ra aeris, which allows one to check the authors' interpretation against the most important text. Shapin and Schaffer have demonstrated that the beginnings of experiment during the Scientific Revolution are more complex than we had originally thought.

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A Russian Eminence

Mikhail Vasilievich Lomonosov. His Life and Work. G. E. PAVLOVA and A. S. FEDOROV. Mir, Moscow, 1985 (U.S. distributor, Imported Publications, Chicago). 312 pp., illus. $7.95. Translated with revisions from the Russian edition (1980) by Arthur Aksenov. Richard Hainsworth, Transl. Ed.

Anyone with an interest in the history of 18th-century science and technology or the development of modern Russia knows something about the achievements of the famous Russian chemist, metallurgist, geographer, astronomer, glassmaker, historian, and poet Mikhail Lomonosov (1711–1765). This amazing man fought his way up from his origins as the son of a poor peasant family living in the far north of Russia to become a scientist praised by Euler and Wolff and a poet and philologist lauded by Pushkin and Gogol. He was elected a foreign member of the Swedish and Bolognese academies of sciences, had his scientific works translated into all major European languages, and is universally acknowledged today as the "father of Russian science." He was the first to recognize that Venus has an atmosphere, and he opposed the concept of "weightless fluids" in theories of combustion. One of his odes is generally cited as the beginning of modern Russian poesy, he fought against the "Norman thesis" of the origin of the Russian state, he was the main organizer of Moscow University. In short, Lomonosov was a man of impressive and varied talents.

This biography, written by two researchers at the Institute for the History of the Natural Sciences and Technology of the Soviet Academy of Sciences, is for the most part a thorough, scholarly account of Lomonosov's life and work. It is organized rather well, with almost half the book a sketch of Lomonosov's life and times and the rest a field-by-field survey of his technical and scholarly achievements. There are plentiful portraits, engravings, and models, and the quality of illustrations is far superior to that usually produced by the book's English- and Russian-language publishers Mir and Nauka. Unfortunately, the translation and editing, especially in the first third of the book, are mediocre. We are told, for example, that Lomonosov gave a speech encouraging the exploitation of mineral resources in 1791 (26 years after his death), and the famous British geologist Sir Charles Lyell is rendered as "Lysle"; while capitalization, syntax, and word usage are erratic, to say the least. Mir Publishers would be able to produce a higher-quality translation if they relied more on native speakers as translators. The poor translation of the first chapters goes some way toward spoiling what is really a nice scientific biography.

Somewhat surprisingly for a Soviet biography of a scientist, the authors have made an attempt to sketch in the social history of Russia in the 18th century. In my opinion, they should not have bothered. Their statistics on literacy are garbled and improbable, and their glowing picture of industrialization and economic development in the time of Peter the Great would leave an uninformed reader with the mistaken impression that there was little left to accomplish in Russia by the time of the October Revolution of 1917 and the massive literacy and industrialization campaigns of the 20th century. In addition, the authors' repeated references to Lomonosov's "patriotism" strike a discordant note, especially as they are linked to the authors' own jarringly ethnocentric and social Darwinistic utterances about the "historical destiny of the Russian people" (p. 264). This is rather unfair to Lomonosov: his views of science as democratic and progressive, as international and cosmopolitan, as the servant and protector of the people, seem closer to those of the famous 19th-century nihilist/populist scientists (Sechenov, Mechnikov, Pavlov, Timiriazev, Kropotkin, the Kovalevskiis, and so on) than to any narrow form of nationalistic feeling.

These objections aside, however, this biography of Lomonosov is an enjoyable and informative piece of work. The last two-thirds of the book, beginning with the chapter "Organizer of Russian science," provides a detailed and richly textured picture of the many facets of Lomonosov's scientific, administrative, and other scholarly activity. Chapters on Lomonosov's atomic-kinetic concept, his chemical research, and his technological works are particularly strong. The authors manage to explain Lomonosov's theories clearly and put him in the context of the international scientific community of the time.

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(Continued on page 1050)

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Bovine extracellular matrix (ECM) is applied to 25-, 75-, and 150-cm^2 flasks and to 4-, 6-, 12-, 24-, and 96-well plates. Bovine ECM is secreted from endothelial cells and attaches strongly to plastic labware during endothelial proliferation. When the endothelial cells are removed, the substratum remains attached to the vessel and provides a natural substrate that greatly enhances cellular attachment, migration, proliferation, and, for many cell types, differentiation. The use of ECM-coated labware reduces the need for serum supplements and cellular mitogens. Cell lines cultured in these vessels demonstrate shape and polarity typically found in vivo. They also appear to exhibit the ability to respond to cultured media components. In Vitro International. Circle 561.

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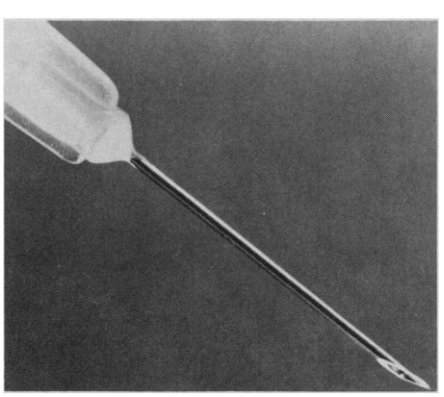
Chemically synthesized DNA probes accurately and reliably identify all known strains of HTLV-III at their earliest stages. These probes are being developed into two diagnostic tests for AIDS: a test utilizing Bio-Probe (DNA-based nonradioactive technology) and a test utilizing a proprietary chelator technology for the most highly sensitive testing. The current antibody tests do not detect the AIDS virus directly; they test for the presence of antibody to the virus. The current antibody tests also cannot detect AIDS at its earliest stages when the virus has been contracted but the antibody is not present. These antibody tests also yield false positive results. In addition 5% of current tests fail to identify the AIDS virus in patients where the virus is present. The new tests eliminate potential hazardous exposure of technicians to the live virus. Tests are performed on clinical samples which have been treated to kill the virus. Enzo Biochem. Circle 574.

Microelectrodes

Model SA 4 is a 20-gauge hypodermic needle. It is 0.9 mm in diameter. Model SA 2 is blunt-ended. It has a stem 100 mm long with a diameter of 1.25 mm. These two tiny electrodes detect hydrogen ions to measure *p*H. Model SA 4 is pictured. World Precision Instruments. Circle 557.



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High-purity staphylococcal nuclease, an S7 micrococcal endonuclease that cleaves both DNA and RNA to yield oligonucleotides and mononucleotides with terminal 3′ phosphate groups is available. This enzyme is useful in the preparation of messenger RNA–dependent protein synthesis systems. High sensitivity and efficiency of utilization of added messenger RNA are preserved. Complete inactivation of staphylococcal nuclease, achieved by addition of EGTA, ensures high performance. Such systems are capable of translating species of messenger RNA into full-sized products of molecular weights up to at least 200K. This product may also be used to digest chromatin and is therefore valuable in the preparation of nucleosomes. Staphylococcal nuclease is supplied as a lyophilized powder with an activity of 8000 U/mg. Porton Products. Circle 573.

Literature

Particle Size Analyzer describes model 2010 which combines a scanning laser and an image analyzer to measure particles in all media. Brinkmann Instruments. Circle 542.

Plate Reader describes model 700 for EIA and ELISA applications. This densitometer offers a built-in printer and an RS-232C interface for remote control and data-processing. Cambridge Techology. Circle 545.

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	mu-delta	Kappa	
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Dynorphin A (1-13)	43.0	3.8	11.3
Nalorphine	7.4	18	0.4
Beta-endorphin	5.0	230	0.02
Naloxone	8.2	160	0.05
Morphine	27.0	335	0.08

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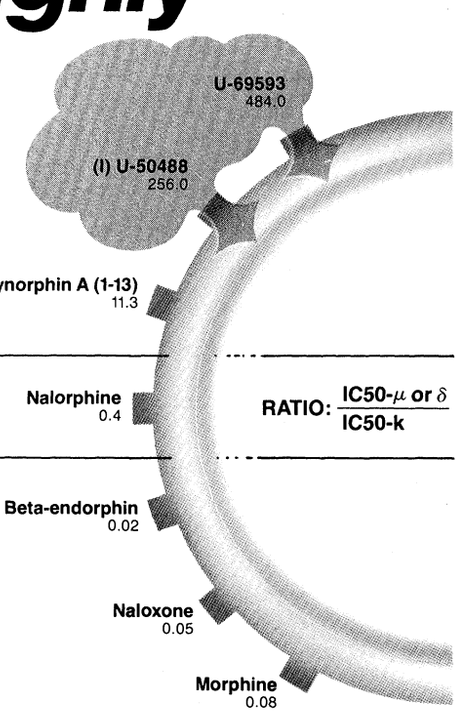

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World Food, Population, and Development. Gigi M. Berardi, Ed. Rowman and Allanheld, Totowa, NJ, 1985. xviii, 346 pp., illus. $29.95; paper, $16.95.

Personnel Placement

SCIENCE publishes each Friday, except the last Friday of the year. Advertising is accepted only in writing; no abbreviations. Any deadline in ad must be at least 2 weeks after date of issue in which ad appears. Also, personnel advertising is accepted only with the understanding that the advertiser does not discriminate among applicants on the basis of race, sex, religion, age, color, national origin, handicap, or sexual preference.

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20 June issue (mailed 13 June): **30 May**
27 June issue (mailed 20 June): **6 June**
4 July issue (mailed 27 June): **13 June**

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1333 H Street, NW
Washington, DC 20005

POSITIONS WANTED

Behavioral Pharmacologist. Ph.D. Postdoctoral training, awards, grants, publications, teaching experience. Familiarity with neuropharmacological/biochemical techniques, different operating systems, behavioral effects in several species. Seeking challenging research opportunities. Box 97, SCIENCE. 5/23; 6/6

Biologist, M.S. Experienced in production of biofuels; design, equipment procurement, field/erection, start-up and operation of biomass conversion/fermentation facilities; products upgrading by catalysis, catalyst design, synthesis and testing; publications and patents. Box 98, SCIENCE. X

Biotechnology Manager: Laboratory experience includes HPLC, FPLC, SDS-PAGE electrophoresis, and column chromatography. Other experience includes sales, marketing, and technical service. Exceptionally goal-oriented, with an eye to bottomline results. Looking for highly visible situation in biotechnology industry. Please reply to: Box 94, SCIENCE. X

Gamete Cell Biologist/Embryologist/In Vitro Fertilization, Ph.D., 2 years of experience in successful in vitro fertilization program. Research interests include monoclonal antibodies and sperm antigens involved in fertilization. Seeks position in industry or tenure-track position with academic rank. Box 100, SCIENCE. 5/23, 30

Psychobiologist, postdoctoral experience. Background in behavioral pharmacology, neuroanatomy, knowledgeable in small animal surgical techniques, biological assays, statistics, and computer programming, seeks research position. Will relocate. Box 92, SCIENCE. 5/30

POSITIONS WANTED

Cum Laude M.S. Graduate with several genetics papers published, seeks a non-residential Ph.D. program in conservation, evolutionary, or ecological genetics. Has funding, research facilities, and materials which would be lost if required to pursue degree elsewhere. Interested graduate departments please respond to: Box 99, SCIENCE. X

POSITIONS OPEN

ANATOMISTS. Two full-time, tenure-track assistant professors to teach histology or gross anatomy and conduct independent research. At least 1 year postdoctoral experience and publications required. Send curriculum vitae, names of three referees, and letter detailing teaching interests and research plans to: **Anatomy Personnel Committee, School of Medicine, University of Puerto Rico, GPO Box 5067, San Juan, PR 00936.** *Fully U.S. accredited and an Affirmative Action/Equal Opportunity Employer.*

ASSISTANT/ASSOCIATE PROFESSOR OF PHYSIOLOGY. Ph.D. physiologist to teach first-year medical students. Lectures mostly in basic cellular, blood, neurophysiology, endocrinology, and reproduction. Assist conducting weekly laboratories. Primary interest in teaching. Research encouraged. Department of three Ph.D. members. Rank and salary commensurate with qualifications. Prefer current successful medical teaching experience. Campus hospital. Preferred starting July 1986. Send curriculum vitae and letter, plus names, addresses and telephone numbers of three appropriate references to: **Dr. E. H. Whitten, Associate Dean, The University of Health Sciences-College of Osteopathic Medicine, 2105 Independence Avenue, Kansas City, MO 64124**, by 13 June.

COAL RESEARCH CENTER, SOUTHERN ILLINOIS UNIVERSITY (SIU)

ASSISTANT DIRECTOR for PROGRAM DEVELOPMENT and GOVERNMENTAL RELATIONS, and PROFESSOR or ASSOCIATE PROFESSOR

This position will be responsible for development of new coal research initiatives, assisting faculty in developing research ideas and funding sources, supervising public policy analysis activities, and teaching undergraduate and/or graduate courses.

Minimum qualifications for the position: must hold an earned doctorate and academic qualifications meriting appointment at the rank of associate professor. Preference will be given to applicants qualified to teach in one of the following: College of Engineering and Technology, College of Science, and Departments of Economics, Political Science, and Geography. Prefer previous experience with governmental agencies and knowledge of coal technology.

Deadline for Applications: 13 June 1986.

Salary: Commensurate with duties of the position and qualifications of the applicant.

Contact Person: **Dr. James H. Swisher, Coal Research Center, SIU-C, Carbondale, IL 62901. Telephone: 618-536-5521**

Southern Illinois University-Carbondale is an Equal Opportunity/Affirmative Action Employer.

ASSISTANT PROFESSOR. The Environmental Health Center at the University of Kansas Medical Center invites applications for a tenure-track position in the center. The individual selected will be expected to develop a strong research program, including collaboration with others in the center. This person will have an academic appointment in pharmacology, toxicology, and therapeutics; preventive medicine; biochemistry; pathology; physiology; microbiology or anatomy, dependent upon the interests of the individual and agreement with the selected department. Applicants should submit curriculum vitae and names of three references. Applications are desired before 1 June, but will be accepted until the position is filled. Send applications to: **Curtis D. Klaassen, Ph.D., Department of Pharmacology, Toxicology and Therapeutics, University of Kansas Medical Center (KUMC), Kansas City, Kansas 66103.**

KUMC is an Affirmative Action/Equal Opportunity Employer.

POSITIONS OPEN

ASSISTANT DIRECTOR
CLINICAL MICROBIOLOGY LABORATORY

The Department of Laboratory Medicine at the Yale University School of Medicine is seeking an M.D. or Ph.D. at the assistant or associate professor level who will serve as assistant director of the Clinical Microbiology Laboratory at Yale-New Haven Hospital.

The appointee will be expected to participate in the clinical and administrative management of the Clinical Microbiology Laboratory, contribute to the department's teaching, and to establish an independent research program. Applicants should be Board-certified or -eligible by the A.B.M.M. or in clinical pathology. Applicants with other equivalent and appropriate certifications will be considered. Candidates with experience and expertise in molecular biology are of special interest.

Applicants should send curriculum vitae and addresses of three references to: **Stephen C. Edberg, Ph.D., Chairman—Search Committee, Department of Laboratory Medicine, Yale University School of Medicine, 333 Cedar Street, New Haven, CT 06510**, before 1 July 1986.

Yale University is an Equal Opportunity/Affirmative Action Employer. Women and members of minority groups are encouraged to apply.

ASSISTANT/ASSOCIATE
FULL PROFESSOR IN EPIDEMIOLOGY

The Department of Epidemiology, University of Michigan School of Public Health, invites applications for a tenure-track at **open rank**. Candidates with demonstrated leadership and active research interests in such areas as chronic disease or nutritional epidemiology, or with skills in the development of advanced quantitative methodology, are encouraged to apply.

The position is immediately available with the latest starting date on 1 September 1987. Applicants should submit curriculum vitae, statement of research interests, and names of three references to:

David Schottenfeld, M.D.
Professor and Chairman
Department of Epidemiology
The University of Michigan
School of Public Health
109 Observatory Street
Ann Arbor, Michigan 48109–2029

We encourage applications from women and minority candidates. The University of Michigan is a non-discriminatory, Affirmative Action Employer.

ASSISTANT PROFESSOR OF ANATOMY: Applications are invited for a tenure-track position available 1 October 1986. Preference will be given to applicants with postdoctoral experience in, but not limited to, neurobiology, immunology/hematology, cell biology, or cardiovascular anatomy. The successful candidate will be expected to pursue a vigorous research program and obtain extramural funding. Teaching responsibilities will be initially minimal, but the candidate must be able to contribute to the teaching program. Candidates should send current curriculum vitae, a statement of research plans, and expertise and the names of three referees to: **Dr. Gordon L. Todd, Anatomy Department Search Committee, University of Nebraska Medical Center, 42nd and Dewey Avenue, Omaha, NE 68105**. Closing date for applications is 1 September 1986. *The University of Nebraska is an Affirmative Action/Equal Opportunity Employer.*

ASSISTANT PROFESSOR
(RESEARCH-TRACK)

Applications are invited for an NIH-supported project involving studies of 02 dependence of chemical detoxication in freshly isolated and cultured cells. Applicants must have a Ph.D. in biochemistry, 3 years of postdoctoral experience and an established record of research productivity. Specific job requirements include proficiency in tissue perfusion, knowledge of hypoxic biochemistry, and experience with oxidative metabolism and cell injury. Salary: $25,000 per annum. Send curriculum vitae, bibliography, and names and addresses of three references by 30 June 1986 to: **Georgia Department of Labor, 1275 Clarendon Avenue—Avondale Estates, GA 30002.** *Emory University is an Equal Opportunity/Affirmative Action Employer.*

POSITIONS OPEN

SEARCH REOPENED
ASSISTANT PROFESSORSHIP
IN DEVELOPMENTAL BIOLOGY

The Department of Biological Sciences has a tenure-track position in DEVELOPMENTAL BIOLOGY. The position has an initial 3-year appointment, with a starting date of either September 1986 or January 1987. Applicants should have the Ph.D. degree, postdoctoral experience, and a strong commitment to both research and undergraduate teaching. Preference will be given to individuals who have demonstrated expertise in areas such as neurobiology, embryology, or pattern formation. The individual will teach introductory biology, intermediate and advanced courses in developmental biology, and neurobiology. Applications will be accepted for review until September 1986, or until the position is filled. Credentials will be reviewed when completed. Qualified individuals should send current curriculum vitae, a list of undergraduate courses, graduate transcripts, a brief outline of research plans, one letter of recommendation, and the names of two additional referees to: **Dr. Gary C. Harris, Chairman, Department of Biological Sciences, Wellesley College, Wellesley, MA 02181.** *Wellesley College is an Equal Opportunity/Affirmative Action Employer.*

BIOCHEMIST at the University of Delaware. A 1-year, visiting assistant professor position is available from 1 September 1986, for a Ph.D. biochemist to teach in the Chemistry Department (30 faculty, including seven biochemists). Competitive salary. Research opportunities available. To ensure consideration, applicants should submit curriculum vitae and arrange for three letters of recommendation to be sent to: **Dr. Colin Thorpe, Biochemistry Search Committee, Chemistry Department, University of Delaware, Newark, DE 19716**, by 13 June 1986. *The University of Delaware is an Equal Opportunity Employer which encourages applications from minority groups and women.*

BIOPHYSICIST—Ph.D. degree required. To develop small angle neutron diffraction instrumentation at a major laboratory. Salary: $35,200 per year, 40 hour week, 8:30 a.m. to 5 p.m. Job Order number 0606405, D.O.T. code 023061014. Send résumé to: **New York State Job Service, 55 Medford Avenue, Patchogue, NY 11772.**

BOTANIST. Assistant Professor. Possible tenure-track. To teach general botany, plant taxonomy, and/or course in specialty. Responsible for coordination/teaching of general biology laboratories. Desire to teach undergraduates at an outstanding institution and in a liberal arts context is primary. Research encouraged; Ph.D. required. Send curriculum vitae, names of three references, and letter to: **Dr. Gerald Kreider, Chairman Biology Department, Albright College, P.O. Box 516, Reading, PA 19603.** *Albright College encourages applications from women and minorities.*

EPIDEMIOLOGISTS

The Department of Epidemiology, University of Michigan School of Public Health, invites qualified scientists to submit applications for 2 tenure-track positions at the level of **assistant professor**. Candidates with demonstrated research expertise in environmental/occupational, chronic disease, and infectious disease epidemiology, and in molecular approaches to disease pathogenesis will be considered. Candidates must have a doctoral degree and training in epidemiology and will be required to teach graduate courses and advise masters and doctoral students.

The positions are immediately available with the latest starting date on 1 September 1987. Applicants should submit curriculum vitae, statement of research interests, and names of three references to:

David Schottenfeld, M.D.
Professor and Chairman
Department of Epidemiology
The University of Michigan
School of Public Health
109 Observatory Street
Ann Arbor, Michigan 48109–2029

We encourage applications from women and minority candidates. The University of Michigan is a non-discriminatory, Affirmative Action Employer.

POSITIONS OPEN

ASSISTANT PROFESSOR. Tenure-track position in vertebrate morphology starting fall 1986. Duties include teaching comparative vertebrate morphology each semester and one additional course or seminar during the year, conducting research, and supervising graduate students. Ph.D. required with research expertise in one of the following areas: (i) ultrastructure or biomedical research or (ii) quantitative or evolutionary biology with an interest in museum curatorship. Postdoctoral experience desired. *Oklahoma State University (OSU) is an Equal Opportunity/Affirmative Action Employer.* Send statement of teaching and research interests, résumé, transcripts, and three letters of reference to: **Dr. H. James Harmon, Department of Zoology, Oklahoma State University, Stillwater, OK 74078**, before 1 June 1986.

ASSISTANT PROFESSOR, Biology, full-time, 1 August 1986, tenurable. **Duties**: undergraduate courses in genetics, biochemistry, and general biology; research. **Minimum Qualifications**: Ph.D. in biological sciences, college teaching experience. **Desired Qualifications**: research in biochemistry and/or genetics. **Minimum Salary**: $21,000. Send letter of application, current curriculum vitae, and three letters of recommendation to: **H. F. Little, Chair, Biology, College of Arts and Sciences, University of Hawaii at Hilo, Hilo, Hawaii 96720–4091. Closing date**: 4 June 1986. *An Equal Employment/Affirmative Action Employer.*

BIOLOGICAL OCEANOGRAPHER. The Division of Biology and Living Resources of the Rosenstiel School of Marine and Atmospheric Science, University of Miami, is opening a search to fill a tenure-track appointment (assistant professor or higher). We are seeking someone who can both develop a strong research program based upon extramural funding and also actively contribute to the RSMAS graduate education program. The individual's research interests should center upon the interaction between biological systems and physical processes in oceanic and/or coastal environments. Possible collaborations with existing RSMAS biological and physical field research programs will be an important selection criterion. For example, opportunities exist for collaboration with existing programs in satellite remote-sensing, moored instrument work, and advanced shipboard sampling experiments.

Please address inquiries/applications to:

Dr. Peter Lutz, Chairman
Division of Biology and Living Resources
Rosenstiel School of Marine and Atmospheric Science
4600 Rickenbacker Causeway
Miami, Florida 33149

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

CELL BIOLOGIST. The University of California, San Francisco (UCSF), is recruiting an assistant research cell biologist to work in the laboratory of the Intestinal Immunology Research Center at the San Francisco VA Medical Center. Responsibilities include independent research and teaching of fellows and graduate students. Requirements include a Ph.D. in a major scientific discipline, or equivalent experience particularly related to cell biology. Published researches in related areas are important considerations. Position and salary will be dependent on qualifications. Send curriculum vitae and three letters of reference to: **Dr. Albert L. Jones, Director, Intestinal Immunology Research Center, VAMC (151-I), 4150 Clement Street, San Francisco, CA 94121.** *UCSF is an Equal Opportunity/Affirmative Action Employer. Women and minorities are encouraged to apply.*

CELL BIOLOGY/BIOCHEMISTRY

Two postdoctoral research associate positions are available 1 July to study phosphatidylinositol turnover, Ca^{2+} release, and protein kinase C in specific cell cycle transitions of non-neoplastic and neoplastic rat liver epithelial cells. The relationship to adenylate cyclase activity will also be studied. Techniques of image analysis of intracellular free Ca^{2+} and microinjection will be utilized. Respond with description of expertise, curriculum vitae, and names of three references to: **Alton L. Boynton, Cancer Research Center, 1236 Lauhala Street, Honolulu, Hawaii 96813.** Closing date: 15 June 1986. *An Equal Opportunity Employer.*

POSITIONS OPEN

The Hebrew University of Jerusalem
BIOCHEMICAL ENGINEER

The Department of Applied Microbiology and the Graduate Program in Biotechnology invite applications for a tenure-track faculty position of senior lecturer/lecturer in biochemical engineering. The appointee will be responsible for teaching the discipline at the graduate level and for developing an innovative research program. The candidate should possess at least 2 years of postdoctoral experience in biochemical engineering.

Applications, including curriculum vitae, brief description of future research plans, and names of three referees should be sent to:

Office of the Dean
Faculty of Medicine
The Hebrew University–Hadassah Medical School
P.O. Box 1172
91 010 Jerusalem, Israel

THE UNIVERSITY OF MANITOBA FACULTY OF MEDICINE

CARDIOVASCULAR MOLECULAR BIOLOGISTS AND ELECTROPHYSIOLOGISTS. The Department of Physiology, University of Manitoba, invites applications for two positions from young investigators in the field of experimental cardiology to be appointed at the level of assistant professor. The successful candidates will be expected to compete for local and national scholarship awards and develop their independent research programs, as well as collaborate with other members of the department. Applicants with backgrounds in molecular biology and electrophysiology are encouraged to submit their curriculum vitae, an outline of their research interests, as well as to arrange for three letters of reference to be sent to **Dr. Henry G. Friesen, Professor and Head, Department of Physiology, Faculty of Medicine, University of Manitoba, Winnipeg, Manitoba, Canada R3E 0W3**. Deadline for application is 1 June 1986. *The University of Manitoba is an Equal Opportunity/Affirmative Action Employer, but in accordance with Canadian immigration, priority will be given to Canadian citizens and permanent residents of Canada.*

CELL/MOLECULAR BIOLOGISTS

The Department of Anatomy and Cell Biology, Medical University of South Carolina, is expanding its research strength in the area of SECRETION. Applications are invited for two or more positions at the levels of tenure-track assistant professor through tenured full professor. We are seeking individuals who will establish independent research programs and who would benefit by taking collaborative, multidisciplinary approaches to this problem. We are particularly interested in scientists working on the regulation of gene expression, intracellular trafficking of secreted proteins, and intracellular signalling, but welcome applications from all individuals using modern, innovative techniques to investigate the secretory process. Applicants who can contribute to departmental teaching efforts (cell biology, gross anatomy, histology, developmental biology, neuroanatomy) will receive special consideration.

Interested individuals should send curriculum vitae, a history of recent grant support, and have three letters of recommendation forwarded to:

Dr. L. Stephen Frawley
Department of Anatomy and Cell Biology
Medical University of South Carolina
171 Ashley Avenue
Charleston, South Carolina 29425–2203
Telephone: 803-792-3526

CHEMIST: Ph.D. in synthetic organic chemistry with extensive training in ^{1}H, ^{13}C, NMR, IR, and mass spectroscopy. Experience in handling radioactive materials, syntheses of isotopically enriched materials, and unnatural amino acids. Experience in solid and solution phase peptide synthesis; isolation and purification of enzymes and kinetic studies with inhibitors; pharmacology of beta-endorphin; NMR for the study of structural aspects of macromolecules—purpose, to design and synthesize ribonuclease T.1. 40 hours per week, 9 a.m. to 5 p.m., $22,127 per year, 1 year experience. Résumé to: **New York State Job Service JO number NY8007651, 175 Remsen Street, 2nd Floor, Brooklyn, New York. DOT code 022061010.**

POSITIONS OPEN

CEREBROVASCULAR

Applications are invited for a position in neuroscience at the University of Manitoba, Faculty of Medicine. Preference will be given to individuals with experience and a continuing interest in cerebral blood flow and metabolism, with some expertise in nuclear magnetic resonance. The successful candidate will be expected to develop an independent laboratory in an environment with ample opportunity to collaborate with other researchers in clinical, as well as basic science, departments. Candidates should have a Ph.D. or equivalent, have two or more years of postdoctoral training, and be eligible to compete for local and national scholarship awards. Send curriculum vitae, outline of future research plans, and arrange for three letters of reference to be forwarded to: **Dr. H. G. Friesen, Professor and Head, Department of Physiology, University of Manitoba, Winnipeg, Manitoba, Canada R3E 0W3**. Deadline for receipt of applications is 1 July 1986. *In accordance with Canadian immigration requirements, priority will be given to Canadian citizens and permanent residents of Canada.*

CHAIRPERSON—MARINE AFFAIRS

The Rosenstiel School of Marine and Atmospheric Science (RSMAS), University of Miami, is seeking to fill a full-time, tenure-track position as chairman for the Division of Marine Affairs. The candidate must have a record of scholarly/professional accomplishments in resource economics or policy analysis and have a superior funding record. The candidate must also be able to generate innovative research projects. The Division of Marine Affairs will interact with the other divisions at the Rosenstiel School and also the Law School and School of Business Administration of the University of Miami. RSMAS is a graduate school and oceanographic research institution. Send curriculum vitae, statement of research interest, and the names of three references by 9 June 1986 to: **Dr. William Fox, Search Committee Chairman, Division of Marine Affairs, RSMAS, University of Miami, Rickenbacker Causeway, Miami, Florida 33149.**

An Equal Opportunity/Affirmative Action Employer.

DIRECTOR
University of Nebraska–Lincoln (UNL)
Conservation and Survey Division

University of Nebraska–Lincoln Institute of Agriculture and Natural Resources (IANR) seeks person to oversee staff of 52, including 34 professionals, with an annual budget of $2 million. Reports to the Vice Chancellor, IANR.

Will serve as principal administrative officer and function as state of Nebraska geologist. Direct natural resources program in geology, land, and water within the division; administer the Nebraska Water Resources Center, plus supervise personnel, budget, and facilities assigned to the division.

Salary and faculty rank will be based on qualifications and experience. Excellent benefits. Requires master's, Ph.D. preferred, with 10 years of professional experience in the geoscience field and 5 years of demonstrated effective managerial experience. Apply with letter of application, résumé, and names of three references by 30 June to:

Professor Ray Burchett, Chair
Search Committee
113 Nebraska Hall
IANR Conservation and Survey Division
University of Nebraska–Lincoln
Lincoln, Nebraska 68588–0517

Affirmative Action/Equal Opportunity Employer

EXECUTIVE OFFICER—The Department of Chemistry, Northwestern University, to serve as the major administrator of the department's activities, including aspects of instruction, graduate and undergraduate programs, physical facilities, graduate recruiting, personnel, departmental services, finances, and industrial relations. Academic experience is necessary, but applicants from all types of current jobs and all fields of science and engineering will be considered seriously. Write to: **Professor A. L. Allred, Chairman, Department of Chemistry, Northwestern University, 2145 Sheridan Road, Evanston, IL 60201.** *Northwestern is an Equal Opportunity/Affirmative Action Employer.*

POSITIONS OPEN

CLINICAL DIRECTOR
Ph.D. in Pharmacology or Biochemistry

Clinical scientist for consumer product (OTC) testing facility in Toronto, Canada. Responsible for development of protocols, management of studies, report writing, and direct client contact. Industry experience preferred, but not necessary.

Competitive salary and profit sharing. Send résumé or curriculum vitae with salary history to: **P.O. Box 3828, West Palm Beach, Florida 33402.**

CYTOGENETICIST

Director of clinical and research laboratory in newly developed University of California, Los Angeles (UCLA)-affiliated Genetics Center. Send curriculum vitae and three reference letters to: **DR. DAVID L. RIMOIN, M.D., Ph.D., Director, Department of Pediatrics and the Medical Genetics-Birth Defects Center, Cedars-Sinai Medical Center, 8700 Beverly Boulevard, Los Angeles, CA 90048.**

ENVIRONMENTAL BIOTECHNOLOGIST—ECOLOGIST

Opening for tenure-track position in ecology of bioengineered species within the Institute of Ecology and an appropriate department. Candidate must have Ph.D., research and teaching experience in ecology of introduced species, microbial ecology, ecological invasions, or a similar specialty. Demonstrated ability to work with interdisciplinary teams is desirable. Rank and salary negotiable. Send applications and letters of recommendation to: **Frank Golley, Chairman of the Search Committee, Institute of Ecology, University of Georgia, Athens, GA 30602.** Applications will be reviewed 1 July 1986, or until a suitable candidate is found. *An Equal Opportunity/Affirmative Action Institution.*

The Department of Biochemistry of the University of Iowa invites applications for a 1 year **VISITING FACULTY POSITION** commencing in the 1986 to 1987 academic year. A Ph.D., plus prior teaching and research experience, are required. Duties consist of teaching in a 1 semester course in introductory biochemistry or in a specialty course at the graduate level. Adequate time and funds will be available for participation in research either as an individual or in collaboration with one or more faculty. Send letter of application, résumé, and names of references to: **Dr. Charles A. Swenson, Acting Head, Department of Biochemistry, University of Iowa, Bowen Sciences Building, Iowa City, IA 52242.** *An Affirmative Action/Equal Opportunity Employer.* Review of applications will begin 15 May 1986.

SCRIPPS INSTITUTION OF OCEANOGRAPHY (SIU). The Ocean Research Division and the Institute of Geophysics and Planetary Physics invite applications for a tenured or tenure-track **FACULTY POSITION** in the areas of physical oceanography, geological fluid dynamics, or geodynamics. Successful applicants will be expected to lead a vigorous research program and participate in graduate-level teaching and graduate student supervision. Applicants must hold a Ph.D. degree and have demonstrated excellence in research. The level of the appointment and salary commensurate with qualifications and experience. Assistant professor level candidates will be expected to show evidence of their potential through a publication record appropriate to their experience and letters of recommendation. Associate professor or professorial level candidates must show evidence of a strong research record in their specialization. Send curriculum vitae, including a description of research interests, reprints of representative publications, and names of three references to: **LeRoy M. Dorman, Chair, SIO Graduate Department A-008, Scripps Institution of Oceanography, University of California, San Diego, La Jolla, CA 92093.** Applications must be received by 1 September 1986. *An Equal Opportunity/Affirmative Action Employer.*

IMMUNOGENETICIST/HLA TYPER

Clinical and research laboratory director in newly developed University of California, Los Angeles (UCLA)-affiliated Genetics Center. Send curriculum vitae to: **DR. DAVID RIMOIN, M.D., Ph.D., Director, Department of Pediatrics and the Medical Genetics-Birth Defects Center, Cedars-Sinai Medical Center, 8700 Beverly Boulevard, Los Angeles, CA 90048.**

RESEARCH DIRECTOR AND PROFESSOR OF FOREST AND CELL BIOLOGY

SOMATIC EMBRYOGENESIS IN CONIFERS

The Institute of Paper Chemistry (IPC) is an accredited, independent graduate school and research center supported by the paper industry for over 55 years. IPC's multidisciplinary academic, research and information programs are strongly interrelated and span the range from basic science and engineering to industrial applications.

We are now seeking an exceptionally talented scientist who is capable and eager to direct world class research on somatic embryogenesis in conifers, to play an active role on the faculty, and to manage the Forest Biology Division, including the Forest Genetics Group, the Wood and Fiber Science Group, and a modern electron and light microscopy laboratory.

Candidates must have a doctor's degree (or equivalent) in botany, plant physiology, or closely related fields, and extensive experience in cell and tissue culture. Candidates should have made contributions to the field of research as evidenced by publications in the refereed scientific literature and by invited presentations at national and international scientific conferences. Salary commensurate with experience.

Write: **Director of Personnel, The Institute of Paper Chemistry, P.O. Box 1039, Appleton, Wisconsin 54912.** An Equal Opportunity/Affirmative Action Employer.

PROJECT LEADER OSTEOPOROSIS

The Sterling-Winthrop Research Institute announces an opening for a project leader in our endocrinology department. This scientist will initiate and manage a new research program dealing with the regulation of calcium and bone metabolism.

The successful candidate will possess a PhD degree in physiology, pharmacology or biochemistry with at least 3 years of relevant experience with in vitro and/or in vivo model systems. This position will involve supervision of other scientific and technical staff and requires demonstrated communication and interpersonal skills.

We offer an attractive salary and benefits package and the opportunity for continued career development. The Institute is located near Albany, New York which is the center of major summer and winter cultural and recreational activities.

Interested candidates, please send resume and salary requirements in confidence to:

William F. Sheldon
Employment Manager

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MICROBIOLOGISTS / IMMUNOLOGISTS

Hybritech Incorporated, the recognized leader in monoclonal antibody-based immunodiagnostics, has recently strengthened its position by merging with Eli Lilly and Company. With this additional financial backing, Hybritech is in need of Sr. Research Associates / Scientists / Sr. Scientists for the following R&D positions:

Microbiologists / Biologists- Ideal candidates will have experience working with viral or bacterial agents in the development of **immunoassays for infectious diseases.** Responsibilities will include antigen / antibody characterization and evaluation, immunoassay optimization, and clinical evaluation. M.S. / Ph.D. in a related science or equivalent experience is required.

Immunologists / Biochemists- Positions are available for cell biologists, immunologists, and tumor biologists interested in developing new **diagnostic and therapeutic monoclonal antibodies.** Responsibilities would include conducting research in immunization and fusion technology, in vitro and in vivo antibody production, generation of antibodies to tumor associated antigens, and cancer diagnosis and therapy in animal models. M.S. / Ph.D. in a related science and three or more years of relevant research experience is required. Supervisory experience as the leader of an R&D team is desirable.

Hybritech offers a stimulating and rewarding work environment, competitive salaries and excellent company paid benefits. Please send your resume and salary history to: **Human Resources Department, Hybritech Incorporated, P.O. Box 269006, San Diego, CA 92126.**

Hybritech INCORPORATED

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POSTDOCTORAL ASSOCIATE POSITIONS
UNIVERSITY OF IOWA

Please contact the appropriate department to express your specific interest:

ANATOMY—Dr. Joe Dan Coulter, Professor and Head, Bowen Science Building.

ANESTHESIA—John H. Tinker, M.D., Professor and Head.

BIOCHEMISTRY—Dr. Charles Swenson, Bowen Science Building.

DERMATOLOGY—John S. Strauss, M.D., Professor and Head, or Kenzo Sato, M.D., Associate Professor, Boyd Tower, General Hospital. A postdoctoral research associate for the study of electrophysiology of cultured cells.

INTERNAL MEDICINE—Openings available in all disciplines in the Internal Medicine Department, College of Medicine, University of Iowa. Contact Francois M. Abboud, M.D., Professor and Head, or Darris Goerdt, Administrator, Phone (319) 356-2850.

MICROBIOLOGY—Dr. Irving P. Crawford, Professor and Head, Bowen Science Building. Research in microbial genetics and physiology, industrial microbiology, as well as mammalian virology.

NEUROLOGY—Postdoctoral associate positions are available. R. L. Rodnitzky, M.D., Professor and Acting Head, 2150 Roy Carver Pavilion.

PATHOLOGY—Dr. Richard G. Lynch, Professor and Chairman, 144 Medical Laboratories. Research activity in all areas of experimental pathology.

PHARMACOLOGY—Dr. P. Michael Conn, Chairman and Head, Bowen Science Building. Openings available in all areas of pharmacology and toxicology.

PHYSIOLOGY & BIOPHYSICS—Robert E. Fellows, M.D., Ph.D., Professor and Head, 5-660 Bowen Science Building.

RADIATION BIOLOGY—Dr. J. William Osborne, Professor and Director, 14 Medical Laboratories. Biological effects of radiation; environmental carcinogenesis and immunology; free radicals and cancer; cell proliferation in hematological and gastrointestinal systems; and radiation biochemistry of DNA base damage. Postdoctoral fellows also.

UROLOGY—Dr. Richard D. Williams, Professor and Chairman, Carver Pavilion. A postdoctoral position is available for physicians interested in research on problems related to the genitourinary system. Areas of interest include oncology, urodynamics, infertility, sexual dysfunction, kidney stones, congenital anomalies, metastasis and tumor immunology. Phone (319) 356-2934.

The College of Medicine, University of Iowa, Iowa City, Iowa 52242, is an Equal Opportunity/Affirmative Action Employer.

DEAN
COLLEGE OF ENGINEERING
The University of Michigan - Ann Arbor

The University of Michigan currently is seeking nominations and applications for the Deanship of the College of Engineering. The Dean is the chief academic and administrative officer of the College and reports directly to the Vice President for Academic Affairs and Provost. The College's activities include instruction at the undergraduate, masters, and doctoral levels and an extensive research program. The Dean provides leadership in program planning, development, and evaluation; in budget preparation and personnel administration; and in representing the College. Qualifications include an earned doctorate, a distinguished research and teaching record appropriate for a tenured appointment in the College, proven administrative ability, and an understanding of budgeting processes in a complex research university.

Nominations and applications should be sent as soon as possible to: **Professor Robert M. Howe, Chair, College of Engineering Deanship Search Committee, 1042 Fleming Bldg., The University of Michigan, Ann Arbor, Michigan 48109-1340.**

The University of Michigan

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NEEDS
MARINE BIOLOGIST

For their on-going studies of the marine environment of the Arabian Gulf. Applicants should have a Ph.D. or equivalent, strong field orientation with emphasis in benthic ecological biostatistics, skill in scuba diving and boat handling, computer expertise and experience in report writing.

Salaries are competitive and tax free. Benefits include annual repatriation with paid leave, housing and transportation allowance. Contract is renewable every two years.

Candidates should send their applications to the following address:

Research Institute
University of Petroleum & Minerals
5718 Westheimer, Suite 1550
Department 424
Houston, Texas 77057 USA

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POSITIONS OPEN

FACULTY POSITION

The Biology Department of Texas A&M University is searching for an individual with a commitment to teaching excellence at the undergraduate level and to vigorous academic research. Within the department there is a major emphasis on cellular, molecular, and developmental biology; however, faculty interests span diverse experimental systems and approaches. The level of appointment will be commensurate with experience and research accomplishment. Send curriculum vitae and names and addresses of three references to:

Dr. B. G. Foster
Biology Department
Texas A & M University
College Station, Texas 77840

Texas A&M University is an Equal Opportunity Employer.

THE HEBREW UNIVERSITY OF JERUSALEM
Faculty Position in Anatomy and Embryology

The Department of Anatomy and Embryology at the Hebrew University-Hadassah Medical School invites applications for a tenure-track faculty position in anatomy and embryology. M.D. and/or Ph.D. and postdoctoral training are required.

The department is engaged in teaching gross anatomy, neuroanatomy, embryology, teratology, and physical anthropology. Research areas are: embryology and teratology, experimental hematology, gene expression, neurobiology (including electrophysiology), oral biology, physical anthropology, and vascular pathophysiology.

The candidate is expected: (i) To participate in the teaching program with special emphasis on embryology, teratology, and gross anatomy. Previous teaching experiences in these subjects is preferable. (ii) To develop independent research in one of the areas already present in the department.

Send curriculum vitae, list of publications and three letters of recommendation to: **Professor Yael Michaeli, Head of the Department of Anatomy and Embryology, The Hebrew University-Hadassah Medical School, P.O. Box 1172, Jerusalem 91010, Israel.** Deadline date: 30 August 1986.

IMMUNOLOGISTS

The Department of Microbiology and Immunology is expanding in the area of immunology and currently has (tenure-track) openings at the assistant/associate professor level. We are seeking individuals with a doctoral degree, at least 2 years of postdoctoral experience, a strong background in fundamental immunology, and an ability to interact with other immunologists both in the department and the Medical School. We are particularly seeking candidates with research interests in immunochemistry, molecular immunology, T- and B-cell regulation or recognition, immunogenetics, or microbial immunology. Successful candidates should be able to establish an independent research program, and will be members of the graduate faculty and with responsibility for teaching both graduate and medical students. Send curriculum vitae and names of three references to: **Thomas J. Rogers, Ph.D., Chairman, Immunology Search Committee, Department of Microbiology and Immunology, Temple University School of Medicine, 3400 North Broad Street, Philadelphia, PA 19140.**

Equal Opportunity/Affirmative Action Employer.

NEUROPHYSIOLOGY

Applications are invited for a position in neuroscience at the **assistant professor** level in the Department of Physiology at the University of Manitoba, Faculty of Medicine. Candidates should have a Ph.D. or equivalent with postdoctoral training, and be eligible to compete for local and national scholarship awards. Send curriculum vitae, an outline of future research plans, and arrange for three letters of reference to be sent to: **Dr. H. G. Friesen, Professor and Head, Department of Physiology, University of Manitoba, Winnipeg, Manitoba, Canada R3E 0W3.** Receipt of applications is 1 June **1986.** *In accordance with Canadian immigration requirements, priority will be given to Canadian citizens and permanent residents of Canada.*

FACULTY POSITIONS IN PHYSIOLOGY

The Department of Physiology is seeking candidates for TWO FACULTY (12-month, tenure-track) POSITIONS AT THE ASSISTANT PROFESSOR LEVEL. We are seeking individuals with interests in the regulation of vascular permeability and organ fluid balance for one position and in the area of cardiovascular or pulmonary physiology for the other. Requirements include Ph.D. or M.D., a sound background in general physiology, and the ability to develop own research program. Will share responsibility for teaching Medical Physiology Course. Opportunities exist for collaborative research and participation in graduate education. Submit curriculum vitae, statement of research interests, and the names of three references by 6 June 1986 to: **Dr. Michael B. Maron, c/o The Office of Human Resources, Northeastern Ohio Universities College of Medicine, Rootstown, Ohio 44272.** *An Affirmative Action/Equal Opportunity Employer.*

FIRE ECOLOGIST—The Nature Conservancy, a nonprofit conservation organization with the world's largest private nature preserve system, is seeking applicants for regional fire steward. Responsible for planning, technical procedures, research program, and training related to prescribed fire. Requirements: Ph.D. or M.S., plus experience, knowledge of fire ecology and management techniques, training skills. Location: Tall Timbers Research Station, Tallahassee, Florida. Submit curriculum vitae and names of three references by 18 June to: **Willard M. Rose, Regional Director of Stewardship, The Nature Conservancy, P.O. Box 270, Chapel Hill, NC 27514.**

GEOGRAPHIC MEDICINE, INFECTIOUS DISEASE: Assistant Professor of Medicine. Tenure-Track. Stanford University, Department of Medicine, Divisions of Geographic Medicine and Infectious Diseases at the Palo Alto Veterans Administration Medical Center is seeking applications from candidates who are Board-eligible or Board-certified in internal medicine and infectious diseases, committed to excellence in clinical teaching and patient care, and prepared to develop a vigorous and independent research program in one of the following areas: the molecular biology, immunology, or pathogenesis of parasitic protozoa and helminths; the epidemiology of infectious diseases in developing countries; and vaccine development. Qualified applicants should submit curriculum vitae, bibliography, statement of research and clinical interests, and names of two references to: **Gary K. Schoolnik, M.D., Division of Geographic Medicine S-156, Stanford University School of Medicine, Stanford, CA 94305.** *Stanford University is committed to increasing representation of women and members of minority groups on its faculty and particularly encourages applications from such candidates.*

MEMBRANE TRANSPORT

A postdoctoral position is available immediately for an individual interested in pursuing studies on the structure and mechanism of ion-translocating ATPases. The ATPase in the plasma membrane of *Neurospora* is an electrogenic proton pump that operates via a phosphoryl-enzyme intermediate identical to those of the animal cell transport ATPases. Research will involve investigation of the biochemistry of this ATPase with the goal of elucidating its molecular mechanism. Send curriculum vitae to: **Dr. Gene A. Scarborough, Department of Pharmacology, School of Medicine, University of North Carolina at Chapel Hill, Chapel Hill, NC 27514.** *Equal Opportunity Employer.*

PERINATAL PHYSIOLOGIST

Department of Obstetrics and Gynecology, University of Cincinnati, has openings for two perinatal physiologists, one an **assistant professor** and one an **associate professor**. Applicants must have a Ph.D. and 3 years of postdoctoral experience. Applicant's major area of interest and research must be in mechanisms of hypertension in pregnancy and/or mechanisms of intrauterine growth retardation. Previous evidence of productivity required. Associate professor also requires demonstration of previous funded research. Send curriculum vitae to: **Kenneth Clark, Ph.D., Department of Obstetrics and Gynecology, University of Cincinnati, Cincinnati, Ohio 45267–0526.** *The University of Cincinnati is an Equal Opportunity Employer.*

The Department of Land, Air, and Water Resources, UNIVERSITY OF CALIFORNIA, DAVIS, announces a position in GEOHYDROLOGY. This is a tenure-track (11 months plus 1 month of paid vacation) position of 30 percent teaching and 70 percent research. Appointment will be at the Assistant Professor level at a salary commensurate with qualifications.

Qualifications: Ph.D. in a scientific discipline applicable to quantitative analyses of geochemical and geophysical processes controlling retention and movement of chemicals in subsurface waters. The appointee will participate with other faculty in teaching and advising in geohydrology at the undergraduate and graduate levels and in computer applications in hydrology.

Applications: Send a statement of research and teaching background and interest; official undergraduate and graduate transcripts; copies of publications, reports, current manuscripts, a summary or abstract of the Ph.D. dissertation; and names, addresses, and telephone numbers of three references by 31 August 1986 to: **R. G. Burau, Chair, Geohydrologist Search Committee, Department of Land, Air, and Water Resources, University of California, Davis, California 95616; telephone: 916-752-0194/1406.** It is expected that the appointee will be available for service on 1 July 1987.

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

PATHOLOGY CHAIRPERSON

The University of California, Irvine, is seeking applicants for the position of professor and chairperson of the Department of Pathology. The department is actively engaged in research, education, and service. The successful candidate will be director of pathology at the University of California, Irvine Medical Center and in charge of the academic programs at affiliated institutions. The position requires strong academic and administrative skills. Applicants should include a complete curriculum vitae and names and addresses of at least five references. *The University of California, Irvine is an Equal Opportunity/Affirmative Action Employer.* Please send applications to:

Richard M. Friedenberg, M.D.
Chairman, Pathology Search Committee
University of California, Irvine Medical Center
Department of Radiological Services (Route 140)
101 City Drive South
Orange, CA 92668

PHARMACOLOGIST

The Division of Pharmacology and Medicinal Chemistry invites applications for a tenure-track faculty position in pharmacology with rank appropriate to experience. Responsibilities include maintenance of an active, extramurally funded research program, direction of graduate students, and participation in graduate and undergraduate instruction. Candidates for the position should hold a Ph.D. in pharmacology or an allied discipline and present evidence of directing an active, funded research program. Salary is competitive and commensurate with qualifications. The position is available 1 September 1986. Applicants should submit a current curriculum vitae, letter describing interests and research program objectives, and names, addresses, and telephone numbers of three references by 15 July 1986 to: **Vernon R. Grund, Ph.D., Chairman, Division of Pharmacology and Medicinal Chemistry, College of Pharmacy, University of Cincinnati Medical Center, Cincinnati, Ohio 45267–0004.** *The University of Cincinnati is an Equal Opportunity/Affirmative Action Employer and encourages applications from women and minority groups.*

POSTDOCTORAL POSITION available to study immune mechanisms of viral persistence and virus-induced demyelination in mice as a model system for multiple sclerosis. Prefer individuals with experience in cellular immunology, immunopathology, or virology. Collaborations exist with molecular biologists, biochemists, and geneticists in the Department of Immunology. Candidates should be U.S. citizens or permanent residents to be supported by a training grant. Excellent stipend and fringe benefits. Submit curriculum vitae to: **Moses Rodriguez, M.D., or Chella S. David, Ph.D., Department of Immunology, Mayo Clinic, Rochester, MN 55905.** *An Equal Opportunity/Affirmative Action Institution.*

Project Scientist Deputy Project Scientist

Dr. Charles Elachi, Earth and Space Sciences Division Manager at the Jet Propulsion Laboratory of the California Institute of Technology, invites applications for either the position of Project Scientist or Deputy Project Scientist for the TOPEX Project. As Project Scientist, you will be responsible for the scientific integrity of the TOPEX part of the Joint French and U.S. TOPEX/POSEIDON mission. The goal of the mission is to use precise satellite altimetric data to measure the surface topography of the oceans from space. Specifically, the duties of this position are to ensure the usefulness of these observations for studies of oceanic circulation, tides, the marine geoid, and geophysics; as well as the programs to calibrate, verify, and distribute data to Principal Investigators in the oceanographic community. You will be the primary link between the TOPEX Project, the Principal Investigators and the POSEIDON Project Scientist; will coordinate the satellite work with planned international oceanographic experiments such as the World Ocean Circulation Experiment; and will represent the Project in discussion with oceanographic funding agencies, scientific societies, and international scientific organizations. The Deputy will be expected to help with these tasks with only your general supervision.

As Project Scientist, you will be expected to divide your work time equally between the Project and individual research. Applicants to the position should have a Ph.D. in oceanography or related field with at least ten years' experience in physical oceanography, preferably in ocean dynamics. Some experience with satellite data is desired. Applicants should be articulate, able to work well in a team environment, and have some experience in managing oceanographic programs or experiments.

The Deputy Project Scientist may work entirely for the Project or, depending on interest, may divide work time equally with individual research. Applicants to this position should have generally the same qualifications as the Project Scientist but with less experience.

The level of appointment and salary will depend on experience. Applicants should send a resume to: **Professional Staffing, Dept. T65, Jet Propulsion Laboratory, 4800 Oak Grove Drive, Mail Stop 249-104, Pasadena, California 91109.**

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JPL

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Equal Opportunity Employer M/F

Principal Investigator Immunology

Two staff positions at the level of Principal Investigator are open within the Immunology Group at Du Pont's Glenolden Laboratory in Pennsylvania. One position is for a cellular immunologist with extensive experience using functional clones of T lymphocytes. The other opening is for an immunologist or biochemist with experience in membrane receptors and signal transduction. Successful candidates will conduct independent innovative basic research within a multidisciplinary group studying the mechanistic action of lymphokines and cytokines. Candidates should possess a PhD degree and have two or more years of postdoctoral experience and extensive publication in scientific journals.

At the world renowned Du Pont Company, you'll find a highly stimulating scientific environment in addition to an excellent salary and fringe benefits. To be considered, please send resume, bibliography, and references no later than July 23, 1986 to Dr. Robert A. Schunn, Central Research and Development Department, E. I. du Pont de Nemours and Company, Experimental Station, Wilmington, DE 19898.

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DIRECTOR OF THE BIOCHEMISTRY AND MOLECULAR BIOLOGY LABORATORY

Harvard University is seeking an individual who understands the complexities of both the managerial environment and that of the independent working scientist, and who can perform well in a research and teaching organization where competition for resources is high and the efficient use of personnel, equipment, and facilities is imperative.

Reporting to the Department Chairman and the Dean of the Faculty of Arts and Sciences, this individual supervises all administrative services (accounting, personnel, purchasing, facilities); is involved in formulating and implementing faculty policies and procedures within the framework of the Department's academic/scientific mission and that of the University; plans, prepares and manages budgets and actively participates in securing teaching and research funds; and plans and programs renovations, alterations, and improvements to the Laboratory.

A Ph.D. in Sciences or Engineering, or equivalent experience in scientific or technical management required. Ability to communicate effectively with different groups of people necessary. Familiarity with current Federal regulatory policies and research support mechanisms highly desired.

Please forward resume to: Professor Thomas Maniatis, Biochemistry Department, Harvard University, 7 Divinity Avenue, Cambridge, MA 02138.

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HARVARD UNIVERSITY

POSITIONS OPEN

LAHEY CLINIC MEDICAL CENTER, Department of Laboratory Medicine. **PH.D., CELLULAR IMMUNOLOGIST**. Ph.D., cellular immunologist wanted to establish clinical cellular immunology laboratory. Position involves application of Coulter EPICS C in various clinical research protocols. Internist-immunologist and clinical pathologist-immunologist to assist in coordination of protocols.

For confidential consideration, please submit résumé to: **Vincent Agnello, M.D., LAHEY CLINIC MEDICAL CENTER, 41 Mall Road, Burlington, MA 01805.** *An Equal Opportunity Employer.*

Ph.D. IN MOLECULAR BIOLOGY DESIRED FOR POSITION IN AN ONCOLOGY RESEARCH LABORATORY

To initiate research program involving: Growth factors, oncogenes, and gene rearrangements in both solid and hematologic malignancies.

Individual with several years of postdoctoral experience, as well as record of independent, original research preferred.

Send curriculum vitae and reference letters to:

Larry Nathanson, M.D.
222 Station Plaza North
Room 300
Mineola, New York 11501

POSTDOCTORAL FELLOW. Lipid chemist Ph.D. with experience in lipid extraction and analysis (GC, HPLC, TLC) required to work in cancer research starting September, 1986. Salary compatible with experience. Inquiries to: **Dr. Peter L. Gutierrez, Developmental Therapeutics, University of Maryland Cancer Center, 655 West Baltimore Street, Baltimore, MD 21201.**

POSTDOCTORAL FELLOW interested in study of cryopreservation of human cells, tissues, and organs for clinical transplant. Preservation methods, viability testing and immuno-potential, and cell function will be pursued. Contact: **Charles R. Baxter, M.D., Medical Director, Transplant and Resources Center, University of Texas Health Science Center at Dallas, 5323 Harry Hines Boulevard, Dallas, Texas 75229. Telephone: 214-688-3523.** *UTHSCD is an Equal Employment Opportunity Employer.*

POSTDOCTORAL FELLOW. An exciting enzyme manufacturing company in the San Francisco Bay Area needs a postdoctor immediately with an outstanding background in either protein biochemistry or molecular biology to work within the research group. The position is for 1 year, renewable for a second year. Salary in the mid-20's. Send curriculum vitae and the names of three references to: **Pat Donchin, Recruiter, GENENCOR, 180 Kimball Way, South San Francisco, CA 94080.** *An Equal Opportunity Employer.*

POSTDOCTORAL POSITION available to study the molecular mechanisms of interferon action. Candidate should have a recent Ph.D. in the biological sciences. Experience with mammalian cell culture techniques, recombinant DNA technology, and oncogenes is required. Salary negotiable. Interested persons should send curriculum vitae and three letters of reference to: **Dr. Opendra K. Sharma, Department of Molecular Biology, AMC Cancer Research Center, 1600 Pierce Street, Denver, Colorado 80214.** *An Equal Opportunity Employer.*

POSTDOCTORAL POSITIONS: (i) To study the role of inflammation in mouse skin tumor promotion, including (a) arachidonate metabolism and phospholipid turnover, (b) generation of oxygen radicals by promoters and (c) development of better in vitro models for initiation/promotion. (ii) To study (a) interferon-dependent modulation of cytochrome P-450's, (b) tumor promoter properties of interferons and (c) immune modulation by tumor promoters. Send curriculum vitae and references to **(i) Dr. Susan M. Fischer or (ii) Dr. John J. Reiners, Jr., University of Texas System Cancer Center, Science Park-Research Division, P.O. Box 389, Smithville, TX 78957, Telephone: 512-237-2403.** *An Equal Opportunity/Affirmative Action Employer.*

POSTDOCTORAL FELLOW IN MOLECULAR IMMUNOLOGY now available to study structural constraints of protein antigen recognition by the immune system; involving liposome/peptide/cellular interactions in investigations of the physical properties of peptides required for T cell recognition. Preference will be given to recent Ph.D.'s with backgrounds in membrane biochemistry and/or NMR and CD conformational analysis and a desire to work in an immunological field. Send curriculum vitae and three letters of reference to: **Dr. Yvonne Paterson, IMM-16, Scripps Clinic, 10666 North Torrey Pines Road, La Jolla, CA 92037.**

POSTDOCTORAL POSITION available immediately to study the role of opiates, gut peptides, and neuropeptides on feeding behaviour, food and water intake, satiety, and preferences for dietary ingredients in humans and animals. Experience in endocrinology, nutrition, neuroanatomy, and physiology is required. Ph.D. is desirable. Salary commensurate with experience ($21,804 to $31,619). **Telephone Dr. Sam Bhathena** for position information on **301-344-2422.** Send appropriate application and three references to: **Rose Cunningham or Telephone 301-344-3954 at USDA, Agricultural Research Service, Room 107, Building 003, BARC-West, Beltsville, Maryland 20705.** Applications in response to this advertisement must be marked 6E036. Deadline for receipt is 16 June 1986. *An Equal Employment Opportunity Employer.*

POSTDOCTORAL POSITION

Available to study gene expression during differentiation and following exposure to monokines such as Tumor Necrosis Factor. Experience in cell culture, recombinant DNA techniques preferred. Beginning summer or fall 1986. Send curriculum vitae and references to:

Frank M. Torti, M.D.
Division of Medical Oncology, M211
Stanford University Medical Center
Stanford, CA 94305

POSTDOCTORAL POSITION—Seeking qualified candidate to hold a Norman and Rosita Winston Foundation Postdoctoral Fellowship to study biochemical and physiological mechanisms of polychlorinated biphenyl and dioxin toxicity. Experience in methodology of arachidonic acid metabolism with HPLC and/or cardiac physiology required. Ph.D. or M.D. degree. Competitive salary. Send curriculum vitae to: **Dr. Arleen Rifkind, Department of Pharmacology, Cornell University Medical College, 1300 York Avenue, New York, NY 10021.**

POSTDOCTORAL POSITION available January 1986, to study the structure and function of human alkaline phosphatase (ALP) genes. Cloned cDNA probes are available for use in several projects including the cloning and sequencing of ALP genes, and the assay of their function by transfer into cultured cells. Also planned are studies comparing ALP genes from several mammalian species. Candidate should have experience in some area of biochemistry or genetics. Experience in cell culture or recombinant DNA desirable, but not essential. Send curriculum vitae and the names of three references to: **Dr. Brian Knoll, Department of Pathology and Laboratory Medicine, University of Texas Medical School, Houston, TX 77225.**

POSTDOCTORAL POSITION IN YEAST MOLECULAR GENETICS. Recent Ph.D. to study genes controlling translation accuracy. Opportunity to learn yeast genetics. Recombinant DNA or in vitro translation experience desirable. Available 1 August 1986, $18,000 to $22,000 per year, renewable 2 more years with mutual consent. Send résumé and reference names by 10 July to: **Susan Liebman, Department of Biological Sciences, University of Illinois, Box 4348, Chicago, IL 60680.** *Affirmative Action/Equal Opportunity Employer.*

POSTDOCTORAL POSITION available immediately to study the immunoregulation of autoimmune disease in mice. Techniques will include the production, characterization and use of antiidiotypic antibodies. Background in molecular biology, cell biology, biochemistry, or immunology required. Send curriculum vitae and names and addresses of three references to: **Dr. Ronald Messner, Department of Medicine, University of Minnesota, Minneapolis, Minnesota 55455.**

POSTDOCTORAL POSITION 1 September 1986, to study ammonia, polyamine, and urea cycle metabolism in a multidisciplinary approach to pathogenesis of Reye's syndrome in ferrets. Techniques include enzyme purification, tissue culture, HPLC, and mitochondrial function. Send curriculum vitae and three letters of recommendation to: **Dr. D. R. Deshmukh, F7828, C. S. Mott Children's Hospital, Box 0244, University of Michigan Hospitals, Ann Arbor, MI 48109–0244.** *An Equal Opportunity/Affirmative Action Employer.*

POSTDOCTORAL POSITION available July, 1986, for molecular investigation of an endogenous human retrovirus isolated from human teratocarcinoma cells. Candidates should have a strong background in recombinant DNA techniques including: cloning, DNA sequencing, and mRNA isolation and analysis. Send curriculum vitae and names of three references to: **Personnel Manager, Southwest Foundation for Biomedical Research, P. O. Box 28147, San Antonio, Texas 78284.** *Equal Opportunity Employer, M/F*

POSTDOCTORAL POSITION available September 1986. NIH fellowship to study S-adenosylmethioine-dependent protein methylation reactions using yeast cytochrome *c* as a model system. Opportunity to gain experience in molecular cloning in vitro transcription and in vitro translation reactions. Applicants must be U.S. citizens or landed immigrant. Please send curriculum vitae and names and addresses of three references to: **Dr. Woon Ki Paik, Fels Research Institute, Temple University School of Medicine, 3401 North Broad Street, Philadelphia, PA 19140.** *Equal Opportunity Affirmative Action Employer.*

POSTDOCTORAL POSITION AVAILABLE IMMEDIATELY to study molecular biology and biochemistry of a human extracellular matrix protein. Opportunity to gain experience with antibodies, molecular cloning, gene isolation, and DNA sequencing. Recombinant DNA experience desirable, but not essential. Send curriculum vitae and names of three references to: **Dr. Mon-Li Chu, Department of Biochemistry, University of Medicine and Dentistry of New Jersey–Rutgers Medical School, P.O. Box 101, Piscataway, NJ 08854.** *An Equal Opportunity/Affirmative Action Employer, M/F/H/V.*

POSTDOCTORAL RESEARCH ASSOCIATE position available 1 July 1986 to study the role of lysosomal proteinases and proteinase inhibitors in tumor cell invasion and metastasis. Applicant must have a Ph.D. in biochemistry or related field with experience in protein purification, enzyme kinetics and/or immunochemistry. Salary range: $17,000 to $20,000 (plus fringes) commensurate with experience. To apply send curriculum vitae and names of three references to: **Dr. B. F. Sloane, Department of Pharmacology, Wayne State University School of Medicine, Detroit, Michigan 48201.** *An Equal Opportunity/Affirmative Action Employer.*

POSTDOCTORAL RESEARCH ASSOCIATE position available beginning in the summer of 1986 for Ph.D. biochemist or biophysist with interest in cell biology. The project involves the study of lipid and protein interactions with the cell membrane, focusing on the effects of changes in membrane lipid content and dynamics on active cation transport and hormone-receptor interactions in cultured cells. Experience using biophysical measures of membrane structure and fluidity is preferred but not required. Support guaranteed for 2 years. Send curriculum vitae and names of three references to: **Thomas W. Smith, M.D., Chief, Cardiovascular Division, Brigham and Women's Hospital and Harvard Medical School, 75 Francis Street, Boston, MA 02115.** *Affirmative Action/Equal Opportunity Employer.*

POSTDOCTORAL RESEARCH SCIENTIST position available to study molecular mechanism of transcription in *Escherichia coli*. Applicants should be familiar with methods in bacterial and bacteriophage genetics, recombinant DNA technology, protein-nucleic acid biochemistry, and in vitro systems. Experience in protein purification and familiarity with automated LC and HPLC systems is particularly desirable. Salary: $16,500. Please send résumé, names of references, and summary of research activities to: **Dr. Alex Goldfarb, Department of Microbiology, Columbia University, 701 West 168 Street, New York, NY 10032.** *Columbia University is an Equal Opportunity/Affirmative Action Employer.*

Armed Forces Radiobiology Research Institute
(AFRRI)

Research Opportunities

AFRRI is a Department of Defense laboratory that conducts fundamental and applied biomedical research in radiobiology. Research opportunities providing advanced training are available for holders of the Ph.D. or equivalent in the following departments:

BEHAVIORAL SCIENCES: Research involves determining the bio-behavioral responses to ionizing radiation and radioprotectants. This program utilizes a broad spectrum of multidisciplinary approaches employing techniques and methodologies used in the areas of operant conditioning, physiological psychology, and behavioral pharmacology. Specific projects include the analysis of response force, discrimination learning, locomotion, brain chemistry, and social interactions.

BIOCHEMISTRY: Research is centered on mechanisms of radiation damage and radioprotection. Projects include investigation of DNA as a target molecule, radiation-induced alterations of gene expression, isolation of bone marrow stem cells using monoclonal antibody reagents in conjunction with the fluorescence activated cell sorter, structure and function of the nuclear membrane as it relates to radiation-induced damage, mast cell injury, and the effects of radiation on lipid mediators of inflammation.

COMPUTER AND ELECTRONICS: Opportunities exist in the areas of medical imaging, signal processing, bio-statistics and modeling. Projects include the development of algorithms for a Gould IP8500 image processor for use in brain receptor and 2D gel analysis; computer system development to support biomedical research using EEG, ECG and EMG analysis; data evaluation and analysis using BMDP, PROPHET, RS/1 and IMSL; and the development of mathematical models of biological systems.

EXPERIMENTAL HEMATOLOGY: Research is centered on the response of the hematopoietic and immune systems to ionizing radiation and the development of therapeutic methods to ameliorate varying degrees of sustained injury. Specific areas of research include hematopoietic stem cell physiology and isolation; bone marrow transplantation; effects of radiation and radiation-induced products on granulocytes, macrophages and the inflammatory response to bacterial sepsis; hematopoietic, immunologic and radioprotective properties of biological response modifiers; immunologic and hematopoietic consequences of combined burn, wound and radiation traumas; and the use of recombinant DNA to study hematopoietic radiobiology.

PHYSIOLOGY: Research involves determining the mechanisms of radiation effects and physiological responses in preparations such as gastrointestinal tissue *in vitro* and *in vivo*, neuromuscular junction, hippocampal slice, area postrema, leukocytes, endothelial cells, and cardiovascular system. Techniques employed in these investigations include computer imaging, electrophysiology (current, voltage and patch clamping), cell function assays, autoradiography, ion fluxes, blood flow measurements, radionuclide techniques and blood and tissue chemistries.

RADIATION SCIENCES: The research program on mechanisms of radiation damage at the atomic, molecular and cellular level spans four interdisciplinary projects: physical basis of radiobiological damage, radiation lesions and cellular repair, altered cellular function and survival, and modeling and analog studies. Specific areas of research include microscopic and macroscopic radiation dosimetry, photochemistry and radiobiological studies of DNA, cellular expression and modification of lesions in DNA, and radiosensitization and radioprotection by sulfhydryl donor molecules.

VETERINARY MEDICINE: Research is aimed at determining the histopathologic effects of ionizing radiation on animal tissues under a variety of experimental situations. Emphasis is largely collaborative and centered on better defining lesions generated by results from existing protocols. Opportunity for independent research exists and is encouraged.

★★★

To apply, indicate department of interest and submit a curriculum vitae or SF-171 along with a one page description of research interests. Send application materials by June 30, 1986 to:

ARMED FORCES RADIOBIOLOGY RESEARCH INSTITUTE

Extramural Research Programs
Attn: Civilian Personnel Office
Bethesda, MD 20814-5145

★★★

These one year GS-11/12 Civil Service positions are available immediately, are renewable up to 4 years, and range in salary from $26,381 to $41,105, depending on qualifications. U.S. citizenship is required. Federal Government leave and holiday benefits apply; life insurance, health benefits and Civil Service retirement are not provided. For additional information, contact Jo Ann Kelleher at (202) 295-1426.

AFRRI IS AN EQUAL OPPORTUNITY EMPLOYER.

POSITIONS OPEN

POSTDOCTORAL POSITION. Available immediately to study genetic disease in humans at the molecular level. Genomic cloning, cDNA cloning, and DNA sequencing are desirable skills. Support is available at NIH scale. Send résumé, description of research interests and experience, and references to: **Dr. James Skare, Center for Human Genetics, Boston University School of Medicine, 80 East Concord Street, Boston, MA 02118.** *Equal Opportunity Employer, M/F.*

A POSTDOCTORAL RESEARCH ASSOCIATE (MEMBRANE/CYTOSKELETON INTERACTIONS) is wanted to join in the investigation of the molecular organization, mechanisms of assembly, and functions of the filamentous skeletons of the erythrocyte membrane and less well understood systems. Our approach combines ultrastructure and biochemistry. Please send credentials and the names of the scientists who best know your work to: **Theodore Steck, M.D., Department of Biochemistry and Molecular Biology, University of Chicago, 920 East 58 Street, Chicago, IL 60637.**

POSTDOCTORAL RESEARCH POSITION is available immediately in cardiovascular physiology. Active, expanding, NIH-funded group with primary emphasis in coronary circulation and myocardial metabolism. Salary is competitive. Send curriculum vitae, description of research interests, and three letters of recommendation to: **George J. Crystal, Ph.D., Department of Anesthesiology, Illinois Masonic Medical Center, 836 West Wellington Avenue, Chicago, IL 60657.**

PROFESSOR OF EXPERIMENTAL CARCINOGENESIS

The Department of Cancer Biology of the Harvard School of Public Health is seeking a professor working on the mechanisms of carcinogenesis. Applicants should have a substantial record of achievement in original research, as well as a commitment to training of graduate students and fellows. Candidates will be expected to develop a strong, independently funded, research program and to participate in the teaching of graduate level courses.

Send curriculum vitae, including list of publications, and reprints of representative recent publications and the names of three or four evaluators to: **Dr. John Cairns, Chairman, *ad hoc* Search Committee, Harvard School of Public Health, 665 Huntington Avenue, Boston, MA 02115.** *Expression of interest is particularly invited from women and minority candidates.*

PROTEIN CHEMIST/IMMUNOCHEMIST
Brookhaven National Laboratory

A junior scientific staff position is available immediately in the Radionuclide and Radiopharmaceutical Research Division of the Medical Department at Brookhaven National Laboratory to carry out research on radiolabeled monoclonal antibodies. Work will involve development of antibody labeling methods, determination of stability, affinity and immunoreactivity, and assistance with animal biodistribution studies. Candidates should have a Ph.D. degree in biochemistry/immunochemistry, plus some experience beyond the Ph.D. in protein labeling, and characterization techniques. Some knowledge of radiochemistry is highly desirable. Interested candidates should send résumé to: **Dr. Suresh C. Srivastava, Medical Department, Building 801, Brookhaven National Laboratory, Associated Universities, Inc., Upton, Long Island, New York 11973.** *Equal Opportunity Employer, M/F.*

RESEARCH ASSOCIATE IN HUMAN GENETICS
Medical College of Virginia (MCV)

Applications are invited for the position of **research associate in genetic epidemiology**. Applicants should have a Ph.D. and have worked substantially on the quantitative genetic analysis of human data. Preference will be given to candidates with postdoctoral experience and a record of publication in the area. Further particulars may be obtained from: **Dr. L. J. Eaves, Department of Human Genetics, Medical College of Virginia, P.O. Box 33, MCV Station, Richmond, VA 23298**, to whom applications should be addressed. *MCV/VCU is an Equal Opportunity/Affirmative Action Employer.*

RESEARCH ASSOCIATE IN BIOCHEMICAL PATHOLOGY

POSTDOCTORAL POSITION is available immediately through 30 March 1989 to study the question: why do serum enzymes change in liver disease? Synthesis and turnover rates of asparate aminotransferase isoenzymes following CCl_4 injection in rats with be studied by measuring incorporation of labeled amino acids into immunoprecipated enzyme in liver homogenates and serum, and by measuring serum enzyme degradation rates. Appointee will work in a research laboratory with access to clinical and medical school facilities. Send curriculum vitae and three references to: **John Pappas, M.D., Chief, Laboratory Service, V.A. Hospital, and Professor of Pathology, University of South Carolina School of Medicine, Columbia, SC 29201. Telephone: 803-776-4000, extension 398.**

RESEARCH ASSOCIATE. Position available under 3 year NIH-sponsored research program investigating molecular basis of attenuation of human hepatitis A virus. Ph.D. or equivalent with experience in molecular biology. Experience in cDNA cloning, DNA transfection assays, and/or DNA sequencing would be helpful. Salary range $19,000 to $23,000 per year. Respond by 17 June to: **S.M. Lemon, M.D., Division of Infectious Diseases, 547 Burnett-Womack Building, University of North Carolina (UNC), School of Medicine, Chapel Hill, NC 27514; telephone: 919-966-2536.** Include curriculum vitae and names of three references. *UNC-CH is an Equal Opportunity/Affirmative Action Employer.*

RESEARCH ASSOCIATE (PH.D.)

In cardiovascular or related area to provide day to day guidance to a research group composed of physicians, fellows, and technicians working on cardiopulmonary research projects. Training in areas of cardiovascular physiology and pathology is required. Background experience in outlining and writing grant proposals is desired. Position available 1 July 1986. Please send curriculum vitae and three references to: **Dr. Lorenzo Gonzalez-Lavin, Director, DEBORAH RESEARCH INSTITUTE, 1 Trenton Road, Browns Mills, NJ 08015.**

Equal Opportunity Employer

RESEARCH FELLOW

Position available 1 July 1986 for a postdoctoral fellow in cardiovascular research. Current projects are in biological tissue valves and mechanism of calcification of biological tissue implanted in the heart. Please send curriculum vitae and three references to: **Dr. Lorenzo Gonzalez-Lavin, Director, DEBORAH RESEARCH INSTITUTE, 1 Trenton Road, Browns Mills, NJ 08015.**

Equal Opportunity Employer

RESEARCH FELLOW

Postdoctoral position available immediately to work on the development of an assay for the detection of human T-lymphotropic virus type III (HTLV III) in blood. Experience in virology, tissue culture, and enzyme immunoassay essential. Salary: $19,000 per year; initial appointment 1 year, renewable. Send curriculum vitae to:

Dr. Nrapendra Nath
American Red Cross
Biomedical Research and
Development Laboratories
9312 Old Georgetown Road
Bethesda, MD 20814

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

RESEARCH TECHNICIAN MOLECULAR GENETICS AND TISSUE CULTURE

Cancer Research: Development of chromosome-specific fluorescent probes for flow cytometry and study of oncogenes in human tumors. Techniques: Southern and northern blots, DNA transfection assays, recombinant DNA techniques, and tissue culture. Requirements: B.S. in life sciences and 1 to 2 years of research laboratory experience using above techniques. Send résumés to: **Stanley E. Shackney, M.D., Director, Advanced Flow Cytometry Laboratory, Allegheny-Singer Research Institute, 320 East North Avenue, Pittsburgh, PA 15212.**

RESEARCH POSITION IN AQUACULTURE AND SPORT FISHERIES MANAGEMENT. The Illinois Natural History Survey (INHS) seeks Ph.D. applicants for a permanent position at the assistant or associate professional scientist level to conduct fisheries research at an established field station in south central Illinois. Research will be conducted in on-site experimental ponds and laboratories and in other available impoundments. Position available 1 September 1986. Training, ability, and desire to enhance a program in both aquaculture and sport fisheries is expected. Salary commensurate with qualifications. Send letter of application, résumé, and names and telephone numbers of three references by 1 July 1986 to: **Dr. R.W. Larimore, Illinois Natural History Survey, 607 East Peabody Drive, Champaign, IL 61820.** *INHS is an Affirmative Action/Equal Opportunity Employer.*

Research Scientist to conduct research in the dynamics and physical properties of aerosol particles and the deposition of hygroscopic particles in the human respiratory system. Ph.D. in physical science/engineering with 2 years of experience in aerosol physics required, and knowledge of aerosol laboratory equipment, including monodisperse aerosol generators, and electron microscope. Salary: $30,000. Contact: The Job Service, 516 North Mangum Street, Durham, NC, or the Job Service nearest you. Refer to Job Order number NC5106518.

RESEARCH SCIENTIST—The Department of Neurology at the University of Massachusetts Medical Center is seeking a research scientist trained in the investigation of the neurobiology of aging and dementia. A broad background in anatomic, histological, and immunohistochemical techniques is required, as well as competence in computer applications. A knowledge of the neurobiology of aging is necessary for this position. Experience in scientific writing is advantageous. The applicant must be capable of carrying out research independently, and in collaboration with others. Apply to: **Dr. David Drachman, Department of Neurology, University of Massachusetts Medical Center, 55 Lake Avenue North, Worcester, MA 01605.**

An Equal Opportunity/Affirmative Action Employer.

RESEARCH SCIENTIST

The Research Laboratory of Electronics has an opening at the research scientist level for an auditory scientist to conduct both experimental and theoretical research on the mechanical properties of the receptor cells in the ear. The experiments will involve optical measurements of the motion of the receptor organ and the hair cell stereocilia. The theoretical studies will involve both analytical and computer simulational investigations of the mechanics of motion of these structures. A doctoral degree in physics, electrical, or mechanical engineering is required as is demonstrated knowledge of auditory physiology. Familiarity with the numerical solution of partial differential equations is desirable. Three to 5 years of experience is required.

Résumés and references should be sent to:

Donna M. Ticchi
Administrative Officer
Research Laboratory of Electronics
77 Massachusetts Avenue
Cambridge, MA 02139

MIT is an Affirmative Action/Equal Opportunity Employer.

TAXONOMIC THEORIST/METHODOLOGIST. The Maryland Center for Systematic Entomology (MCSE), a consortium of 60 systematists and students at the University of Maryland, U.S. Department of Agriculture, and Smithsonian Institution, seeks a researcher in taxonomic methods to consult with and assist staff on data collection, analysis, and computer applications. Qualifications include: a Ph.D.; experience in zoological systematics; and proven ability to program computers and collaborate well. Position for 1 year, with possibility for renewal or permanence. Salary commensurate with experience. Send curriculum vitae, reprints, and names of four references to: **Dr. M. E. Schauff, Systematic Entomology Laboratory, USDA, NHB 168, Smithsonian Institution, Washington, DC 20560**, by 27 June 1986. *MCSE's member institutions are Equal Opportunity Employers.*

POSITIONS OPEN

UNIVERSITY RESEARCH FELLOW

The Department of Biology at LAKEHEAD UNIVERSITY invites applications from Canadian citizens and landed immigrants to be sponsored for an **NSERC UNIVERSITY RESEARCH FELLOWSHIP (URF)**. The biological specialization of the position is OPEN. The candidate is expected to develop a vigorous research program and to complement departmental teaching in his/her discipline. The candidate must fulfill the criteria of selection set by the NSERC URF program. The Department of Biology may be in a position to consider the candidate for a tenure-track position in the second 5-year term of the URF program. Send curriculum vitae, a completed URF application form, two letters of reference, and names of three impartial external reviewers by 15 July 1986 to: **Dr. John P. Ryder, Chairman—URF Search Committee, Department of Biology, Lakehead University, 955 Oliver Road, THUNDER BAY, Ontario, Canada P7B 5E1.**

RESEARCH/TEACHING SPECIALIST II

Seeking an individual to study the regulation of the synthesis of proteins in the collagen gene family at the transcriptional, translational, and post-translational levels in the laboratory of **Dr. Richard Berg** in the Department of Biochemistry. The emphasis will be on the regulation of collagen production, wound healing, and connective tissue disorders. Master's degree in a biological science, plus 2 or more years of experience in collagen research. Preference will be given to applicants with a Ph.D. degree in a biological science with experience in molecular biology and biochemistry. Excellent salary and benefits. Please send curriculum vitae: **Mila Gendrano (86-P-235), UNIVERSITY OF MEDICINE AND DENTISTRY OF NEW JERSEY—Rutgers Medical School, Office of Human Resources (SCI), P.O. Box 101, Piscataway, NJ 08854.** *An Equal Opportunity/Affirmative Action Employer, M/F/H/V.*

SENIOR TECHNICAL STAFF MEMBER I

The Human Information Processing Group of Princeton University is seeking a member of the technical staff to integrate several areas of research including: cognitive motivation, cognitive science, engineering anomalies, and expert systems and robotics. Responsibilities will include developing computer operations systems for the laboratories comprising the group; designing and implementing computer-based experiments, statistical analysis; coordination and management of multidisciplinary personnel and facilities; and fiscal management of projects. Salary dependent upon qualifications and experience.

Résumés should be sent to: **Psychology Department, 1-S-4 Green Hall, Code HIPG-A, Princeton University, Princeton, New Jersey 08544.**

Princeton University is an Equal Opportunity/Affirmative Action Employer.

TWO VETERINARY GROSS ANATOMY PROFESSORIAL POSITIONS

The Department of Physiological Sciences, Oklahoma State University, is accepting applications for two positions in veterinary gross anatomy. Applicants are expected to hold a Ph.D. degree and a D.V.M. degree is desirable. Applicants should have demonstrated teaching experience in veterinary gross anatomy, and clinical experience is desirable. An interest and experience in teaching graduate level courses in the discipline of veterinary anatomy is expected. The candidates for these positions will be expected to teach undergraduate veterinary gross anatomy and develop a graduate program in basic and/or clinical sciences. Academic rank and salary are dependent upon qualifications and experience. Send curriculum vitae, and the names and addresses of three references to: **Chairman, Anatomy Search Committee, Department of Physiological Sciences, College of Veterinary Medicine, Oklahoma State University, Stillwater, OK 74078.** To assure full consideration, applications should be received by 1 June 1986. It is anticipated that employment would begin 1 August 1986.

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

POSITIONS OPEN

TOXICOLOGIST. Start fall 1986. Tenure-track assistant or associate professor rank. The successful candidate will be expected to develop independent research in toxicology, advise and supervise undergraduate and graduate (MA) students, and to teach in the newly established toxicology program. Experience in environmental and industrial toxicology highly desirable. Salary negotiable. Ph.D. and permanent visa or U.S. citizenship required. Send curriculum vitae, college transcripts, statement of teaching/research interests, and the names, addresses, and telephone numbers of three references to: **Dr. John Frey, Department of Biological Sciences, Mankato State University, Mankato, MN 56001.** *An Equal Opportunity/Affirmative Action Employer.*

The Division of Neurological Surgery, Department of Surgery, is seeking applicants for position of **TUMOR IMMUNOLOGIST** to develop and direct basic research in the immunobiology and immunotherapy of malignant brain tumors in experimental animal model systems and in patients. Successful candidate will have a Ph.D. in immunology/immunochemistry with several years of postgraduate experience in: recovery and analysis of intratumoral immune-related cells, mouse, rat and human hybridoma technology, and serologic analyses of tumor membrane and cytoplasmic antigens. Experience in purification and characterization of mononuclear phagocyte-derived growth factors is also desired. As evidence of ability to conduct a successful research program, candidates will be expected to have continuing federal/non-federal research grant support of at least $150,000 direct costs annually. Tenure-track faculty appointment at associate professor level with opportunity for adjunct appointments in any of several basic science departments and in Cancer Research Center. Qualified individuals should submit curriculum vitae and three letters of recommendation by 1 July 1986 to: **M. Stephen Mahaley, Jr., M.D., Ph.D., Professor and Chief, Division of Neurological Surgery, 148 Burnett Womack CSB 229H, University of North Carolina, Chapel Hill, North Carolina 27514.** *UNC is an Equal Opportunity/Affirmative Action Employer. Minority and female applicants are encouraged to voluntarily identify themselves.*

POSITIONS OPEN

RESEARCH SCIENTIST

The Division of Biomedical Research of the Lovelace Medical Foundation has a staff opening for a molecular immunologist, Ph.D., to participate in ongoing studies in immunoregulation. Interest and experience with human monoclonal antibodies or autoimmune diseases desirable. If qualified, please send résumé to: **Lovelace Medical Center, Human Resources Department, 5400 Gibson, SE, Albuquerque, NM 87108.** *Equal Employment/Affirmative Action Employer, M/F/V/H.*

TOXICOLOGIST. Chemical/human toxicology consulting group seeks Ph.D. toxicologist/pharmacologist with 3 to 5 years of industrial experience with clinical and experimental toxicology of xenobiotics. Regulatory and/or safety-testing experience with chemicals/drugs preferred. Excellent verbal/written skills a must. Send résumé, cover letter, and salary history to: **BOX 95, SCIENCE.**

TOXICOLOGY ASSISTANT DIVISION DIRECTOR. San Francisco Professional Corporation has immediate opening for assistant director-Division of Occupational and Human Toxicology Department. Qualified applicants will possess management experience with state or Federal OSHA-commercial laboratory or research. M.B.A. or M.P.H. preferred. Full-time, regular position, good salary plus top benefit package. Send résumé plus salary requirements to: **BOX 96, SCIENCE.**

VICE PRESIDENT—SCIENCE

Environmental/conservation organization headquartered in New York City seeking vice president for science to manage all scientific activities. Ph.D.-ecology or natural science, plus 5 years of management experience. Fund-raising skills required. Send résumé to: **Personnel Department, National Audubon Society, 950 Third Avenue, New York, NY 10022.** No telephone calls. *Equal Opportunity Employer.*

VISUAL ELECTROPHYSIOLOGY POSTDOCTORAL POSITION available July 1986 in ongoing NIH-funded study of directionally selective cells of the turtle retina. Skills in intracellular recording and staining desirable. Salary up to $19,000, based upon experience. Send curriculum vitae and three letters of reference to: **Dr. Robert DeVoe, Department of Visual Sciences, School of Optometry, Indiana University, Bloomington, Indiana 47405.** *Equal Opportunity/Affirmative Action Employer.*

PRIZE

The Indiana University School of Medicine

NOMINATIONS ARE SOLICITED FOR THE 1986 STEVEN C. BEERING PRIZE

This prize, consisting of a medal and $10,000, is awarded annually to an individual who has made internationally recognized and outstanding contributions to the advancement of biomedical science and/or education.

Nominations must be made by 6 June 1986 to:

Daniel P. Benford
Beering Prize Nominating Committee
Indiana University School of Medicine
1120 South Drive
Indianapolis, IN 46223

ANNOUNCEMENT

ANNOUNCEMENT OF RESEARCH FUNDS AVAILABLE

The Office of Program and Policy Coordination of the Agency for International Development is seeking proposals for studies linking **population growth, renewable resources, and environmental policies in Africa.** Grants for studies analyzing existing data will be funded up to $50,000. In-country studies may be funded up to $100,000.

For information, contact:

Anna S. Quandt
Patricia Koshel
PPC/PDPR/PS 3893 NS
Agency for International Development
Washington, DC 20523

SEMINAR

STEROID HORMONE REGULATION OF EXTRACELLULAR MATRIX PROTEINS
CO-CHAIRMEN—KENNETH CUTRONEO, PH.D.
AND ROBERT DIEGELMANN, PH.D.
29 JUNE TO 2 JULY 1986
BASIN HARBOR CLUB
VERGENNES, VERMONT

Cellular and molecular mechanisms of hormone regulation of extracellular proteins will be discussed. Topics will focus on glucocorticoid and sex hormone regulation of collagen, fibronectin, and elastin metabolism during normal growth and in disease states. All participants are invited to present posters. Register on, or before 6 June.

FOR ADDITIONAL INFORMATION, CONTACT:

Maureen E. Hanagan, Coordinator
Continuing Medical Education
235 Rowell Building
University of Vermont
Burlington, VT 05405
Telephone: 802-656-2292

SYMPOSIUM

Aspen, Colorado, 12 to 16 August 1986 at the Given Institute of Pathobiology. Five-day course entitled "Immunology and Disease" designed for clinical and basic scientists. Intensive update by national authorities on immunoregulation, diseases of immune dysfunction, immunosuppression, modulation of inflammatory responses, and frontiers in immunology. CME credit. Registration fee $300. Organized by University of Colorado School of Medicine. For Information, contact: **Continuing Medical Education Office C295, UCHSC, 4200 East 9 Avenue, Denver, CO 80262. Telephone: 303-394-5195.**

TRAINING PROGRAM

RESEARCH TRAINING PROGRAM

The University of California, Los Angeles (UCLA) School of Medicine announces its openings for the second year of its newly established postdoctoral research training program in medical genetics utilizing the clinical and research resources of its affiliated campuses and teaching hospitals. This program is open to academically oriented applicants with an M.D., Ph.D., D.D.S., or equivalent degree. There is a wide variety of research training opportunities in molecular, biochemical, immuno-, cancer, cyto-, somatic cell, population, and clinical genetics. The program also meets all of the requirements of the American Board of Medical Genetics. Training program faculty include members of the Departments of Biological Chemistry, Biomathematics, Medicine, Pediatrics, Obstetrics-Gynecology, Psychiatry, and the Molecular Biology Institute. Applications for July 1987, are now being accepted. Send curriculum vitae and three letters of reference to: **David L. Rimoin, M.D., Ph.D., Professor of Pediatrics and Medicine, Chief, Division of Medical Genetics, Harbor-UCLA Medical Center, 1000 West Carson, Torrance, CA 90509.**

FELLOWSHIPS

POSTDOCTORAL FELLOWSHIP (M.D. or Ph.D.) position is available beginning 1 July 1986 to study the mechanism(s) of regulation of inflammation in animal models of disease. Animal models presently being studied are (i) antigen-induced synovitis, (ii) murine collagen-induced arthritis, and (iii) murine *Schistosoma japonicum* infection. These studies involve the analysis of immune network interactions, generation of antigen-specific T cell hybrids and lymphokines, as well as the analysis of arthrogenic protein epitopes of collagen and proteoglycans, in addition to schistosome egg antigens. Send curriculum vitae and the names of three references to: **Thomas F. Kresina, Ph.D., Department of Medicine, University Hospitals of Cleveland, Cleveland, Ohio 44106.**

FELLOWSHIPS

POSTDOCTORAL FELLOWSHIPS IN THE CELLULAR AND MOLECULAR ASPECTS OF REPRODUCTIVE BIOLOGY, UNIVERSITY OF CALIFORNIA, DAVIS, CAMPUS. Fellowships will become available in 1987 in an NIH-funded training program. Research areas include cell biology and biochemistry of gametes and fertilization (**D. Katz, J. Hedrick, S. Meizel, R. Nuccitelli**); cell biology and morphology of implantation, placenta, and early development (**G. Anderson, A. Enders, A. Hendrickx, B. King**); cellular endocrinology (**J. Turgeon**). Candidates must be U.S. citizens or permanent residents and, at time of appointment, must have doctoral degree with either no postdoctoral training or less than 1 year of such training. Fellowships will be awarded as positions become available in 1987. For further information, send curriculum vitae and a statement of research interests to: **Dr. Stanley Meizel, Director, Reproductive Biology Training Grant, Department of Human Anatomy, School of Medicine, University of California, Davis 95616.** *The University of California is an Equal Opportunity Affirmative Action Employer.*

POSTDOCTORAL FELLOWSHIPS available for behavioralists. The University of Rochester School of Medicine announces a new NIMH multidisciplinary program for postgraduate training using neuroanatomical, neurochemical, and physiological approaches to the study of behavior. Candidates should have a Ph.D. or M.D. degree with training in psychology, neuroscience, anatomy, physiology, or related areas. U.S. citizenship or permanent residency required. Send curriculum vitae, a description of research interests, and a list of three references to: **Dr. M. Blair, Department of Physiology, Box 642, University of Rochester, School of Medicine, Rochester, NY 14642.**

Training Faculty are **J. Sladek** Program Director (chemical neuroanatomy); **R. Ader** (psychoneuroimmunology); **M. Blair** (neuroendocrine mechanisms of blood pressure regulation); **P. Coleman** (neurobiology of aging); **M. del Cerro** (neural development); **D. Felten** (neuroimmunology; monoamines); **D. Gash** (CNS regeneration and transplantation); **S. Haber** (limbic-motor interactions); **G. Hoffman** (neuropeptide systems); **W. M. King** (vestibular oculomotor systems in primates); **R. Loy** (neural plasticity; sexual dimorphisms); **W. Merigan** (primate visual psychophysics; visual toxicology); **T. Pasternak** (neural mechanisms of vision); **C. Sladek** (regulation of vasopressin release); **B. Weiss** (neurotoxicology).

POSTDOCTORAL RESEARCH TRAINING FELLOWSHIPS

Fellowships available to residents of North America with Ph.D., M.D., or comparable degree and less than 1 year of postdoctoral laboratory experience by application date for beginning training in basic biomedical research. The 3-year award consists of a stipend of $18,000 for the first year, with increments of $1,000 for each of the next 2 years; $1,000 per annum research allowance; travel to fellowship location; annual meeting. Application deadline 15 August; fellowships activate following July. For application forms, write or telephone: **The Helen Hay Whitney Foundation, 450 East 63 Street, New York, NY 10021; telephone: 212-751-8228.**

WASHINGTON UNIVERSITY, ST. LOUIS

POSTDOCTORAL FELLOWSHIPS—RECEPTOR MEDIATED ENDOCYTOSIS AND PROCESSING OF PROTEINS AND ANTIGENS

Postdoctoral positions are available to individuals interested in the cell and molecular biology of receptor-mediated endocytosis and processing of proteins. Individuals with M.D. or Ph.D. who seek research training in the following areas are encouraged to apply: receptor recycling, antigen processing and presentation, endosome acidification, Ia and cell surface membrane proteins, and protein sorting and targeting.

Send curriculum vitae and names of three references to:

***Dr. Alan L. Schwartz**	Department of Pediatrics and Pharmacology
***Dr. Philip D. Stahl**	Department of Cell Biology and Physiology
***Dr. Emil R. Unanue**	Department of Pathology

Washington University School of Medicine
660 South Euclid Avenue
St. Louis, Missouri 63110

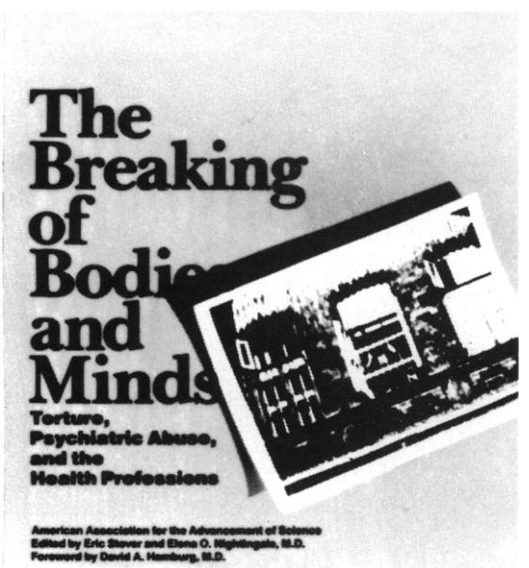
The Breaking of Bodies and Minds

Torture, Psychiatric Abuse, and the Health Professions

A documentation of systematic use and effects of physical and mental torture throughout the world

Edited by Eric Stover and Elena O. Nightingale

With a Foreword by David A. Hamburg



This eye-opening book brings together for the first time writings on the role of medical personnel in cases of torture and psychiatric abuse. Through analyses and case histories, psychiatrists and other health care professionals, political scientists, ethicists, and other writers discuss the systematic use and effects of physical and mental torture in the Soviet Union, Latin America, and other parts of the world.

The book also details the complicity of an alarming number of medical personnel in torture and psychiatric abuse and examines the ways in which governments use a medical rationale to seek legitimacy for human destruction. Finally, it describes efforts by medical and other associations both to combat offensive practices and treat victims.

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Toward the Prevention of Torture and Psychiatric Abuse
Elena O. Nightingale and Eric Stover

The Breaking of Bodies and Minds is important reading for anyone concerned with the preservation of basic human rights.

1985 352 pages

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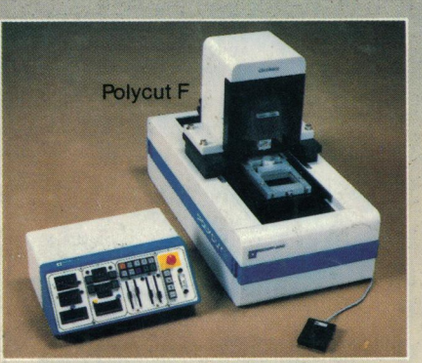

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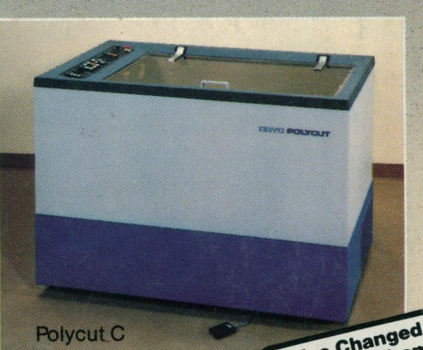

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