a brief description of research goals, and arrange for three letters of reference to be sent to: **T. L. Morris, Chair, Search Committee, Department of Plant Pathology, University of California, Berkeley, Calif. 94720, by 30 April 1984.**

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

The Department of Physiology and Biophysics at the University of Alabama in Birmingham (UAB) is seeking an individual at the level of **ASSOCIATE OR FULL PROFESSOR** who would supervise the establishment of a central facility for electron microprobe analysis. Candidates should have several years of experience in this field and a demonstrated record of productivity on the application of this technology to relevant problems in modern physiology or cell biology. Support for this position is to be jointly provided by the department and the UAB Centers for Cancer, Cystic Fibrosis and Nephrology research. Interested individuals should submit recent curriculum vitae and the names of two suitable references by 1 April 1984.

Address inquiries and applications to:

**D. R. DiBona, Ph.D.
Director, Division of Cell and Membrane Biology
Department of Physiology and Biophysics
University of Alabama in Birmingham
University Station
Birmingham, Ala. 35294**

The University of Alabama in Birmingham is an Affirmative Action/Equal Opportunity Employer.

BIOENGINEERING, University of Utah. Applications from candidates with an earned doctorate are invited for one/two tenure-track faculty positions, assistant to full professor level. The appointee(s) will teach courses in bioengineering and will be expected to conduct an outstanding independent program of research. Joint appointments with other departments possible. Send curriculum vitae and three recent publications to: **Professor Richard A. Normann, Department of Bioengineering, University of Utah, Salt Lake City, Utah 84112.** Application deadline: 15 April 1984. *An Affirmative Action/Equal Opportunity Employer.*

CHAIRPERSON DEPARTMENT OF MECHANICAL AND INDUSTRIAL ENGINEERING UNIVERSITY OF UTAH

Applicants with outstanding research accomplishments and a genuine interest in the future of mechanical and industrial engineering are urged to apply. Complete curriculum vitae/résumé, list of publications, at least three technical references, and a letter outlining personal academic, teaching, and research goals as well as suggested departmental academic and research goals should be directed to: **Dr. David Pershing, Chairman, Mechanical and Industrial Engineering Search, 310 Park Building, University of Utah, Salt Lake City, Utah 84112.** *The University of Utah is an Equal Opportunity Employer.*

ASSOCIATE EDITOR

Major interdisciplinary weekly scientific magazine seeks an associate editor with a strong background in genetics and molecular biology. Preference will be given to candidates with an advanced degree in biochemistry or biology. The level of the position and salary will be commensurate with experience. Please submit résumé with cover letter, including salary requirements, to: **C. Pruitt, SCIENCE, 1515 Massachusetts Avenue, NW, Washington, D.C. 20005.**

Equal Opportunity Employer

TRAINING RESEARCH MANAGERS

The Training Laboratory at the Navy Personnel Research and Development Center, San Diego, California, is accepting applications for:

SUPERVISORY RESEARCH PSYCHOLOGISTS

Openings exist in three areas of specialized research:

Training Technology Development
Training Technology Application
Training Systems Application

Each of the positions will be responsible for developing, managing and directing professional research into unstructured areas. Approaches and methods of research must be designed to achieve goals and positive results. Current research thrusts are in the following areas:

- Computer-Based Training
- Cognitive Science
- Functional-Context Training
- Basic Skills
- Performance Testing
- Applications to Navy Systems
- Training Navy Civilians
- Training Management
- Marine Corps Training
- Equipment Maintenance
- Career Systems
- Technical Training
- Embedded Training
- Team Training
- Artificial Intelligence
- Prototype Training Systems

Responsibilities will include supervising two or three research groups of eight or more research scientists, managing a set of related research thrusts, planning and developing future projects, and representing the Laboratory within the Navy, the Defense Department and the Scientific Community. A doctoral degree with two years of higher level experience in the field of specialization is fully qualifying.

We offer competitive salary based on experience/education with pay adjusted annually based on performance and excellent employee benefits.

Send Resumes To: Navy Personnel
Research and Development Center
Personnel Office
Code 008, Attn: Ann. No. 3D-1
San Diego, CA 92152

U.S. Citizenship Required, Federal Civil Service.
NPADC is an equal opportunity employer



EXECUTIVE SECRETARY- TREASURER

American Physiological Society

The American Physiological Society is seeking an **Executive Secretary-Treasurer (ES-T)**. The ES-T is the principal administrative officer of the Society and as such manages the Society's Central Office in Bethesda, Maryland. The duties and responsibilities of the ES-T are multiple and include governance and operations and interactions with individual members and external institutes. The ES-T must be a life scientist with a doctoral degree, preferably a physiologist, with proven administrative abilities and skills. Details of qualifications and job description can be found opposite the table of contents in the January 1984 issue of the *American Journal of Physiology*.

Starting date: 1 July 1985. Address correspondence by 15 May 1984 to: **A. P. Fishman, M.D., Chairman, Search Committee, Hospital of the University of Pennsylvania, 871 Maloney Building, 3600 Spruce Street, Philadelphia, Pa. 19104. Telephone: 215-662-6393.**

An Equal Opportunity Employer

inhalation toxicologist

FMC CORPORATION's Chemical R & D Center, located in Princeton, NJ, has an exceptional position available for an individual to carry out Inhalation Toxicology testing of pesticides and industrial chemicals.

Major position responsibilities will include establishing an Inhalation Toxicology capability within our Toxicology Department, scheduling and prioritizing inhalation toxicology testing, coordinating the selection and implementation of test procedures including validation and compliance to recognized practices and standards.

Major position requirements must include a BS/MS Degree in Toxicology, Biology or a related field. A minimum of 5 years' experience with all techniques of Inhalation Toxicology including 1.) methods for generating chamber concentrations of chemicals with a variety of physical properties, 2.) operation of various types of chambers, 3.) air sampling methods and 4.) evaluation of respiratory effects on animals during and after exposure.

FMC CORPORATION offers excellent compensation commensurate with your background and education, a full range of corporate benefits and real advancement potential within an exciting and challenging work environment. Applicants should send a letter and resume with salary history to: Employment Supervisor, FMC CORPORATION, Chemical R & D Center, Box 8, Princeton, NJ 08540. An Equal Opportunity Employer, M/F.

FMC

POSITIONS OPEN

BIOCHEMIST/MICROBIOLOGIST (M.S./Ph.D.) for R&D in microbial treatment of industrial wastewater. Three years of experience in wastewater treatment. Some travel. Available immediately. Excellent salary and benefits. Send résumé to: **Lois Davis, Sybron Chemicals, Inc., P.O. Box 808, Salem, Virginia 24153. Telephone: 703-389-9361.**

BIOLOGIST—Mammalian ethologist broadly trained in biology to teach animal behavior, natural history, and general biology. Ph.D. required. Tenure-track position available August 1984. Send curriculum vitae, complete transcripts, statement of goals, and names of three references by 2 April to: **Dr. William J. Vail, Department of Biology, Frostburg State College, Frostburg, Md. 21532. Affirmative Action/Equal Opportunity Employer.**

CELL, DEVELOPMENTAL BIOLOGIST

The Joint Biology Department of the College of Saint Benedict/Saint John's University is seeking to fill a biology position beginning 1 September 1984.

Teaching assignment for 1984-1985 includes lectures and laboratories for courses in cell biology, histology, and lower division courses. Ph.D. in designated area is preferred as well as ability in teaching at the undergraduate level. Be familiar with the appropriate instrumentation, including SEM. Send curriculum vitae, letter of interest, three letters of recommendation, and transcripts to: **Director, Personnel, Saint John's University, Collegeville, Minn. 56321. Women and minorities are encouraged to apply.** Applications received after 20 April 1984 cannot be guaranteed consideration.

FACULTY POSITION, tenure track, **environmental chemistry**. The Raymond Walters General and Technical College (RWC), a 2-year suburban campus of the University of Cincinnati (UC), solicits applications to fill the position of instructor or assistant professor of chemistry. Rank commensurate with education and experience. Minimal qualifications include advanced degree in chemistry, chemical engineering, or environmentally related program, with recent experience and/or graduate training specifically in chemistry of the environment. Teaching responsibilities in chemical analysis of environmental pollutants and in introductory chemistry courses. Forward complete curriculum vitae, including the names and telephone numbers of three references, to: **Dr. Robert Thomas, Chemistry Department, 9555 Plainfield Road, Cincinnati, Ohio 45236. RWC/UC is an Affirmative Action/Equal Opportunity Employer.** Closing date: 16 April 1984.

GENETICIST: The Department of Biological Sciences at The University of Texas at El Paso seeks to fill a tenure-track, assistant professor position with a geneticist capable of interacting with a faculty whose strengths are in diverse areas of microbial, organismal, and evolutionary biology. The individual (Ph.D. required) will teach undergraduate genetics, introductory biology and will have the responsibility of developing a genetics program at the graduate level. Postdoctoral experience desirable and establishment of an externally funded research program expected. Position to begin fall semester 1984. Deadline for application materials is 2 April 1984. Applicants should send curriculum vitae, a brief statement of research goals, and the names, addresses, and telephone numbers of three references to: **Dr. J. R. Bristol, Genetics Search Committee, Department of Biological Sciences, The University of Texas at El Paso, El Paso, Texas 79968-0519. The University is an Equal Opportunity/Affirmative Action Employer.**

IMMUNOLOGY FACULTY POSITION

Tenure track, at either assistant/associate or full professor, Department of Microbiology, Southwestern Medical School, Dallas.

Areas of particular interest include molecular genetics, cellular immunology, and cell cloning. Rank and salary open. Current members of immunology faculty are: Doctors Capra, Forman, Kettman, Lipsky, Sullivan, Tucker, Uhr, Vitetta, and Wasserman. Applicants should submit curriculum vitae, description of research interests, and names of four references to: **Dr. J. W. Uhr, Department of Microbiology, Southwestern Medical School, 5323 Harry Hines Boulevard, Dallas, Texas 75235.**

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

POSITIONS OPEN

CHEMISTRY FACULTY POSITION, tenure track. The Raymond Walters General and Technical College, a 2-year suburban campus of the University of Cincinnati, seeks an assistant professor of chemistry. The successful candidate must have a Ph.D. in chemistry, inorganic area preferred, and a demonstrated dedication to teaching. Primary teaching assignment will be in basic and introductory courses. Send complete curriculum vitae, including the names and telephone numbers of three references, to: **Dr. Robert G. Gailey, Chemistry Department, 9555 Plainfield Road, Cincinnati, Ohio 45236. An Affirmative Action/Equal Opportunity Employer.** Closing date: 15 April 1984.

DEAN: SCHOOL OF ALLIED HEALTH

The University of Kansas Medical Center, Kansas City, Kansas, announces a call for nominations and applications for the position of Dean of the School of Allied Health. **Qualifications—Required:** Ph.D., M.D., or Ed.D.; demonstrated administrative ability and experience; an understanding and appreciation of allied health science education. **Preferred:** a major interest in research as evidenced by a record of sustained scholarly research and publication; a history of distinguished teaching; a record of obtaining grants and contracts in support of research and related health science activities. **Appointment:** 12-month, tenured faculty position. **Salary:** commensurate with administrative, research, and academic experience. Nominations with résumés and at least three references should be submitted to: **John Ferraro, Ph.D., Chairman, Dean of the School of Allied Health Search Committee, Office of the Dean, 1004A, Kansas University Medical Center, 39th and Rainbow, Kansas City, Kans. 66103.** Nominations preferred by 15 April 1984. *The University of Kansas is an Equal Opportunity Employer.*

DEVELOPMENTAL BIOLOGIST. Tenure-track position for assistant professor beginning by August 1984. The candidate will be expected to maintain an active and fundable research program, to participate in one or more areas of the department's doctoral program, and be qualified to teach a developmental biology course as well as an advanced course in his/her area of specialization. Applicant should send curriculum vitae and three letters of reference to: **Dr. William J. Brett, Chairman, Department of Life Sciences, Indiana State University, Terre Haute, Indiana 47809, by 8 April 1984.**

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

OCCIDENTAL COLLEGE

One-Year Faculty Position in Geology

Applications are invited for a position in the Geology Department for the 1984-1985 academic year. Ability to teach undergraduate courses in introductory geology, mineralogy, igneous geology, field geology, and/or related subjects are necessary. Research or applied experience, while not essential, is desirable. Salary and rank will be commensurate with degree level and experience.

Occidental College is an Equal Opportunity Employer, and encourages applications from qualified women and minorities.

For consideration, send résumé and letters of reference to:

**Dr. William J. Morris
Department of Geology
1600 Campus Road
Occidental College
Los Angeles, Calif. 90041**

MICROBIOLOGIST. Tenure-track position for assistant professor beginning by August 1984. The candidate will be expected to maintain an active and fundable research program, to participate in one or more areas of the department's doctoral program, and be qualified to teach a microbiology course as well as an advanced course in his/her area of specialization. Applicant should send curriculum vitae and three letters of reference to: **Dr. William J. Brett, Chairman, Department of Life Sciences, Indiana State University, Terre Haute, Indiana 47809, by 8 April 1984.**

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

POSITIONS OPEN

The Department of Biological Sciences at Stanford University seeks a **DEVELOPMENTAL GENETICIST—MOLECULAR BIOLOGIST** for a faculty appointment at the assistant professor level. The appointee will be expected to develop an active and distinctive research program and to participate in both graduate and undergraduate teaching programs. Interested persons should send curriculum vitae and the names of three references to: **Professor Robert T. Schimke, Department of Biological Sciences, Stanford University, Stanford, California 94305, by 1 April 1984.**

Stanford University is an Equal Opportunity/Affirmative Action Employer.

PANLAB GENETICS, INC.

Director and Staff Scientists for Fungal Molecular Biology Research

Panlab Genetics, Inc., an internationally known service research organization having nearly 200 clients in 15 countries, is seeking to assemble a team in its Seattle laboratory to develop recombinant DNA and vector technology in filamentous fungi. Applications are invited from postdoctoral molecular biologists for the above positions. Experience with filamentous fungi is desirable but not essential. An attractive salary plus relocation expenses are offered. Please send curriculum vitae, including names of three referees to:

**Dr. Christopher Ball
Panlab Genetics, Inc.
110-110th Avenue, NE, Suite 704
Bellevue, Wash. 98004
An Equal Opportunity Employer**

ELECTRON MICROSCOPIST (Ph.D.) at the level of postdoctoral fellow or research associate, to provide EM services and collaborate on projects in membrane biochemistry related to atherosclerosis. Jeol S100 EM, Sorvall MT 5000 ultramicrotome, Balzers BAF 300 freeze fracture apparatus, technical help available. Please send résumé, salary request, and the names of three references to: **Dr. H. H. O. Schmid, The Hormel Institute, University of Minnesota, Austin, Minn. 55912. Telephone: 507-433-8804. The University of Minnesota is an Equal Opportunity Employer and specifically invites and encourages women and minority applicants.**

FACULTY POSITION IN MOLECULAR BIOLOGY

As part of a continuing program of growth and development, the Boston College Biology Department will make several tenure-track appointments during the next few years. Applications are invited for the first position, which will be filled as early as September 1984 at the assistant or associate professor level. Candidates should have a vigorous research program in molecular biology, preferably utilizing recombinant nucleic acid techniques, and have a commitment to teaching at the graduate and undergraduate levels.

We offer a competitive salary and start-up funds. The department has an active M.S. and Ph.D. program in research areas that emphasize the cellular, molecular, and biochemical approaches to biological problems.

Applications, including the names of three references, should be submitted by 1 April 1984 to: **Chairman, Biology Search Committee, Biology Department, Higgins Hall, Boston College, Chestnut Hill, Mass. 02167.**

The University of Michigan, Department of Otorhinolaryngology, and the Kresge Hearing Research Institute have **TWO FACULTY POSITIONS** available for persons with a Ph.D. in psychology or physiology. Background in psychoacoustics and experience in auditory research are desired; assistant or associate professor level. Apply to: **Jochem Schacht, Ph.D., Department of Otorhinolaryngology, 6018 KRH1, Ann Arbor, Mich. 48109. A nondiscriminatory, Affirmative Action Employer.**

University of Michigan, Department of Pediatrics, is seeking another BC/BE **NEONATOLOGIST** for May 1984. Academic position includes primary clinical responsibilities at the Level II Special Care nursery but with ample interaction with the Level III ICU. Individual should have a major interest in research and teaching. Please apply with curriculum vitae to: **D. W. Roloff, M.D., Director of Newborn Services, Box 007, L3023 Women's Hospital, Ann Arbor, Michigan 48109-0010. University of Michigan is an Affirmative Action Employer.**



**FACULTY POSITIONS
COLLEGE OF AGRICULTURE
AND FOOD SCIENCES
KING FAISAL UNIVERSITY
AL-HASA, SAUDI ARABIA**

1. **Lecturer:** Specialization in Agricultural climatology to teach courses in Agricultural Climatology—Development of Water Resources and Ground Water Hydrology.
2. **Assistant/Associate Professor:** Specialization in Farm Power and Machinery to teach courses in Agricultural Workshops, Surveying, Land Leveling Operations and Machinery and Agricultural Process Engineering.
3. **Assistant/Associate Professor:** Specialization in Agricultural Engineering (Farm Power Machinery) to teach subjects in Agricultural Mechanization, Pest Control Machinery, Poultry and Animal Production Equipments, and Stress Analysis and Properties of Matter.
4. **Assistant/Associate Professor:** Specialization in Rural Sociology to teach courses in Principles of Development of Local Rural Sociology.
5. **Assistant/Associate Professor:** Specialization in Horticulture (Tissue Culture) to teach Horticulture Crop Physiology and Genetics and Tissue Culture.
6. **Assistant/Associate Professor:** Specialization in Animal Breeding to teach subjects in Poultry and Animal Breeding and Dairy and Beef Production.
7. **Assistant/Associate Professor:** Specialization in Meat Science and Technology to teach courses in Meat Technology, Technology of Animal Products, and Fish Technology and Preservation.
8. **Assistant/Associate Professor:** Specialization in Fish Diseases and Parasites to teach courses in Fish Diseases and Fish Sciences.
9. **Assistant/Associate Professor:** Specialization in Analytical (Chromatography or Spectroscopy) Chemistry to teach courses in General and Analytical Chemistry. Experience in Computer-aided Chemistry is preferred.

MINIMUM REQUIREMENTS: Ph.D. degree for Assistant or Associate Professor positions; M.S. degree for Lecturer positions; Publications in professional journals; minimum of two years teaching experience at the University level for Assistant Professor positions and four years teaching experience for Associate Professor positions. Must be *fluent in both Arabic and English*. All faculty members are expected to conduct research in their area of interest.

If qualified, application forms may be obtained at the following address:

Dean, College of Agriculture and Food Sciences
King Faisal University
c/o U.S. Recruiting Office
2425 West Loop South, Suite 540
Houston, Texas 77027

Additional information, specifically on benefits, may be obtained when applying for positions.

DEADLINE FOR RECEIVING APPLICATIONS IS APRIL 15, 1984.

**Assistant Professor
in Vertebrate Ecology**

The University of Calgary invites applications for a position at the Assistant Professor level in the Department of Biology. The successful candidate will be expected to develop an active research program in the area of population ecology of terrestrial vertebrates, and to participate in the teaching of courses in introductory ecology and population ecology. Applicants must hold the Ph.D. degree or equivalent, and should have a broad biological training and demonstrable dedication to excellence in undergraduate and graduate teaching. Post-doctoral experience would be advantageous.

The appointment will be open as of September 1, 1984, with an expected starting salary in the range of \$29,700 to \$33,500 per annum, based on the 1983-84 scale.

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

Applicants are requested to submit a complete curriculum vitae, and to have three letters of academic reference forwarded by May 1, 1984 to:



Department of Biology
Dr. R.W. Davies, Head
The University of Calgary
2500 University Dr. N.W.
Calgary, Alberta, Canada
T2N 1N4

CHEMISTS

- **Synthetic Organic**
- **Natural Products Isolation**
- **Bio-organic**

Expansion of our Antitumor Chemical Research Group has resulted in a number of openings for chemists in the areas of synthetic organic chemistry, natural products isolation and the synthesis of linkers for and preparation of MAB-drug conjugates.

The professionals we seek will possess a BS or MS degree in Chemistry and 3–5 years of work experience in one of the following specialties: organic synthesis; natural products isolation; bio-organic chemistry; protein derivitization.

We offer excellent starting salaries, comprehensive benefits and exceptional opportunities for professional achievement. Our Syracuse, New York location is in an area with fine cultural, educational and recreational advantages. For prompt, confidential consideration, forward your resume with salary history and requirement, to:
EMPLOYMENT RECRUITER



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

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

An equal opportunity employer M/F



Battelle

Geneva Research Centres

is seeking for its Centre of Toxicology and Biosciences, two

BIOCHEMISTS

one at the senior scientist level with several years post doctoral experience, and

one at the post doctoral level.

The candidates will be engaged to develop new chemotherapeutic agents for use in the treatment of filarial parasitic diseases and will be expected to:

- exploit mechanistic studies on the interaction of substrates and inhibitors with enzymes in the view to designing site-specific anti-filarial agents
- collaborate in the establishment of a novel drug design and target screening programme for selecting antifilarial agents
- identify and evaluate biochemical targets directed against filarial worms.

The successful candidates will be joining a multidisciplinary team of scientists to set up and specifically carry out long-term basic research aimed at the development of filaricides. Experience in filariasis is not a prerequisite, however a background in parasitology or invertebrate biochemistry would be an advantage.

Please address application, including curriculum vitae, photograph and salary requirements to the **Personnel Manager, BATTELLE, 7, route de Drize, CH-1227 Carouge/Geneva/Switzerland.**

POSITIONS OPEN

EUKARYOTIC CELL BIOLOGIST with research interests at the molecular level. **ASSISTANT PROFESSOR** in Division of Cellular/Molecular Biology, eligible for tenure review. Earned Ph.D. and teaching experience required, postdoctoral experience preferred. Seeking applicants who are committed to undergraduate and graduate teaching and research. Teaching duties include introduction to cellular biology. Advanced course and research program development expected. Salary commensurate with experience. Send curriculum vitae, reprints, statement of proposed research program and teaching experience, official transcripts, and three letters of reference, to arrive no later than 15 April 1984, to:

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

All correspondence should identify the position applied for. *WSU is an Equal Opportunity/Affirmative Action Employer.*

FISH ECOLOGIST

A full-time research position for a fish ecologist is available at the Savannah River Ecology Laboratory of the University of Georgia. Candidate must be a U.S. citizen, have several years of experience beyond the Ph.D., a strong open literature publication record, and be interested in developing a long-term, field-oriented research program on the ecology of freshwater fish, including their population characteristics and habitat relationships. Faculty rank and salary are negotiable. Applicants should send a letter of application, curriculum vitae, reprints, and the names, addresses, and telephone numbers of four individuals who may be contacted as references to:

Dr. Barbara Taylor, Chairman
Fish Ecologist Search Committee
Savannah River Ecology Laboratory
Drawer E
Aiken, S.C. 29801

Applications will be accepted until 23 March 1984. *The University of Georgia is an Equal Opportunity/Affirmative Action Institution.*

The Department of Internal Medicine is seeking **SEVERAL JUNIOR FACULTY MEMBERS**. The positions will include research, patient care, and teaching activities. Candidates should be Board-certified or -eligible in internal medicine and have experience in research. Address inquiries to: **William N. Kelley, M.D., Department of Internal Medicine, University of Michigan Medical School, Ann Arbor, Michigan 48109.** *The University of Michigan is a nondiscriminatory, Affirmative Action Employer.* Code 900TP-912TP.

POSTDOCTORAL FELLOW—NEUROBIOLOGY AND BEHAVIOR. The Department of Psychiatry of the Albert Einstein College of Medicine and Montefiore Medical Center expects to have an opening 1 July 1984 for a postdoctoral fellow in the area of neurotransmitters and behavior, including functional interrelations of CNS monoamines and neuropeptides. Applicants should have a Ph.D. in neuroscience, physiological psychology, or neuropharmacology, and experience with anatomical, behavioral, pharmacological, and electrophysiological approaches to the CNS. Skill in the design and fabrication of behavioral and electrophysiological apparatus is highly desirable. Send curriculum vitae and representative publications to: **Dr. Elliot L. Gardner, Forchheimer Building G-49B, Albert Einstein College of Medicine, 1300 Morris Park Avenue, Bronx, N.Y. 10461.** *An Equal Opportunity/Affirmative Action Employer.*

POSTDOCTORAL FELLOW/RESEARCH ASSOCIATE. Ph.D. or M.D. Experience with recombinant DNA and M13 sequencing preferred. Projects concern gene structure, evolution, and regulation, and analysis of mutations causing human disease. Send curriculum vitae and references to: **Dr. Walter L. Miller, Room 677S, University of California, San Francisco, Calif. 94143.**

POSTDOCTORAL POSITION IN MOLECULAR BIOLOGY available involving cloning and expression of human tumor-associated antigens in group headed by Dr. Joseph P. Brown. Applicants should have strong background in techniques in molecular cloning, DNA sequencing, and expression vectors. Send curriculum vitae and names of references to: **Anne Marie Moses, Oncogen, Suite 200, 3005 First Avenue, Seattle, Wash. 98121.** *Equal Opportunity Employer.*

POSITIONS OPEN

FACULTY POSITIONS IN BIOMEDICAL ENGINEERING, BOSTON UNIVERSITY COLLEGE OF ENGINEERING, at the assistant/associate/full professor levels in expanding Department of Biomedical Engineering for September 1984 or January 1985. Applicants should have an earned doctorate, be committed to quality teaching at both undergraduate and graduate levels, and have the desire to develop strong research programs. Collaboration with the Boston University School of Medicine or other engineering departments may be facilitated through a joint faculty appointment. Candidates with backgrounds in image processing, computer science, chemical engineering, mechanical design, electronics, computer engineering, biomechanics and materials, or robotics are especially welcome. Opportunities for part-time (adjunct) faculty positions and for collaborative arrangements with nearby institutions involved in biomedical research and development are also available. Candidates should send résumé, list of publications, names and addresses of five references, and a brief statement of teaching and research interests to: **Dr. Eugene Smithberg, Chairman, Engineering Search Committee, College of Engineering, Boston University, 110 Cummington Street, Boston, Mass. 02215.** *Boston University is an Equal Opportunity/Affirmative Action Employer.*

LIPID CHEMIST. Applications are invited for a lipid chemist (M.S. preferred). Responsibilities involve analysis of lipid classes and lipid metabolism in mammary tumors and mammary tumor cell cultures. Send curriculum vitae and names of three references to: **Leonard A. Cohen, Ph.D., American Health Foundation, Naylor Dana Institute, Valhalla, N.Y. 10595.** *An Equal Opportunity Employer.*

LIPID RESEARCH

POSTDOCTORAL POSITIONS available to study skin lipids. Ph.D. required, preferably in chemistry or biochemistry. Opportunity to collaborate closely with experienced investigators studying the occurrence, chemistry, physical properties, metabolism, and functions of lipids in skin. Appointments for 1 to 3 years available immediately. Salary: \$16,000 to \$18,000. Send résumé and names of references to: **Donald T. Downing, Ph.D., Department of Dermatology, University of Iowa College of Medicine, Iowa City, Iowa 52242.** *Affirmative Action/Equal Opportunity Employer.*

MEDICINAL CHEMISTRY AND PHARMACOGNOSY ASSISTANT PROFESSOR

Tenure-track appointment, effective 1 September 1984. Applicant should have strong commitment to teaching at the undergraduate and graduate levels and to the development of a vigorous research program in medicinal chemistry and pharmacognosy. Ph.D. should be in medicinal chemistry, pharmacognosy, natural products chemistry, organic chemistry, or related disciplines with synthetic expertise and postdoctoral experience desirable. Application deadline: 1 April 1984.

Applicants should submit detailed curriculum vitae, list of publications, summary of research interests, and have three letters of recommendation transmitted to: **Dr. Duane D. Miller, Chairman, Division of Medicinal Chemistry and Pharmacognosy, College of Pharmacy, The Ohio State University, 500 West 12 Avenue, Columbus, Ohio 43210.** *Equal Opportunity/Affirmative Action Employer.*

MICROBIOLOGIST, clinical or medical, Ph.D. level with 2 to 4 years of experience, is needed to assist in development and coordination of microbiology procedures and tests for monitoring spaceflight related objectives. Planning and development of procedures applicable to an orbiting Space Operations Center will also be undertaken. Microbiological experience with small laboratory animals, including monkeys, is desirable. Preparation of test plans, reports, technical documents, and manuscripts is required.

Northrop Services, Inc., P.O. Box 34416, Houston, Texas 77234. *An Equal Opportunity/Affirmative Action Employer.*

MICROBIOLOGY INSTRUCTIONAL LABORATORY DIRECTOR. Supervision of teaching assistants and technicians for laboratory sections of undergraduate courses in microbiology. Ph.D. required; teaching experience recommended. Send résumé, including names of three references, by 15 April 1984 to: **Dr. M. M. Appleman, Chairman, Department of Biological Sciences, University of Southern California, Los Angeles, Calif. 90089-0371.** *An Equal Opportunity Institution*

POSITIONS OPEN

MEDICAL MICROBIOLOGIST to provide professional direction for the microbiology section of the Clinical Laboratory, which includes mycology, virology, and serology. **Childrens Hospital of Los Angeles** is a 331-bed pediatric hospital affiliated with the University of Southern California. This position has a faculty appointment and requires a Ph.D. degree and A.B.M.M. certification or eligibility. Minimum of 2 years of postdoctoral experience preferred. Specialized skills in rapid diagnostic techniques, computerization, and virology would be an asset. Send curriculum vitae and three references to: **Allen I. Lipsey, M.D., Laboratory Director, Clinical Laboratory, Childrens Hospital of Los Angeles, P.O. Box 54700, Terminal Annex, Los Angeles, Calif. 90054-0700.**

University of Southern California and Childrens Hospital of Los Angeles are Equal Opportunity/Affirmative Action Employers.

NEUROPHYSIOLOGIST, a tenure-track position as an assistant/associate professor. Major teaching responsibility is in the sharing of lectures and laboratory instruction for medical and graduate students taking the course in neuroscience. Research interests should be within the area of neurobiology. Candidates for the junior position should have 2 years of postdoctoral experience that demonstrates the ability to initiate and maintain a research program. Candidates for the senior position should present evidence of a productive track record in research as an independent investigator. Laboratories are located in the new basic science building of the medical school located 38 miles north of Chicago. Send curriculum vitae and three letters of recommendation to: **Chairman, Department of Physiology and Biophysics, University of Health Sciences/The Chicago Medical School, 3333 Green Bay Road, North Chicago, Ill. 60064.** *The University is an Equal Opportunity Employer.*

DEPARTMENT OF PALEOBIOLOGY

The Department of Paleobiology has available a federal permanent position for a **PALEOBOTANIST**, GS-11/12 (\$24,508/\$29,374 per annum), requiring a research background and continuing research interest in the evolution of flowering plants based on microfossil evidence. Ph.D. applicants are preferred. Factors to be evaluated are: published scientific contributions; originality, complexity, and independence of research plan; curation and collection development; and activities in professional societies. Application for federal employment (SF-171), curriculum vitae, copies of publications, and statement of long-term research goals should be sent to: **Office of Personnel Administration, Arts and Industries Building, Room 1410, Smithsonian Institution, Washington, D.C. 20560, Attention MPA-84-100-F.** Closing date for acceptance of applications is 15 April 1984.

An Equal Opportunity Employer

POSTDOCTORAL POSITION available immediately to study the molecular aspects of herpesvirus-induced atherosclerosis. Candidates should have a strong background in recombinant DNA technology; experience in virology and cell culture would be helpful. Please send curriculum vitae and three letters of reference to: **Dr. K. A. Schat, Department of Avian and Aquatic Animal Medicine, New York State College of Veterinary Medicine, Cornell University, Ithaca, N.Y. 14853.**

POSTDOCTORAL POSITION for recent Ph.D. or M.D., U.S. citizen or permanent resident, available immediately, supported by NIH Training Grant (National Research Service Awards), in the area of basic cancer chemotherapy, clinical cancer chemotherapy, cancer biology (including radiation biology), or cancer drug development (organic synthesis). Application deadline: 1 month. Send résumé, indicating area(s) of interest, and two or more letters of reference to: **Dr. Sungman Cha, Brown University, Box G, Providence, R.I. 02912.** Telephone: 401-863-3114. *An Equal Opportunity/Affirmative Action Employer.*

POSTDOCTORAL POSITION in the molecular genetics and biochemistry of mammalian cell adhesive mechanisms. Research involves analysis of fibronectin and related proteins with monoclonal antibodies and recombinant DNA technology. Experience in areas above helpful, but interest and enthusiasm more important. Send curriculum vitae and three references to: **Dr. Robert J. Klebe, Department of Cellular and Structural Biology, The University of Texas Health Science Center at San Antonio, 7703 Floyd Curl Drive, San Antonio, Texas 78284.** *An Equal Opportunity/Affirmative Action Employer.*

Peptide/Protein Chemists

Our Peptide Chemistry Department in Palo Alto, California has the following openings for chemists with an interest in pharmaceutical R&D:

Protein Sequencing Chemist, Ph.D.

We are seeking an experienced peptide/protein sequencing chemist for our analytical group. The ideal candidate will have a Doctorate with specialization in Biochemistry/Organic Chemistry or a similar discipline and a minimum of 4 years' post-doctoral training and experience. At least 2 years' hands-on experience in protein sequencing will be required. Administrative and leadership aptitude as well as verbal and written communication skills are a must.

Synthetic Organic Chemist, BS/MS

We are seeking a Synthetic Organic Chemist to synthesize peptides and their analogs for therapeutic evaluation. Candidates are required to have a BS or an MS in chemistry with 2 or more years of experience in synthetic organic chemistry, including the use of modern analytical instruments and methods. Experience in peptide synthesis and purification is highly desired.

An excellent benefits program includes medical, dental, and life insurance; retirement plan; stock purchase; and tuition reimbursement. Resume should be submitted to Fred Krueger, Employee Relations, Beckman Instruments, Inc., 1050 Page Mill Road, Palo Alto, CA 94304. EOE.

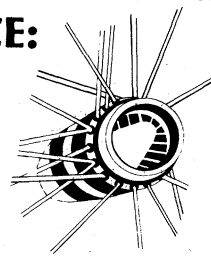
Beckman Instruments, Inc.

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WEAPONS IN SPACE: A NATIONAL TELECONFERENCE

April 5, 1984

8-10 p.m. EST



An in-depth program on ballistic missile defense televised from Boston to sites in: **Atlanta, Chicago, Denver, Houston, Los Angeles, New York, St. Louis, San Francisco, Seattle, and Washington, DC.**

Panelists include:

- **Dr. Carl Sagan**
- **Dr. Richard Garwin**
- **Admiral Noel Gayler**
- **Dr. Henry Kendall.**

Admission is free, by reservation only. For more information, please contact:

617-547-5552.

**Teleconference, Union of
Concerned Scientists, 26 Church
Street, Cambridge, MA 02238.**

National Institutes of Health National Cancer Institute

SUPERVISORY MICROBIOLOGIST/BIOLOGIST/CHEMIST

The National Cancer Institute has an opening for Chief of the Chemical and Physical Carcinogenesis Branch of the Carcinogenesis Extramural Program.

Duties include planning, developing, directing and managing a national extramural program of basic and applied research concerned with the occurrence and inhibition of cancer caused or promoted by chemical or physical agents, acting separately or together, or in combination with biological agents.

The position requires extensive knowledge of the scientific basis of chemical and physical carcinogenesis research; experience in planning, administration and evaluation of research carried out under the grant, contract and cooperative agreement mechanisms, experience with effective personnel management and supervision as well as experience in dealing with interrelationships between governmental, educational, industrial, and private research concerns.

In addition to three years of appropriate experience, minimum educational requirements include a 4 year course of study in an accredited college or university leading to a

bachelor's degree with major study in chemistry or biology. A doctorate or equivalent training in molecular biochemistry, pharmacology or biology is desirable.

This is a Civil Service Career-Conditional Appointment under the Merit Pay System at the GS-15 level with a salary range of \$50,252 to \$63,652 depending upon the qualifications of the applicant selected. Benefits include Civil Service Retirement, life and health insurance. This is a supervisory position and may require the incumbent to serve a one year probationary period. U.S. citizenship is required.

Submit application (SF-171, Personal Qualifications Statement), current performance appraisal and names of 3 references to:

**Ms. Rados, Cancer Personnel Office
Bldg. 31, Rm. 3A-35, 9000 Rockville Pike
Bethesda, MD 20205, Tel: 301/496-6864**

Applications must be received or postmarked by April 6, 1984.

NIH is an equal opportunity employer.

POSITIONS OPEN

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

PHYSIOLOGY

Assistant or associate professor, Ph.D. required, full-time, August 1984. Responsibilities include teaching two full-year courses: a medically oriented graduate physiology and an undergraduate human physiology, with laboratory, for biology majors. Postdoctoral teaching/research experience is required. Applicants should send résumé and three letters of recommendation by 7 April 1984 to: **Sister John Karen Frei, Ph.D., Director of Division of Biological and Biomedical Sciences, Barry University, Miami Shores, Fla. 33161.**

PLANT MICROPROPAGATOR. Twyford Plant Laboratories, a United Kingdom-based plant micropropagation/biotechnology company, is seeking a well qualified and experienced plant micropropagator (Ph.D. or equivalent). Preference will be given to those with experience of micropropagation in a wide range of horticulturally important ornamental and crop species. Responsibilities include receiving into culture a wide range of cultivars, varieties, and species and developing micropropagation systems suitable for use in a large-scale production unit, as well as overseeing a number of technicians. A proportion of time will be spent in administration, customer report preparation, conference presentations, and publications. An attractive package of salary and benefits will be offered. Applications with full curriculum vitae and three references to: **Research Director, Twyford Plant Laboratories, Bantonsborough, Glastonbury, Somerset BA6 8QG, England.**

POPULATION ECOLOGIST

Applications are invited for a tenure-track assistant professor position in population ecology beginning September 1984. Candidates must have a Ph.D. and a strong background in quantitative aspects of ecology. Postdoctoral experience is desirable. Teaching duties include participation in freshman-level courses, a graduate course in population ecology, and the development of other specialty courses. The successful applicant will be expected to develop a research program involving graduate and undergraduate students and to pursue outside funding. An interdisciplinary person who will interact with terrestrial and aquatic ecologists is desired. Preference will be given to vertebrate ecologists. Submit transcripts, a letter addressing research interests, curriculum vitae, and three letters of reference by 6 April 1984 to: **K. B. Davis, Chairman Search Committee, Department of Biology, Memphis State University, Memphis, Tenn. 38152.** The position will be filled only if suitable and qualified candidates apply. *Memphis State is an Equal Opportunity/Affirmative Action Institution.*

POSTDOCTORAL ASSOCIATE(S). One or two positions (research fellow or research associate, depending on experience) to work on the regulation of phospholipid metabolism in biological membranes. Research interests may include receptor-mediated lipid turnover, enzyme purification (phospholipases), or aspects of cell biology (myocytes, platelets). Please send inquiries to: **Dr. H. H. O. Schmid, The Hormel Institute, University of Minnesota, Austin, Minn. 55912. Telephone: 507-433-8804.** *The University of Minnesota is an Equal Opportunity Educator and Employer and specifically invites and encourages women and minority applicants.*

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

POSITIONS OPEN

POSTDOCTORAL POSITION IN HUMAN NUTRITION available 1 July 1984. Background/experience in biochemistry, enzymology, or immunochemistry required for research in developmental gastroenterology. Send curriculum vitae to: **Dr. Norman Kretschmer, Department of Nutritional Sciences, University of California, Berkeley, Berkeley, Calif. 94720.** *The University of California is an Affirmative Action/Equal Opportunity Employer.*

POSTDOCTORAL POSITIONS IN ONCOLOGY available immediately in NCI-supported multidisciplinary training program. Research opportunities in immunopharmacology, molecular and cell biology, chemotherapy, viral oncology, tumor immunology. Outstanding candidates will be selected from recent Ph.D.'s with training in basic medical sciences or M.D.'s who wish to develop a career in cancer research. Trainees must be U.S. citizens or permanent residents. Candidates may apply by submitting their curriculum vitae, three references, and career goals to: **Dr. Sheldon Dray, Program Director, Department of Microbiology/Immunology, University of Illinois at Chicago, P.O. Box 6998, Chicago, Illinois 60680.**

POSTDOCTORAL POSITION. Immunologist with a background in genetics to work on developing the MHC of a marsupial under the supervision of William H. Stone, who is a distinguished professor at Trinity University and scientist at the Southwest Foundation for Biomedical Research. Minimum salary for the first year is \$18,500 with consideration made for prior relevant postdoctoral experience. Candidates should respond to: **Personnel Manager, Southwest Foundation for Biomedical Research, P.O. Box 28147, San Antonio, Texas 78284.** Please include curriculum vitae, including undergraduate and graduate transcripts, statement of research experience and interests, and names of three references. *An Equal Opportunity/Affirmative Action Employer*

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 \$18,500 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 Biomedical Research, 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*

RESEARCH PSYCHOLOGIST

U.S. ARMY NATICK RESEARCH AND DEVELOPMENT CENTER NATICK, MASSACHUSETTS 01760

This is a career position in the Federal Service. Salary range: \$29,374 to \$38,185, commensurate with education and experience. Ph.D. in experimental psychology or human factors preferred.

Responsibilities include: independently planning and conducting research programs in human performance related to development of clothing and protective equipment; conducting laboratory and field studies to evaluate new clothing and equipment concepts; providing advisory services in human factors to product developers. Minimum requirements for this position are a bachelor's degree in psychology and 3 years of professional experience in appropriate subject matter area.

The Natick Research and Development Center is located 20 miles west of Boston. This position is in the competitive service and limited to citizens of the United States.

Send résumé and salary history to:

**U.S. Army Natick R & D Center
Attention: STRNC-BCR (Edward Hays)
Natick, Mass. 01760**

The Federal Government is an Equal Opportunity Employer.

POSITIONS OPEN

POSTDOCTORAL ASSOCIATE. Department of Pharmacology. To study the cellular pharmacokinetics of the chemotherapeutic agent bleomycin. Requires an M.D. or Ph.D. in pharmacology and prior research experience on anticancer drug biochemistry, absorption, and metabolism. Also requires prior experience in drug binding and transmembrane transport data analysis, with HPLC, cell culture and liquid scintillation techniques. Full-time position with annual salary of \$15,000. Interested applicants should submit their résumés to: **Box 61, SCIENCE.** *An Equal Opportunity/Affirmative Action Employer.*

POSTDOCTORAL POSITION IN PEDIATRICS/MICROBIOLOGY/IMMUNOLOGY DEPARTMENTS for recent Ph.D. who is available immediately to work on natural resistance in children with sickle cell anemia, or related area. Background and experience in monoclonal antibody production and fluorescence-activated cell analysis and sorting highly desirable.

Salary commensurate with experience. Send curriculum vitae and three letters of reference to:

**Thomas D. Miale, M.D.
Box 6998, Department of Pediatrics
University of Illinois at Chicago
Chicago, Ill. 60680**

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

DEPARTMENT OF BIOCHEMISTRY UNIVERSITY OF TORONTO POSTDOCTORAL POSITIONS

Postdoctoral training positions are available in the Department of Biochemistry, University of Toronto, in the fields of molecular biology, membrane structure and function, enzymology, immunology, protein chemistry, intermediary metabolism, and so forth. Candidates must have a Ph.D. in biological sciences. Recent postdoctoral experience is desirable but not essential. Candidates need not be landed immigrants or Canadian citizens. Appointments can commence immediately and are tenable for up to 2 years.

Salary is commensurate with experience and follows MRC guidelines. Applications, including curriculum vitae and names of at least three referees, should be sent to:

**Dr. H. Schachter, Chairman
Department of Biochemistry
University of Toronto
Toronto, Ontario, Canada M5S 1A8**

POSTDOCTORAL POSITION available for 1 to 3 years for research in catecholamine-angiotensin interactions in neurochemistry or biochemical pharmacology. Experience in radioreceptor assays, cell culture, or HPLC analysis of catecholamines preferred but not required. Send résumé and names of three references to: **Dr. Mohan K. Raizada (telephone: 904-392-3791) or Dr. Colin Summers (telephone: 904-392-4485), Department of Physiology, College of Medicine, University of Florida, Box J274, Gainesville, Florida 32610.** *An Equal Opportunity/Affirmative Action Employer.*

POSTDOCTORAL POSITION to study enzymology and regulation of muscle protein phosphatases. Send résumé and three letters of reference to: **Dr. E. Y. C. Lee, Department of Biochemistry, University of Miami School of Medicine, P.O. Box 016129, Miami, Florida 33101.**

POSTDOCTORAL POSITIONS IN CELLULAR AND MOLECULAR BIOLOGY are available immediately. Applicants should have background in cell biology, molecular biology, or biochemistry. Specific projects include the following: (i) Expression of collagen genes in cultured calf aortic smooth muscle cells and in a monkey model of atherosclerosis. Synthesis and turnover of connective tissue proteins, effects of the extracellular matrix on cells in culture [Dr. Franzblau and Dr. Sonenshein; see *Exp. Cell Res.* 143, 15 (1983); *J. Biol. Chem.* 257, 12252 (1982)]. (ii) Regulation of expression on oncogenes and immunoglobulin genes in mouse myeloma and human lymphoma cells. Expression of oncogenes in the cell cycle [Dr. Sonenshein, see *Nature (London)* 305, 443 (1983); *Cell* 36, 241 (1984)]. Applicants should indicate interest in specific project and send curriculum vitae and the names of three references to either: **Dr. Carl Franzblau or Dr. Gail Sonenshein, Department of Biochemistry, Boston University School of Medicine, 80 East Concord Street, Boston, Mass. 02118.** *An Equal Opportunity Employer.*

IMMUNEX CORPORATION is a multidisciplinary biotechnology company pursuing research and development of important immunoregulatory diagnostic and therapeutic products. An opening currently exists for a:

MOLECULAR BIOLOGIST

experienced in the expression of eukaryotic genes in microorganisms (bacteria and/or fungi.) A Ph.D. and post-doctoral experience is required. Knowledge of immunology is not necessary.

Please send a resume and the names of three references to:

**Personnel Director
Immunex Corporation
51 University Street
Seattle, WA 98101**

IMMUNEX

POSTDOCTORAL OPPORTUNITIES IN THEORETICAL PHYSICS

The Theoretical Division of the Los Alamos National Laboratory expects to have available postdoctoral research appointments for work in a broad range of theoretical physics and applied mathematics.

Current programs include basic and applied research in condensed matter theory, statistical physics, theoretical chemistry, atomic and molecular physics, equation of state and opacity, fluid dynamics and reactive flows, plasma theory, astrophysics, elementary particle theory, medium energy theory, nuclear physics and nuclear data, mathematical physics, dynamical systems, applied mathematics and numerical analysis, nonlinear systems, and theoretical biophysics.

The positions offer opportunities for use of our large computer facilities, for exciting interdisciplinary research, and for collaboration with experimental programs at LAMPF, in the Physics Division, and in other divisions.

Los Alamos National Laboratory is operated by the University of California for the Department of Energy. Our location in the mountains of northern New Mexico offers a clean environment and ample recreational activities. Postdoctoral appointments are for one year and may be renewable for a second year. Candidates no more than three years past their Ph.D. are invited to apply.

To apply, send a resume and a brief letter describing your research interests to:

George I. Bell, DIV 84-AM
Theoretical Division
MS B210
Los Alamos National Laboratory
Los Alamos, NM 87545



An Affirmative Action/Equal Opportunity Employer.

CHIEF, BIOSTATISTICS BRANCH

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

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

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

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

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

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

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

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

The National Institutes of Health is an Equal Opportunity Employer.

POSITIONS OPEN

POSTDOCTORAL POSITION available in July 1984 for a 2-year period to study the application of DNA polymorphism to the diagnosis of various disease states, including fragile X syndrome. Applicants should have experience in recombinant DNA techniques. Send curriculum vitae and three letters of recommendation to: **Stephen Thibodeau, Ph.D., Department of Pathology, The Children's Hospital, 1056 East 19 Avenue, Denver, Colorado 80218. An Equal Opportunity Employer.**

NOBLE FOUNDATION POSTDOCTORAL POSITIONS

- **Immunology**—Role of Fc and C3b receptor subclasses in macrophage phagocytosis; differentiation; interferon, complement, or antibody mediated activation. Role of NK and macrophage in chemical carcinogenesis.
- **Cell Biology**—Cellular aging; chromatin biochemistry; molecular biology.
- **Membrane Biology**—Enzyme and protein chemistry; cytoskeletal elements.

Two-year appointment at \$18,000 per annum; health and dental insurance; moving allowance; recent Ph.D. required.

Opportunity to do unencumbered research in privately funded research laboratory.

Send résumé to: **Dr. M. K. Patterson, Jr., Director, Biomedical Division, P.O. Box 2180, Ardmore, Okla. 73402.**

POSTDOCTORAL POSITION—Vanderbilt University Center in Toxicology seeks an **NMR SPECTROSCOPIST**. Duties include operation and care of a new Bruker AM-400 and other spectrometers, and training and supervision of open-shop users. Extensive opportunities exist for collaborative research; the position involves not only provision of routine service but also development and refinement of methods needed to solve non-routine problems. Salary: \$17,222. Send letter of application, résumé, and names of three references to: **Professor Thomas M. Harris, Department of Chemistry, Vanderbilt University, Nashville, Tenn. 37235. Equal Opportunity/Affirmative Action Employer.**

POSTDOCTORAL RESEARCH APPOINTMENTS are occasionally available in the Departments of Biochemistry, Biophysics and Medical Physics, Botany, Microbiology and Immunology, Molecular Biology, Physiology-Anatomy, and Zoology at the **University of California at Berkeley, Berkeley, California 94720**. Appointments are normally made for 1 year, but with the possibility of renewals for a maximum of two more years. A description of the research interests in the faculty in each department is available from that department upon request, and highly qualified persons are invited to apply directly to the faculty member with whom they wish to work. If no position is available with that faculty member, the application may be circulated to others in the same or other departments with similar research interests. Applications should include a résumé, a brief statement of research interests and goals, and the names and addresses of three references. *The University of California is an Equal Opportunity/Affirmative Action Employer.*

POSTDOCTORAL RESEARCH ASSOCIATE, Job Order Number 416787; 40 hours per week; \$19,000 per year. Performing experiments with mass spectrometer, shock tube, and vacuum systems. Analyzing computer data and results. Gas handling and analyses. Computer modeling of chemical kinetic results. Formulation and testing of proposed mechanisms for the formation of soot from hydrocarbon fuels. Preparing manuscripts for publication.

Send résumé and three letters of recommendation. Contact: **Louisiana Office of Employment Security, 617 St. Charles Avenue, New Orleans, La. 70130.**

POSTDOCTORAL RESEARCH ASSOCIATE

Postdoctoral research associate position in membrane/biochemistry/biophysics available immediately to study mechanisms of biological membrane assembly. Projects involve protein and phospholipid biosynthesis and integration into membranes using biochemical, biophysical, and immunochemical techniques. Interested applicants please send curriculum vitae and names of two references to:

**Dr. William S. Thayer
Department of Pathology
Hahnemann University School of Medicine
Broad and Vine
Philadelphia, Pa. 19102
An Affirmative Action Employer**

POSITIONS OPEN

POSTDOCTORAL POSITION available (1 April) on studies of molecular mechanism of anion metabolite transporters (phosphate, pyruvate, glutamate) of the mitochondrial inner membrane. Research program encompasses the identification and isolation of transport proteins, studies of their structure (including preparation and sequencing of cDNA) and function in mitochondrial and artificial membranes, and of processes related to the biosynthesis of these membrane proteins. Minimum salary: \$16,000 plus fringe benefits. Send curriculum vitae and two references to: **Dr. Hartmut Wohlrab, Boston Biomedical Research Institute, 20 Stanford Street, Boston, Mass. 02114. Equal Opportunity/Affirmative Action Employer.**

POSTDOCTORAL POSITION available 1 April to study metabolism of inhalation anesthetics. Experience in pharmacology/toxicology preferred. Candidate should have strong background in enzyme isolation and characterization. Cyt P-450 and GSH-S-transferase are of special interest. Send curriculum vitae and two references to: **Dr. Susan Rice, Department of Anesthesia, Stanford University School of Medicine, Stanford, Calif. 94305; telephone: 415-858-3938. Stanford University is an Equal Opportunity/Affirmative Action Employer and welcomes applications from women and minority group members.**

POSTDOCTORAL RESEARCH ASSOCIATE—Position available immediately for researcher to conduct studies on lipid protein interactions involving pulmonary surfactant. Applicant would join multidisciplinary group studying fetal and neonatal lung maturation. Background in lipid and protein chemistry, and measures of surface tension is desirable. Apply with curriculum vitae to: **Box 60, SCIENCE.**

UNIVERSITY OF CALIFORNIA, IRVINE POSTDOCTORAL RESEARCH IN PSYCHOBIOLOGY

The Department of Psychobiology, University of California, Irvine (UCI), anticipates filling several postdoctoral research positions in the laboratories of the faculty with starting dates between 1 February 1984 and 30 June 1984. The current faculty and their research interests are: D. Aswad (Neurochemistry); M. Baudry (Cell Biology and Neurochemistry); C. Cotman (Synaptic Growth and Plasticity); R. Josephson (Comparative Physiology of Muscles); M. L. Kean (Linguistics and Neural Mechanisms of Language Processing); H. Killackey (Developmental Neuroanatomy); M. Leon (Developmental Psychobiology); G. Lynch (Physiology, Neurochemistry); J. Marshall (Neural Plasticity of Catecholamines); J. McGaugh (Memory Storage Processes); D. Perkel (Theoretical Neurobiology); N. Weinberger (Neural Mechanisms of Learning); and P. Yahr (Neuroendocrinology and Behavior).

Candidates should address inquiries to: **Postdoctoral Research Advisor, Department of Psychobiology, University of California, Irvine, Calif. 92717.**

UCI

An Equal Opportunity/Affirmative Action Employer

PRE- AND POSTDOCTORAL TRAINING IN AGING AND THE NERVOUS SYSTEM. A NIA training grant awarded to the Sanders-Brown Research Center on Aging provides support for pre- and postdoctoral fellows to work with a multidisciplinary faculty studying aging and the nervous system. Research includes studies of microchemical changes in cortex and hippocampus, membrane chemistry, brain trace elements alterations, neuroimmunology, neuroendocrinology, effects of brain lesions on behavior, physiology of the life history of single neurons, cytoskeletal studies, and biochemistry of neurofibrillary tangles. Resources include a 30,000 square foot building for aging research, EM facilities, and a university-wide commitment to gerontology. One postdoctoral position is open for fall 1984. Contact: **William R. Markesbery, M.D., Director, Sanders-Brown Research Center on Aging, University of Kentucky, Lexington, Ky. 40536-0230.**

The Department of Physiology and Biophysics, Harvard Medical School, invites applications for the position of **PROFESSOR OF BIOPHYSICS**. Candidates should have a distinguished record of scholarship in the biophysical sciences. Duties: research and teaching within the Medical School and the Faculty of Arts and Sciences. *Qualified women and minority candidates are encouraged to apply.* Send curriculum vitae to: **Chairman, Search Committee, Department of Physiology and Biophysics, Harvard Medical School, 25 Shattuck Street, Boston, Mass. 02115.**

POSITIONS OPEN

PROFESSOR OF ANATOMY. The Department of Anatomy at Harvard Medical School seeks to fill a tenured professorship with a cell biologist who has demonstrated his/her ability in both molecular genetics and cell structure, and who is working at the interface between cell and molecular biology. Interest in isolating and localizing the genes involved in the synthesis of extracellular matrix or cytoskeletal components is the most desirable attribute. The individual would be expected to participate in teaching one of the required courses (for example, microscopic anatomy, neuroanatomy, gross anatomy, embryology) offered to medical students, and thus previous experience along these lines is also a desirable attribute. Please submit curriculum vitae and letter of interest to: **Dr. Elizabeth D. Hay, Chairperson, Department of Anatomy, Harvard Medical School, 25 Shattuck Street, Boston, Mass. 02115. Harvard is an Affirmative Action/Equal Opportunity Employer.**

PROTEIN CHEMIST

Immediate opening for a Ph.D. with expertise in protein chemistry to work on all aspects of immunoassay development. Background in organic chemistry and/or proteases helpful. Postdoctoral research experience preferred. This is a unique opportunity to work in a strong R & D company.

Please send curriculum vitae to: **Director of R & D, Genetic Diagnostics Corp., Box 2100, Great Neck, N.Y. 11022.**

PROTEIN/MEMBRANE BIOCHEMIST

A research associate position is available immediately. Emphasis will be on purification, functional characterization, and crystallization of integral membrane protein with an ultimate goal of 3-dimensional structure determination by diffraction methods. A Ph.D. or equivalent in biochemistry of cell biology is required. Salary is \$19,000 per year, plus fringe benefits. Send curriculum vitae and three letters of reference to: **Dr. W. Chiu, Department of Biochemistry, University of Arizona, Tucson, Ariz. 85721, before 30 March 1984.**

An Equal Opportunity/Affirmative Action/Title IX/Section 504 Employer

PROTEIN TRANSPORT

Position available immediately at the University of California, San Francisco, for studies on the biogenesis and transport of periplasmic oxidoreductases in prokaryotes. Applicants should have expertise in protein chemistry or enzymology and microbial biochemistry. Experience in the membrane transport of proteins is desirable but not essential. Appointment will be at the level of postgraduate or assistant research biochemist in the salary range of \$19,392 to \$26,100, depending on qualifications and experience. Deadline for application: 30 March 1984. Curriculum vitae and names of three references to: **Dr. D. J. Steenkamp, Molecular Biology Division, Veterans Administration Medical Center 151S, 4150 Clement Street, San Francisco, Calif. 94121.**

PSYCHOBIOLOGIST. The Department of Psychology at The University of Michigan invites applications for a regular tenure-track assistant professor position in its psychobiology area. Duties will include teaching psychobiology at graduate and undergraduate levels, supervising graduate research, and conducting an active research program on some aspect of brain-behavior relations. Exact area of research interest is open, although an emphasis on integrating biological and behavioral approaches is desired. Send curriculum vitae and letters of recommendation to: **Dr. William Uttal, Chairman, Psychobiology Search, The University of Michigan, P.O. Box 1248, Ann Arbor, Michigan 48106. The University of Michigan is an Affirmative Action/Equal Opportunity Employer.**

RESEARCH ASSOCIATE

Permanent position at university hospital. Immunologist with biochemical background or immunochemist. Doctorate required. Work on immunological aspects of human cancer. Experience in antigen and antibody fractionation, labeling, and immunoassays necessary. Excellent salary and benefits. Send curriculum vitae and bibliography to: **Dr. G. F. Springer, Director, Immunochimistry Research, Evanston Hospital, 2650 Ridge Avenue, Evanston, Illinois 60201. Equal Opportunity Employer, M/F.**

**ANNOUNCEMENT/CALL FOR PAPERS, POSTERS, AND
REGISTRATION, (CONFERENCE ON THE MOLECULAR BASIS
OF CANCER: AN INTERDISCIPLINARY DISCUSSION ON
BASIC AND APPLIED ASPECTS OF CANCER)**

MAY 30-JUNE 2, 1984

**ROSWELL PARK MEMORIAL INSTITUTE
BUFFALO, NEW YORK**

Invited speakers:

A. Bloch	Buffalo	G. Loew	Menlo Park
S. Broyde	New York	K. Miller	Troy
C. Cantor	New York	S. Neidle	London
E. Clementi	Poughkeepsie	T. O'Connor	Buffalo
D. Crothers	New Haven	W. Olson	New Brunswick
C. DeLisi	Bethesda	G. Pack	Rockford
T. Dougherty	Buffalo	M. Pincus	New York
W. Duax	Buffalo	P. Politzer	New Orleans
M. Feldman	Rehovot	A. Pullman	Paris
R. Feldmann	Bethesda	B. Pullman	Paris
I. Hertman	Ness-Ziona	R. Rein	Buffalo
A. Hopfinger	Skokie	R. Sarma	Albany
T. Hopp	Seattle	H. Scheraga	Ithaca
J. Kaufman	Baltimore	R. Schwartz	Bethesda
S. Kim	Berkeley	D. Stollar	Boston
P. Kollman	San Francisco	A. Wada	Tokyo
J. Ladik	Erlangen	R. Wells	Birmingham
M. Liebman	New York	C. Wenner	Buffalo

Organizing Committee: R. Rein (Chairman), C. DeLisi, P. Lowdin, T. O'Connor, B. Pullman, H. Weinstein

This conference will provide a forum for a dialogue on topics which are in the forefront of cancer research by investigators from various areas of natural sciences. The conference will bring together experimental biologists, theoreticians, and structural chemists for a discussion centered around gene function and expression, drug design, immunological probes, and membrane properties underlying the cancerous process.

The invited and contributed papers will be promptly published. Papers for the proceedings should be submitted no later than the finish of the conference. Abstracts are due by April 1 and should include the name of the author(s), institution, and a summary of the work to be presented. Send to R. Rein, Roswell Park Memorial Institute, Cancer Cell Center, Buffalo, New York 14263.

The number of participants will be limited to 400. Inquiries about details of the program and registration should be addressed to Kevin A. Craig, Medical & Scientific Communications, Roswell Park Memorial Institute, 666 Elm Street, Buffalo, New York 14263.

**POSTDOCTORAL FELLOWSHIPS
at
THE WISTAR INSTITUTE**

Postdoctoral positions for 2 to 3 years are continuously available to exceptionally good recent MD and PhD graduates in the field of oncogenesis, cellular differentiation, chemical carcinogenesis, membrane biochemistry, somatic cell genetics, tumor cell biology and molecular biology. Applicants should send their curriculum vitae and names of three references to:

**Coordinator of Research Training
The Wistar Institute of Anatomy
and Biology
36th Street at Spruce
Philadelphia, PA 19104**

Research

Scientists

Newly created positions on staff of dynamic R&D operation

So important has R&D become at the Bristol-Myers Company, that this operation has been elevated to Divisional level status. As a result, two excellent opportunities are currently available within the Pharmacology Department for innovative and creative scientists to become involved in new drug discovery programs in the Gastrointestinal and Antiarthritic/Anti-inflammatory Research areas.

• PhD Pharmacology/Physiology

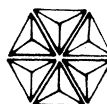
Should have 2 or more years of postdoctoral experience in gastrointestinal pharmacology and/or gastrointestinal function, plus strong record of publication. Research experience or knowledge of the control mechanisms of gastrointestinal motility is also desirable.

• PhD Antiarthritic/ Anti-inflammatory Research

Should have 3 or more years of postdoctoral experience in the design and performance of experiments in hypersensitivity and autoimmune diseases. Published work must reflect ability to perform creative and independent research. Background in immunopharmacology is highly desirable, as is an understanding of the biochemical and molecular aspects of osteo and rheumatoid arthritis.

We offer good starting salaries, comprehensive benefits and a working environment conducive to your professional growth. Our facility is located in Syracuse, a central New York area with excellent cultural, recreational and educational resources. For prompt, confidential consideration, forward your resume with salary history and requirement, to:

EMPLOYMENT RECRUITER



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

P.O. Box 4755, Syracuse, New York 13221
An equal opportunity employer M/F

POSITIONS OPEN

RESEARCH ASSISTANT

Norden Laboratories, subsidiary of SmithKline Beckman Corp. and leader in the animal health industry, has an immediate opening in our research and development area. As an important member of one of our biological research teams, the research assistant will be responsible for laboratory work in the area of molecular biology.

Applicants should have an M.S. degree in microbiology, molecular genetics, or biochemistry; or a B.S. degree plus 2 to 3 years of research experience.

In addition to an attractive starting salary, Norden offers a comprehensive benefit package that is one of the finest in the industry. Interested applicants should send a résumé (including salary requirements), in confidence, to **Connie Soucie** at:

NORDEN LABORATORIES
P.O. Box 80809
Lincoln, Neb. 68501

An Equal Opportunity/Affirmative Action Employer

TWO RESEARCH ASSISTANT PROFESSORS, nontenure track, Ph.D. or M.D., with pertinent postdoctoral experience. Candidates will be expected to have theoretical knowledge and practical proficiency in molecular biology for studying fundamental problems of pancreatic islet cell metabolism or expertise in biochemical pharmacological approaches to investigate the role of ion channels and pumps in stimulus secretion coupling in endocrine cells. Please send résumé, including list of publications and summary of research, and three letters of reference to:

Franz M. Matschinsky, M.D.
Director, Diabetes Research Center
University of Pennsylvania
School of Medicine
414 Anatomy-Chemistry Building/G3
Philadelphia, Pa. 19104

The deadline for applications is 23 March 1984. *The University of Pennsylvania is an Equal Opportunity/Affirmative Action Employer.*

RESEARCH ASSISTANT; 40 hours per week; 8 a.m. to 5 p.m.; \$14,000 per year.

Opening for research assistant to maintain an organic synthesis preparation laboratory (gm to kg scale): repeat literature preps; develop scale-up procedures; check the purity of compounds to be used for testing; conduct literature research for procedures. Supervise and train graduate and undergraduate students in developing their laboratory skills and techniques; Determine the students' level of laboratory expertise through use of a formal examination and observation in laboratory; assist in assigning preps to develop or enhance laboratory skills and techniques; assist in developing students' expertise in literature searching and retrieval; and train students in the art of keeping a correct, informational, and legal laboratory notebook. Order and maintain a stock supply of chemicals, glassware, and equipment for a research group of approximately 15 members. The work of this laboratory is to design, synthesize, and test new anticancer agents and antiparasitic compounds. Because very new, untested compounds are used in the laboratory, knowledge of structure activity relationship is necessary for safe completion of duties. Job requires bachelor's degree in chemistry and 2 years of experience as a chemical-laboratory technician. Job also requires background in nuclear magnetic resonance, infrared, ultraviolet, mass spectroscopy equipment and technique as gained through academic or professional experiences and background in chromatographic techniques as gained through academic or professional experiences. Send résumés to: **MESC, 7310 Woodward Avenue, Room 415, Detroit, Mich. 48202; reference number 3684.** Employer paid ad.

RESEARCH ASSISTANT PROFESSOR OF NEUROLOGY to perform tissue culture, biochemical and immunochemical studies of neuroglial proliferation and regulation. Please contact: **Dr. Donald H. Silberberg, Professor and Chairman, Department of Neurology, Hospital of the University of Pennsylvania, 3400 Spruce Street, Philadelphia, Pa. 19104.** *The University of Pennsylvania is an Affirmative Action/Equal Opportunity Employer.*

RESEARCH FACULTY POSITION for a neurochemist-neurobiologist with expertise in the biochemistry of myelination and in cell culture. Applicants should contact: **Dr. H. Silberberg, Professor and Chairman, Department of Neurology, Hospital of the University of Pennsylvania, 3400 Spruce Street, Philadelphia, Pa. 19104.** *The University of Pennsylvania is an Affirmative Action/Equal Opportunity Employer.*

POSITIONS OPEN

UNIVERSITY OF NEW HAVEN INSTITUTE OF COMPUTER STUDIES

RESEARCH ASSOCIATE positions are available starting in September 1984 for durations of up to 3 years. Candidates must possess an expertise in business, in applied/life science, or in engineering with a high level of computer-related skills. The ability to relate to many academic disciplines is essential. Independent research in a computer-related area is required concurrent with teaching and other Institute activities. Salary commensurate with qualifications. Send résumé, summary of research goals, and three letters of reference by 2 April 1984 to:

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

An Affirmative Action/Equal Opportunity Employer

RESEARCH ASSOCIATE

A 2-year position at the rank of **postdoctoral research associate** is available in the Department of Physiology and Biophysics of the University of Tennessee Center for the Health Sciences. Candidates should have a Ph.D. or M.D. degree, and a research interest in neuroendocrine regulatory mechanisms and anterior or posterior pituitary physiology. Send curriculum vitae, brief statement of research interests, and the names of three references to: **Dr. Clark Grosvenor, Professor, Department of Physiology and Biophysics, University of Tennessee Center for the Health Sciences, Memphis, Tennessee 38163.** *An Equal Opportunity/Affirmative Action Employer.*

RESEARCH ASSOCIATE POSITION IN ATOMIC THEORY

A research associate position is available immediately, involving research in the general area of atomic structure. Send a résumé and arrange to have three letters of recommendation sent to: **Professor Chander P. Bhalla, Department of Physics, Kansas State University, Manhattan, Kansas 66506.** Application deadline is 25 March 1984. If no qualified candidate is available, the deadline will be extended to 15 June 1984. *Kansas State University is an Equal Opportunity/Affirmative Action Employer.*

RESEARCH ASSOCIATE needed to study eukaryotic gene structure and organization. Will be required to sequence DNA, restriction map and subclone DNA fragments into DNA vectors. Must have Ph.D. in biochemistry or molecular biology with 1 year of postdoctoral training in molecular biology. Must also be adept in nucleic acid research and sequencing. Salary: \$18,000 per year, 40 hours per week. Apply at the Texas Employment Commission, Houston, Texas, or send résumé to: **The Texas Employment Commission, TEC Building, Austin, Texas 78778, J.O. Number 2511182.** *Ad paid by an Equal Opportunity Employer.*

RESEARCH ASSOCIATE POSITION IN BIOMEDICAL ENGINEERING. Available immediately to join a research group studying micro- and macro-circulation, with particular emphasis on mathematical modeling and computer-based acquisition of cardiovascular data in animal models of hypertension. Must have a Ph.D. in biomedical engineering and a strong background in cardiovascular physiology and fluid mechanics. Position available for a minimum of 2 years. NIH-supported grant. Salary: \$14,040 per year. Send résumé to: **Dr. Phillip M. Hutchins, Department of Physiology and Pharmacology, Bowman Gray School of Medicine, 300 South Hawthorne Road, Winston-Salem, North Carolina 27103.** *Equal Opportunity Employer.*

The Department of Biochemistry, Rice University, announces the availability of **RESEARCH POSITIONS** for programs of research in the areas of cholesterol biosynthesis, sphingolipid chemistry and metabolism, and the regulation of sterol and isoprenoid synthesis by naturally occurring and synthetic inhibitors. Experience in bioorganic chemistry and/or analytical biochemistry of concerned compounds and/or of mammalian cell culture techniques highly desirable. Positions available immediately. Interested candidates should send résumé and names of three references to: **G. J. Schroepfer, Jr., Department of Biochemistry, Rice University, Houston, Texas 77251.** *Rice University is an Equal Opportunity/Affirmative Action Employer.*

POSITIONS OPEN

The Department of Physiology and Biophysics at the University of Alabama in Birmingham has an opening for a **RESEARCH ASSOCIATE** 1 July 1984, for studies of regional oxygen supply and demand during hypoxia. Recent Ph.D. with interests in respiration and circulation and especially in problems relating to oxygen transport to tissues would be suitable. In addition, interest in the application of microcomputers to laboratory problems is desirable. Salary follows NIH guidelines for postdoctoral fellowships. Send curriculum vitae and two letters of reference to:

Stephen M. Cain, Ph.D.
Department of Physiology and Biophysics
University of Alabama in Birmingham
University Station
Birmingham, Ala. 35294

The University of Alabama in Birmingham is an Equal Opportunity/Affirmative Action Employer.

VIROLOGIST—Civil service examination for position of virologist to be given soon. Experience in tissue culture, virus propagation and assay, immunological identification of viruses, RIA and ELISA desirable. Position involves research and monitoring studies for the quantitative recovery isolation and identification of viruses from water, sewage, sludge, and aerosols. Minimum requirements: B.S. in microbiology, bacteriology, or biology with emphasis on virology, plus 1 year of experience in virology or microbiology. Minimum starting salary: \$23,300. For application and information, contact: **Personnel Department, The Metropolitan Sanitary District of Greater Chicago, 100 East Erie Street, Chicago, Ill. 60611; telephone: 312-751-5611.**

WEED SCIENTIST/Plant Physiologist—Ecologist. The Department of Botany, University of California, Davis, invites applications for a tenure-track position in **WEED SCIENCE/Plant Physiology—Ecology** at the assistant professor level. The appointment is 75 percent in the Agricultural Experiment Station for research and 25 percent in the College of Letters and Science for teaching. Candidates must have an expressed interest in weed science with strengths in plant physiology and experimental design. The research will focus on physiological and ecological aspects of environmental stress on plants and plant communities in habitats such as range and forests. The major emphasis would be on biotic and abiotic interaction within these communities and how various techniques such as herbicide application, mechanical treatment, biological control, and so forth, may be used to manipulate the weedy components. Appointee should be prepared to teach an undergraduate course in either weed science or botany, or participate in a team-taught course in plant protection and pest management, be in charge of an occasional seminar, and direct graduate student research. The Ph.D. degree in botany, ecology, plant physiology, weed science, or closely related field is required at the time of appointment. Applicants should submit curriculum vitae, list of publications, graduate and undergraduate transcripts, statement of research and teaching goals, and the names and addresses of at least three references to: **Dr. David E. Bayer, Chair of the Search Committee, Botany Department, University of California, Davis, California 95616.** Closing date for applications is 20 April 1984. *The University of California is an Affirmative Action/Equal Opportunity Employer.*

DEPARTMENT OF INVERTEBRATE ZOOLOGY NATIONAL MUSEUM OF NATURAL HISTORY SMITHSONIAN INSTITUTION

Two zoologist positions at entry level GS-11/12 (\$25,366 to \$30,402) for a malacologist (preferably in opisthobranchs, bivalves, or pulmonates) and a stony coral specialist. Open to all qualified candidates with a Ph.D. or equivalent for research/curatorial functions with emphasis on recent collections-oriented systematic and evolutionary biology. Requires demonstrated working knowledge of classical and contemporary systematic techniques, hard- and soft-part anatomy, modern evolutionary theory, and museum/curatorial and field functions. Submit, by 15 April 1984, Standard Form 171, résumé and statement of long-term research goals, list or reprints of publications, transcripts, and names and addresses of references to: **Smithsonian Institution, Office of Personnel Administration: 900 Jefferson Drive, SW, Room 1410, Washington, D.C. 20560, attention: MPA-84-200-F.** Telephone inquiries may be directed to: **Dr. Clyde F. E. Roper at 202-357-2030.**

The Smithsonian Institution is an Equal Opportunity Employer.

Genetics Institute is the largest privately-held company actively engaged in the development and application of recombinant DNA technology to human health care, agriculture, and chemicals. During the first two years of operation we have grown to over 100 employees and have undertaken research projects in collaboration with a number of prominent commercial partners. Our continued rapid growth affords a wide range of career opportunities.

We seek scientific staff at all degree levels for the following areas of research and development:

Molecular Biology

A number of openings exist for individuals with a strong research background in recombinant DNA technology with additional expertise in one of the following areas: viruses and viral expression vectors, animal cell culture, or bacterial expression.

Molecular Biology/ DNA Sequencing

An accomplished Ph.D. to supervise a DNA sequencing laboratory. Experience in molecular cloning is essential.

Protein Biochemistry

To work on the development of procedures for purification and characterization of protein produced through recombinant DNA technology. At least two years of relevant work experience is essential. One Ph.D. level position would require experience in glycoprotein characterization.

Chemistry/Enzymology

A broad familiarity with enzymes, enzyme manipulation, kinetics, organic synthesis and characterization of reaction products.

Protein Chemistry

Experience with peptide synthesis, automated protein sequencing, new protecting groups and activation reagents for the solid phase approach.

Cell/Developmental Biology

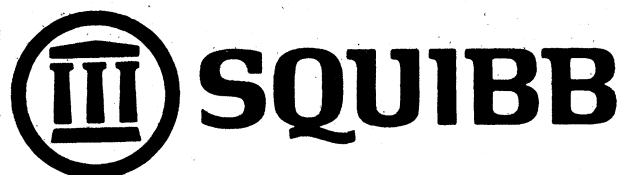
A skilled and highly motivated Ph.D. level cell biologist with extensive experience in tissue culture and developmental biology. Initially, work will be on the biology and therapeutic potential of osteogenic factors.

Medical Microbiology

Strong research background in clinical microbiology and familiarity with a broad range of microorganisms. Nucleic acid molecular biology is highly desirable.

We offer equity participation in addition to a competitive salary and complete benefit package. Qualified candidates should forward their resumes, and the names of three individuals we may contact for references, in confidence to: Personnel Office, GENETICS INSTITUTE; 225 Longwood Ave., Boston, MA 02115.

Genetics Institute



POSITIONS IN PHARMACOLOGY

The Squibb Institute for Medical Research, an established leader in the pharmaceutical industry, has a number of openings in our Pharmacology Department. In general we are seeking individuals with a proven ability to work independently but who can interact with a large multi-disciplinary team conducting cardiopulmonary research.

SENIOR RESEARCH INVESTIGATOR

Will plan, conduct and report on cardiovascular research within the prostaglandin-thromboxane-leukotriene area. Will supervise junior scientists. We require a Ph.D. in Pharmacology or Physiology, or equivalent with 4-6 years of postdoctoral experience in related cardiovascular pharmacology.

RESEARCH ASSOCIATE

B.S. or M.S. in Physiology/Pharmacology or equivalent with 1-3 years experience with *in vitro* or *in vivo* cardiovascular experimentation. Responsibilities include the performance and reporting of laboratory studies in cardiovascular and pulmonary pharmacology. Preference will be given to candidates with knowledge also of prostaglandin/thromboxane pharmacology.

RESEARCH ASSOCIATE

Qualified candidates will possess a B.S. or M.S. in Physiology/Pharmacology or equivalent with a minimum of 1-3 years relevant experience. Responsibilities include the performance of sterile surgical procedures and studies of cardiovascular pharmacology, with special emphasis in Doppler Blood Flow techniques.

RESEARCH ASSOCIATE

Requires a B.S. or M.S. in Biochemistry or equivalent and a minimum of 1-3 years experience performing radio-immunological and enzymatic assays. This individual will conduct such assays while participating in multi-disciplinary pharmacological research projects.

These challenging positions are located at Squibb World Headquarters in Princeton, New Jersey and provide an excellent salary and benefits package. Interested candidates are requested to send their resume including salary requirements in confidence to: SQUIBB CORPORATION, Department 990-4, P.O. Box 4000, Princeton, New Jersey 08540. An equal opportunity employer.

POSITIONS OPEN

The U.S. Department of Agriculture (USDA) Human Nutrition Research Center on Aging at Tufts University in Boston (HNRC) is seeking an experienced **RESEARCH SCIENTIST** to assist the chief of the Nutrition Evaluation Laboratory.

The successful applicant will be responsible for developing chemical and biochemical methods for the assessment of nutritional status. This involves identifying analytical requirements, reviewing existing methodologies, and evaluating the effectiveness of new and existing methods. The incumbent will participate in the management of the laboratory and provide strong intellectual support and leadership for the laboratory staff. Collaboration with other HNRC scientists in the conduct of experimental human and animal nutrition research is expected.

Applicants should have a Ph.D. in an appropriate scientific discipline and/or significant research experience in analytical biochemistry. Interested persons should send their curriculum vitae, a short description of their past and present research experience and interests, names of three references, and salary history to:

Thomas B. Sykes
Personnel Manager
USDA Human Nutrition Research Center
on Aging at Tufts University
711 Washington Street
Boston, Mass. 02111

Applications will be considered until a suitable candidate is found.

The Environmental Defense Fund is seeking applicants for the position of **SCIENCE ASSOCIATE** in its New York City office. The position carries a 2-year commitment and an annual salary of \$18,000 to \$20,000. Applicants must have a degree (preferably graduate) in the physical or biological sciences, research experience, and good writing skills. The position provides the opportunity to undertake research and apply the results to public policy issues. Please send résumés to:

Marion Rogers
Environmental Defense Fund, Inc.
444 Park Avenue South
New York, New York 10016

GRADUATE STUDY

GRADUATE STUDY IN BIOLOGICAL ANTHROPOLOGY at the University of Pittsburgh. The faculty in the Department of Anthropology invites applications for study leading to the degree of Ph.D. in anthropology. The program in biological anthropology offers specializations in anatomy, behavior, ecology, paleontology, and systematics. Graduate research and teaching assistantships are available on a competitive basis. For further information and application forms, contact: **Dr. Michael I. Siegel, Department of Anthropology, University of Pittsburgh, Pittsburgh, Pa. 15260.**

PROGRAMS

PRE- AND POSTDOCTORAL TRAINING IN ENVIRONMENTAL ONCOLOGY. The Institute of Environmental Medicine invites applications for its pre- and postdoctoral training programs in environmental oncology. Molecular and cellular approaches to the study of chemical and radiation carcinogenesis in vivo and in vitro are emphasized. Curriculum vitae and two letters of recommendation should be submitted by 1 April 1984 to: **Dr. Roy E. Albert, Institute of Environmental Medicine, New York University Medical Center, 550 First Avenue, New York, N.Y. 10016. An Affirmative Action/Equal Opportunity Employer, M/F.**

TRAINING PROGRAM IN DIABETES AND ENDOCRINOLOGY RESEARCH: Postdoctoral research associate positions (two) to study the molecular basis of transmembrane signalling: (i) molecular cloning of adenylate cyclase coupling proteins, and (ii) phospholipid reconstitution of receptors with coupling proteins and study of consequences. Pre-doctoral experience in either protein purification, nucleic acid research, or protein-phospholipid interactions desirable. Requires U.S. citizenship or permanent residence visa in United States. Candidates should write to: **Dr. Lutz Birnbaumer, Professor, Department of Cell Biology, Baylor College of Medicine, Houston, Texas 77030, and provide a list of references.**

PROGRAMS

CAREER CHANGE OPPORTUNITY

This unique program offers the candidate with an earned doctorate in the sciences the opportunity to obtain a doctor of optometry (O.D.) degree in two calendar years. Employment opportunities exist in private practice, industry, education, and research. Contact: **The Dean of Admissions, The New England College of Optometry, Room 301, 424 Beacon Street, Boston, Mass. 02115.**

FELLOWSHIPS

A **POSTDOCTORAL FELLOWSHIP** is available in protein crystallography related to active sites and regulatory mechanisms, including enzymes modified at the DNA level by recombinant techniques. Applicants from the area of small molecule crystallography will also be considered.

Applicants may write to: **Professor William M. Lipscomb, Gibbs Chemical Laboratory, Harvard University, Cambridge, Mass. 02138. Harvard University is an Affirmative Action/Equal Opportunity Employer.**

POSTDOCTORAL RESEARCH FELLOWSHIP IN THE CELLULAR BIOCHEMISTRY OF LEUKEMIAS

This minimum 2-year position is available immediately in an interdisciplinary program sponsored by the Department of Pediatrics, Medicine, and Biochemistry at the University of Chicago. This federally funded program involves basic research in membrane biology of leukemic cells, with particular emphasis on Hairy Cell Leukemia, together with its application to clinical therapy. A strong background in biochemistry is desirable.

Stipend is \$16,000 to \$18,000 per annum. Applicants should send curriculum vitae to:

Dr. Glyn Dawson
Department of Pediatrics, Box 82
University of Chicago
5841 South Maryland Avenue
Chicago, Ill. 60637

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SYSTEMATIC HERPETOLOGY. Applications invited for 1-year research fellowship. Applicant must have received Ph.D. Stipend: \$17,000 plus \$1,000 expenses. Award on 1 July 1984. Submit résumé, including list of publications; description of research, including the desirability of working at the Academy; graduate transcripts if Ph.D. received in past 5 years; and names, addresses, and telephone numbers of three references to: **Director of Administration, California Academy of Sciences, Golden Gate Park, San Francisco, Calif. 94118. Closing date: 30 April 1984.**

POSTDOCTORAL FELLOWSHIPS IN PHARMACOLOGY/TOXICOLOGY

Fully funded 2-year postdoctoral fellowships at the Harvard Medical School are available as early as July 1984 to study mechanisms of drug action and toxicity. Agents currently being studied include paracetamol, aminoglycoside antibiotics, oral anticoagulants, fat soluble vitamins, and diuretics. Experimental approaches to be utilized range from molecular biology to studies in laboratory animals and in humans. Additional opportunities exist for formal instruction in toxicology, pharmacokinetics, and poison control. Persons interested in applying should have received the doctoral degree within the last 2 years in biochemistry, molecular biology, chemistry, or a related field. They should send curriculum vitae and arrange to have three letters of recommendation sent to: **Dr. Paul A. Friedman, Department of Pharmacology, Harvard Medical School, 250 Longwood Avenue, Boston, Mass. 02115. Harvard University is an Equal Opportunity/Affirmative Action Employer.**

POSTDOCTORAL FELLOWSHIP available July 1984 for the biochemical study of cell-cell interactions in the cellular slime mold, *Dictyostelium discoideum*. Current work is focused on a purified adenylate cyclase and surface cAMP receptors, the key components of the intercellular signaling system. Experience in biochemistry or cell biology is desirable. Send résumé and names of three references to:

Dr. Peter N. Devreotes
Department of Physiological Chemistry
The Johns Hopkins University
School of Medicine
725 North Wolfe Street
Baltimore, Maryland 21205

FELLOWSHIPS

MEDICAL GENETICS—Postdoctoral fellowships for individuals with M.D. or Ph.D. degrees. The John F. Kennedy Institute and the Division of Medical Genetics of the Department of Pediatrics, The Johns Hopkins University, are offering 2- and 3-year fellowships in medical genetics which meet the requirements for subspecialty boards in medical genetics. Openings are available in the areas of clinical genetics, cytogenetics, molecular genetics, biochemical genetics, or a combination of the above. Applications are now being accepted for appointments beginning 1 July 1984 and 1985. For further information, contact: **Dr. Haig Kazazian, Department of Pediatrics, CMSC, Room 1004, The Johns Hopkins Hospital, 600 North Wolfe Street, Baltimore, Maryland 21205. Telephone: 301-955-6327. An Equal Opportunity/Affirmative Action Employer.**

POSTDOCTORAL AND PREDOCTORAL STIPENDS available 1 July 1984. Candidates will work among four laboratories and conduct research in folliculogenesis, fertilization or embryogenesis; or research in applying developments in these and other areas of reproductive biology to animal improvement. Postdoctoral applicants are sought with strong training in one or more of the following basic sciences: cell biology, biochemistry, and genetics. Interested applicants should submit curriculum vitae, including all college transcripts, and arrange for three letters of recommendation to be mailed to: **Dr. Roy Ax, Department of Dairy Science, University of Wisconsin, 1675 Observatory Drive, Madison, Wis. 53706.**

POSTDOCTORAL FELLOWSHIPS IN ALCOHOL STUDIES: NIAAA-funded postdoctoral program for M.D.'s and Ph.D.'s in a variety of disciplines in conjunction with an NIAAA Alcohol Research Center. Five possible fields of clinically oriented research: behavioral research, biomedical aspects of alcohol use (including psychophysiology, EEG and ERP, sleep research), clinical outcome and typology, cross-national studies, behavior genetics, and family studies. NRSA stipend; amount depends on experience. Stipends available 1 July 1984. For more information, contact: **Victor Hesselbrock, Ph.D., Department of Psychiatry, University of Connecticut Health Center, Farmington, Conn. 06032. An Affirmative Action/Equal Opportunity Employer, M/W/H.**

MARKETPLACE

VERBATIM TRANSCRIPTS

Skin the Barrier—In Vitro Assessment & Prediction Techniques, July 18-19, 1983, Newark, NJ
325 pgs., (\$85.00).

Alternatives to In Vivo Bioassays for Risk Assessment, Nov. 9-11, 1983, Washington, D.C.
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KING SAUD UNIVERSITY
(formerly University of Riyadh)
Riyadh, Saudi Arabia



COLLEGE OF AGRICULTURE

Qualified personnel are invited to apply for the following posts of Faculty Members (Professors, Associate Professors, Assistant Professors), Lecturers, Demonstrators, Research Assistants and Technicians for the academic year 1984 — 1985.

Department	Specialization	Qualification
I. Staff members:		
1. Food Science	a. Human nutrition metabolism	Ph.D. teaching experience, Arabic speaking
	b. Dairy technology Food analysis	
2. Animal Science	a. Poultry nutrition	same as above
3. Plant Production	a. Cytogenetics	same as above
4. Agricultural Economics & Rural Sociology	a. Farm management	PhD. teaching experience, Associate or Professors only, Arabic speaking.
	b. Marketing of agricultural products	same as above
5. Home Economics & Nutrition	a. Textiles and costumes	Ph.D., teaching experience, Arabic speaking
II. Lecturers:		
1. Home Economics & Nutrition	a. Plant production (Ornamentals)	M.Sc., teaching experience, Arabic speaking
	b. Plant production (field crops)	
2. Plant Production	a. Plant production (vegetable crops)	same as above
3. Animal Production	a. Animal production	same as above
III. Demonstrators:		
1. Food Science	a. Fish & meat technology	B.Sc. "B" average or higher, Past experience in teaching is preferred, Arabic speaking
	b. Food Microbiology	
	c. Food analysis	
2. Plant Production	a. Horticulture (Vegetable crops)	same as above
3. Agricultural Engineering	a. Agricultural Engineering	same as above
IV. Technicians:		
	a. Human nutrition	Experience in field work, conducting and operating laboratory equipment.
	b. Cereal technology	same as above
	c. Analytical chemistry in the field of food science	Experience and training in operating food and nutrition analyses equipment preferably IR, AAA, AA, GLC, HPLC. Good knowledge of English Language.
V. Research Assistants:		
	a. Food microbiology	Preferably M.Sc. with research experience in the field of specialization
	b. Food chemistry and analysis	
	c. Horticulture (Pomology)	
	d. Field Crops (Breeding)	

Interested academicians are kindly requested to send non-returnable photocopies of their academic diplomas and specialized experience certificates together with their resumes (including lists of their problems publications and references) and written applications indicating the positions applied for and the subjects the applicant is qualified to teach to the following address:

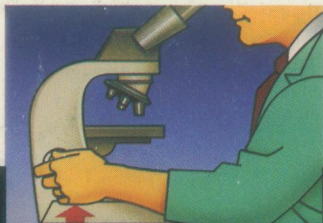
Dean, College of Agriculture
King Saud University
P.O. Box 2460
Riyadh, Saudi Arabia 11451

A second copy of applicants resume and credentials should be sent to

King Saud University Office
2425 West Loop South, Suite 450
Houston, TX 77027
Attention: Miss Aida Ganim

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