

waves are expected to have wavelengths well beyond the scale of any terrestrial detector; indeed galaxies themselves could respond to megaparsec-long waves. Perhaps the random to-and-fro motions of galaxies could be induced by such waves. This would require a very considerable mass fraction of the universe to be present in this exotic form of energy, and one can learn in the book under review how such exotic possibilities are constrained by the harsh reality of observational cosmology.

Along with such fascinating speculations, Zel'dovich and Novikov provide a thorough grounding in the basics of the hot big bang theory. For the translation the 1975 Russian edition has been considerably improved and updated by the authors in close collaboration with Gary Steigman and Kip Thorne. The long history of the book shows, in that recent developments involving grand unification symmetry breaking, baryon creation, and inflation are omitted. A more serious fault is the number of typographical or mathematical errors in the equations, along with inconsistencies in notation. But the persevering student will be well rewarded. The book provides a first-rate introduction for the reader who wishes to explore the origins and evolution of the large-scale structure of the universe.

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Astronomical Cuneiform Texts. Babylonian Ephemerides of the Seleucid Period for the Motion of the Sun, the Moon, and the Planets. O. Neugebauer. Springer-Verlag, New York, 1983. Three volumes. xl, 512 pp., and viii, 256 pp., illus. \$88. Sources in the History of Mathematics and Physical Sciences 5. Reprint, 1955 edition.

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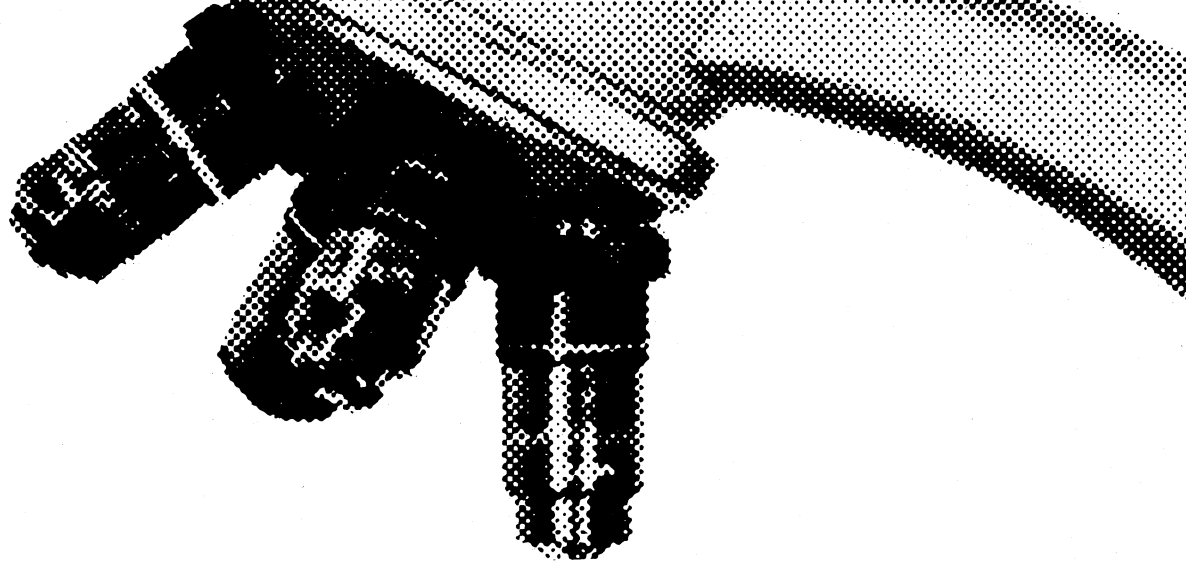
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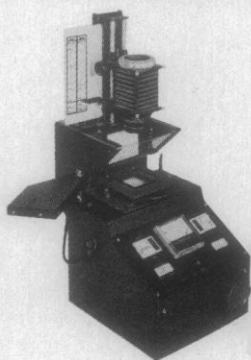
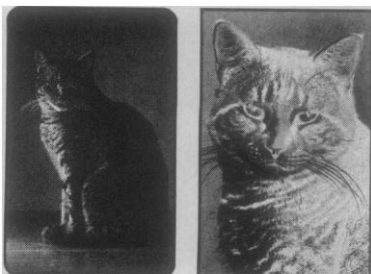
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Glacial Deposits in North-west Europe. Jürgen Ehlers, Ed. Balkema, Rotterdam, 1983 (U.S. distributor, MBS, Salem, N.H.). x, 470 pp., illus. \$48.50.

A Guide to General Toxicology. Freddy Homburger, John A. Hayes, and Edward W. Pelikan, Eds. Karger, Basel, 1983. x, 410 pp., illus. \$58.75. Karger Continuing Education Series.

Handbook of Environmental Data on Organic Chemicals. Karel Verschueren. 2nd ed. Van Nostrand Reinhold, New York, 1983. viii, 1310 pp., illus. \$99.50.

Handbook of Experimental Pollination Biology. C. Eugene Jones and R. John Little, Eds. Scientific and Academic Editions (Van Nostrand Reinhold), New York, 1983. xviii, 558 pp., illus. \$46.50.

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Nonlinear Methods of Spectral Analysis. S. Haykin, Ed. 2nd ed. Springer-Verlag, New York, 1983. xiv, 263 pp., illus. Paper, \$25. Topics in Applied Physics, vol. 34.

Progress in Behavior Modification. Michel Hersen, Richard M. Eisler, and Peter M. Miller, Eds. Academic Press, New York, 1982 and 1983. Vol. 13. xvi, 293 pp. \$35. Vol. 14. xvi, 388 pp. \$47.

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Stress and Fatigue in Human Performance. Robert Hockey, Ed. Wiley, New York, 1983. xvi, 396 pp., illus. \$34.95. Wiley Series on Studies in Human Performance.

Structure-Activity Correlation as a Predictive Tool in Toxicology. Fundamentals, Methods, and Applications. Leon Golberg, Ed. Hemisphere, Washington, D.C., 1983. xx, 330 pp., illus. \$49.50. Chemical Industry Institute of Toxicology Series. From a symposium, Raleigh, N.C., Feb. 1981.

Successful Dissertations and Theses. David Madson. Joseey-Bass. San Francisco, 1983. xviii, 174 pp. \$12.95.

Surface Studies with Lasers. F. R. Aussenegg, A. Leitner, and M. E. Lippitsch, Eds. Springer-Verlag, New York, 1983. x, 241 pp., illus. \$26. Springer Series in Chemical Physics, 33. From a conference, Mauterndorf, Austria, Mar. 1983.

Techniques in Molecular Biology. John M. Walker and Wim Gaastra, Eds. Croom Helm, London, 1983. 333 pp., illus. £19.95; paper, £9.95.

Terrestrial Trace Fossils. William A. S. Sarjeant, Ed. Hutchinson Ross, Stroudsburg, Pa., 1983 (distributor, Van Nostrand Reinhold, New York). xvi, 415 pp., illus. \$44.50. Benchmark Papers in Geology, vol. 76.

Their Blood Runs Cold. Adventure with Reptiles and Amphibians. Whit Gibbons. University of Alabama Press, University, 1983. xvi, 164 pp., illus. \$19.57; paper, \$9.95.

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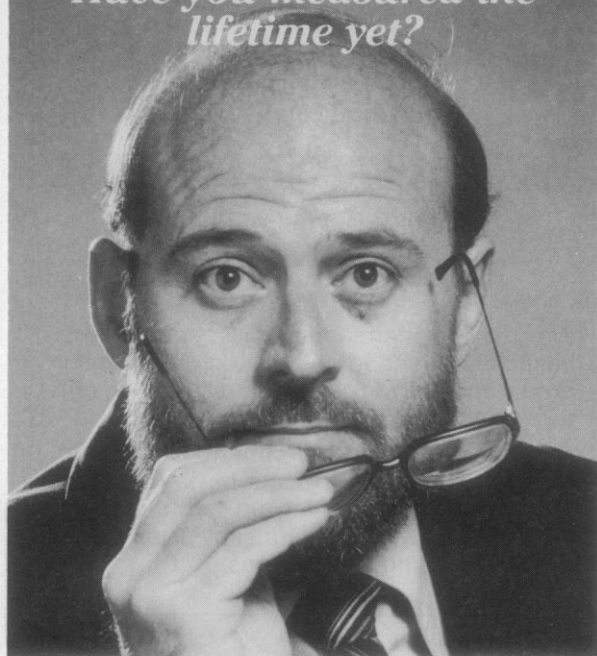
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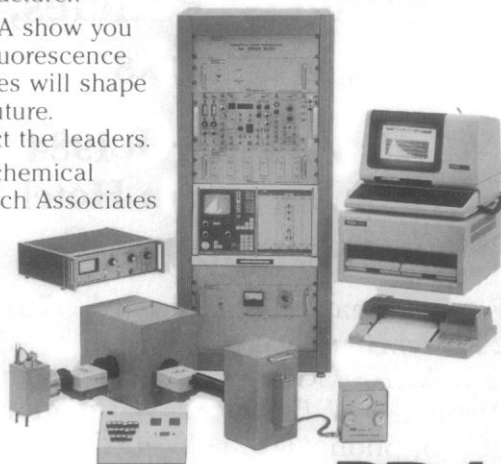
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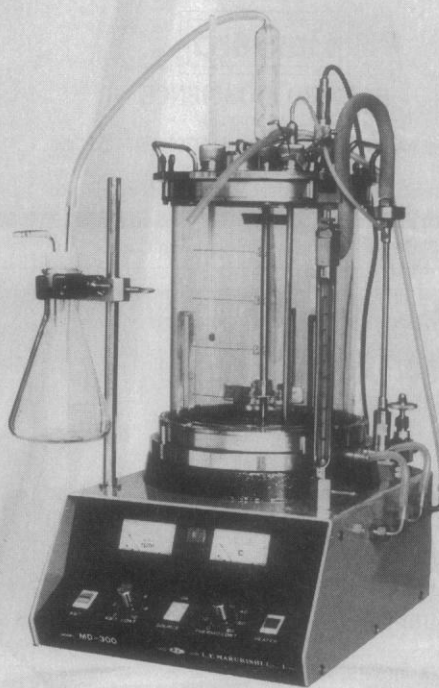
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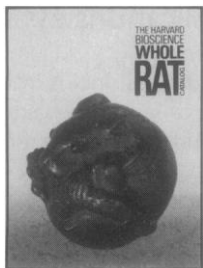
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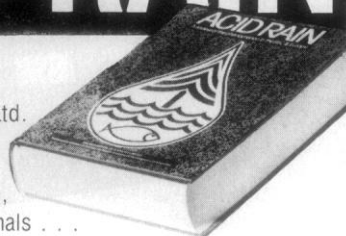
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AAAS NEWS

(Continued from page 579)

Stephen Laufer of Spring Valley, New York, member of Section C since 1939, 4 October 1983.

Philip L. Levins of Lexington, Massachusetts, member of Section C since 1963, 27 August 1983.

Robert L. Livingston, Department of Chemistry, Purdue University, member of Section C since 1968, 21 August 1983.

George T. Lodge of Virginia Beach, Virginia, member of Section J since 1947, 26 April 1983.

Douglas H. Lowndes of Pasadena, California, member of Section A since 1963, 20 September 1983.

Joseph F. McDonnell, Jr., of Alexandria, Virginia, member of Section C since 1928, 19 August 1983.

John W. McKay of Orange City, Florida, member of Section G since 1928, 6 July 1983.

Wallace L. Minto of Sarasota, Florida, member of Section C since 1950, 3 September 1983.

Malcolm Mitchell of Indianapolis, Indiana, member of Section M since 1964, 21 August 1983.

San-ichiro Mizushima of Tokyo, Japan, member since 1966, 3 August 1983.

Charles H. Moore, founding president, International Copper Research Association, Inc., member of Section M since 1957, 16 October 1983.

June B. Moore of San Anselmo, California, member of Section T since 1977, 21 July 1983.

Sumner M. Morrison, director, Environmental Health Services, Colorado State University, member of Section G since 1965, 13 November 1983.

Harvey A. Neville of Bethlehem, Pennsylvania, member of Section C since 1929, 11 October 1983.

Homer E. Newell, former associate administrator, National Aeronautics and Space Administration, member of Section X since 1947, 18 July 1983.

Allen P. Newman of Fremont, Ohio, member of Section N since 1966, 31 July 1983.

Daniel F. Nickols of Lincoln, Illinois, member since 1975, 23 November 1983.

J. W. Nielsen of Berkeley Heights, New Jersey, member of Section C since 1966, 3 May 1983.

Horace W. Norton, professor of statistics, Department of Animal Science, University of Illinois, member of Section U since 1945, 4 November 1983.

William A. O'Leary of Danbury, Connecticut, member of Section M since 1972, 29 June 1983.

Harold A. Press of Fayetteville, Penn-

sylvania, member of Section E since 1965, 27 August 1983.

Derek deSolla Price, Avalon Professor of the History of Science, Yale University, member of Section L since 1960, 2 September 1983.

L. W. Rainard of Wilmington, Delaware, member of Section N since 1964, 20 September 1983.

Rodham Routledge of San Antonio, Texas, member since 1983, 3 November 1983.

Kalman W. Rusinow of West Caldwell, New Jersey, member of Section B since 1948, 21 June 1983.

Alexander Rush of Philadelphia, member of Section N since 1947, 24 October 1983.

Max T. Schnitker of Toledo, Ohio, member of Section N since 1943, 4 May 1983.

E. A. Schoenecker of Milwaukee, Wisconsin, member of Section N since 1968, 23 September 1983.

Milton J. Scott, former research manager, Monsanto Company, member of Section C since 1948, 26 August 1983.

Kirk Shinsky, Department of Physics, University of California, Berkeley, member of Section B since 1977, 6 September 1983.

Herbert J. Shumacher of Little Rock, Arkansas, member since 1969, 13 June 1983.

Raymond F. Taylor of Pebble Beach, California, member of Section G since 1949, 12 October 1983.

Hamilton P. Traub of La Jolla, California, member of Section G since 1929, 14 July 1983.

Homer C. Vaughan of New York, New York, member of Section R since 1956, 29 October 1983.

Philip C. Wakeley of Ithaca, New York, member of Section G since 1926, 28 August 1983.

Gregory W. Webb, Department of Geology, University of Massachusetts, member of Section E since 1968, 4 October 1983.

Boris Weinstein, professor of chemistry, University of Washington, member of Section C since 1964, 29 July 1983.

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HEBREW UNIVERSITY OF JERUSALEM. Tenure-track positions: **Animal Behaviour:** strong background in field ecology. **Molecular Biology:** cell biology; animal and/or plant cells. **Neurobiology:** development and differentiation. Candidates expected to pursue active advanced level research; teach, supervise graduate students in their specialized fields; teach undergraduate courses in their broader fields. Rank/salary according to qualifications. Send curriculum vitae, list of publications, and representative papers, and have three reference letters sent to: **Professor Dan Cohen, Chairman, The Institute of Life Sciences, The Hebrew University of Jerusalem, Jerusalem 91904 Israel, before 1 April 1984.**

ASSISTANT FACULTY FELLOW IN CHEMISTRY. Nontenure-track faculty level position open to an individual to conduct research on funded projects in protein chemistry of blood coagulation and fibrinolysis. The candidate must have postdoctoral experience in biochemistry, cell biology, or immunology. Please submit a résumé and three letters of reference to: **Dr. Francis J. Castellino, Department of Chemistry, University of Notre Dame, Notre Dame, Indiana 46556. The University of Notre Dame is an Equal Opportunity/Affirmative Action Employer.**

Applications are invited for a research position in the area of molecular and clinical aspects of rotaviruses. The position will be filled at the level of **ASSISTANT MEMBER or POSTDOCTORAL FELLOW** depending upon experience. A Ph.D. in virology or molecular biology with experience in monoclonal antibody or recombinant DNA research is required. Teaching opportunities and joint appointments are available at the College of Medicine of the University of Cincinnati. Send résumé with the names of three references and summary of research goals to: **Richard L. Ward, Ph.D., The Christ Hospital Institute of Medical Research, 2141 Auburn Avenue, Cincinnati, Ohio 45219. An Equal Opportunity/Affirmative Action Employer.**

ASSISTANT OR ASSOCIATE PROFESSOR IN THE RESEARCH ASSOCIATE TRACK to assume major responsibility in a cellular electrophysiology laboratory studying arrhythmogenesis and the actions of antiarrhythmic drugs. Experience in voltage clamping, cable analysis, ion sensitive microelectrodes, and computer programming preferable. Excellent scientific environment. Renewable term appointment with full fringe benefits. Immediate availability. Please send curriculum vitae, representative reprints, and names of three references to: **Morton F. Arnsdorf, M.D., Chief, Section of Cardiology, University of Chicago Hospitals, Box 423, 950 East 59 Street, Chicago, Ill. 60637.**

POSITIONS OPEN

ASSISTANT PROFESSOR

The Department of Food Microbiology and Toxicology, Food Research Institute, University of Wisconsin-Madison, invites applications from qualified individuals for a tenure-track faculty position. Applicants should have a Ph.D., productive postdoctoral experience, and demonstrated expertise in microbiological aspects of food safety and preservation. The primary duty of the incumbent will be to establish a high-quality research program on Gram-positive bacteria (preferably anaerobes) of importance in food safety. The incumbent will also be expected to deliver several lectures in area of specialty to undergraduate and graduate students each semester, perform university-related public service, and participate in activities contributing to the support of the department and the Food Research Institute. This is an exceptional annual (12-month) appointment offering excellent facilities in a challenging intellectual environment. Applicants should submit curriculum vitae and the names of three to five references to: **Dr. M. W. Pariza, Chairman, Department of Food Microbiology and Toxicology, Food Research Institute, University of Wisconsin, 1925 Willow Drive, Madison, Wis. 53706. The University of Wisconsin is an Equal Opportunity/Affirmative Action Employer.**

ASSISTANT PROFESSOR

Applicants must hold Ph.D., preferably in biochemistry, and have postdoctoral training. Research expertise in **MOLECULAR IMMUNOLOGY** is preferred so that applicant's work will complement ongoing research in immunoregulation. The ability to develop a research program and to acquire extramural funding is required. The successful applicant must be qualified to effectively teach biochemical subjects outside own area of research to both medical and graduate students. This 12-month, tenure-track position will be filled on 1 July 1984. Send curriculum vitae, brief summary of present and proposed research programs, and names of three people who may be contacted for reference to: **Dr. F. P. Inman, Department of Biochemistry, P.O. Box 19930A, College of Medicine, East Tennessee State University, Johnson City, Tenn. 37614. An Affirmative Action/Equal Opportunity Employer.**

The Department of Surgery, Southwestern Medical School, is seeking applicants for:

ASSISTANT PROFESSOR—M.D., accredited general surgery residency, 1 year of laboratory investigative work in gastrointestinal physiology. **ASSISTANT PROFESSOR—M.D.,** accredited general surgery residency, 1 year of basic laboratory surgical research with interest in traumatology and clinical research at the cellular level.

Contact: **William J. Fry, M.D., Hudson-Penn Professor and Chairman, Department of Surgery, 5323 Harry Hines Boulevard, Dallas, Texas 75235. The University of Texas Health Science Center at Dallas is an Equal Opportunity Employer.**

ASSISTANT PROFESSOR, BIOCHEMISTRY. Tenure-track position beginning 1 September 1984. Ph.D. in biochemistry or molecular biology required with postdoctoral experience desired. Ability to teach effectively and to develop an independent research program is critical. All research areas considered, with preference to molecular biology. Please send a résumé, description of research interests, and three letters of recommendation by 1 March 1984 to: **Chairman, Search Committee, Department of Biochemistry, 227 Hitchner Hall, University of Maine, Orono, Maine 04469. An Equal Opportunity/Affirmative Action Employer.**

ASSISTANT PROFESSOR HIGH ENERGY PHYSICS DUKE UNIVERSITY

The Physics Department at Duke University has an immediate opening in high energy physics at the assistant professor level. The position is tenure track and involves a light teaching load. It is expected that the person filling this position will participate fully in research carried on by the Duke high energy group. We currently have active experimental programs at Fermilab, Brookhaven, and CERN. There is a future opportunity to participate in an approved experiment at the pp collider at FNAL. The applicant should have both software and hardware experience in experimental particle physics. Inquiries should be sent to: **Professor W. D. Walker, Physics Department, Duke University, Durham, North Carolina 27706.**

Duke University is an Equal Opportunity/Affirmative Action Employer.

POSITIONS OPEN

ASSISTANT PROFESSOR

The Department of Social and Administrative Health Sciences of the School of Public Health, University of California, Berkeley, is seeking a tenure-track faculty member at the level of assistant professor with expertise in the broad area of public health nutrition and demonstrated competence in some specialized area of public health nutrition. Candidates with prior teaching, research, and practical experience area preferred, but recent doctoral students will also be considered. The individual selected will be expected to develop an active research program, supervise the research activities of doctoral students, and participate actively in the M.P.H. and Dr.P.H. programs, especially in public health nutrition. Appointment effective 1 July 1984 is desired. Salary is negotiable, depending upon qualifications. To apply, send curriculum vitae, a selection of refereed publications, and a statement of your research and teaching interests to: **The Chairman, Department of Social and Administrative Health Sciences, 508 Warren Hall, School of Public Health, University of California, Berkeley, California 94720. The closing date for applications is 1 May 1984. The University of California is an Equal Opportunity/Affirmative Action Employer.**

ASSISTANT PROFESSOR OF PHYSIOLOGY

A tenure-track position at the rank of assistant professor is available in the Department of Physiology and Biophysics of the University of Tennessee Center for the Health Sciences. Candidates should have a Ph.D. or M.D. degree, a minimum of 2 years of postdoctoral training, and a **strong research background in organ system or whole animal physiology.** Demonstrated ability to initiate a strong independent research program and to engage in the teaching activities of the department are expected. Send curriculum vitae, a brief statement of research interests, and the names of three references to: **Dr. Leonard Share, Chairman, Department of Physiology and Biophysics, University of Tennessee Center for the Health Sciences, Memphis, Tennessee 38163. An Equal Opportunity/Affirmative Action Employer.**

ASSISTANT PROFESSOR—RADIATION ONCOLOGY UNIVERSITY OF SOUTHERN CALIFORNIA (USC), SCHOOL OF MEDICINE

The Department of Radiation Oncology invites applications for a tenure-track faculty appointment in the area of cellular radiation biology. Applicant must have Ph.D. or M.D. and at least 2 to 3 years of postdoctoral training in cellular radiation biology. Experience in working with mammalian cells in culture is required. Preference may be given to the applicants with working knowledge of molecular aspects of cell biology. Send curriculum vitae, list of publications, and names of three references to:

Dr. Antun Han
Head, Division of Experimental Radiotherapy
USC School of Medicine
1414 South Hope Street
Los Angeles, Calif. 90015

BACTERIOLOGIST. Ph.D., postdoctoral training in microbial biochemistry or biochemical aspects of microbial structure, and continuous ability to conduct and publish original, independent research. Tenure-track position, effective 1 July 1984, with appointment as assistant or associate professor, depending on experience. The deadline for applications is 15 March 1984. *In accordance with Canadian Immigration requirements this advertisement is directed to Canadian citizens and permanent residents. The University of Western Ontario is an Equal Opportunity Employer.* Address correspondence to: **Dr. N. R. Sinclair, Chairman, Department of Microbiology and Immunology, University of Western Ontario, London, Ontario, Canada N6A 5C1.**

BIOCHEMICAL ENDOCRINOLOGIST

INSTRUCTORSHIP available to study mechanism of glucocorticoid hormone action. Project involves purification and characterization of the glucocorticoid receptor. Teaching responsibilities in the area of endocrinology. Salary commensurate with experience. Send curriculum vitae and names of three references to:

Dr. F. Norman Briggs
Department of Physiology and Biophysics
Medical College of Virginia
Richmond, Va. 23298
An Equal Opportunity Employer

**BIOLOGY DEPARTMENT
COLLEGE OF NATURAL
SCIENCES AND MATHEMATICS**

Indiana University of Pennsylvania (IUP) invites applications for **three tenure-track positions** in the Biology Department beginning September 1984.

- 1) **Virologist/Microbial Genetist**—Teach introductory courses in microbiology and genetics. Major emphasis of training should be in virology/microbial genetics with experience in genetic engineering. Ph.D. required. Send letter of application to:

Dr. F. W. Liegey, Chairperson, Search Committee, Biology Department, IUP, Indiana, Pa. 15705.

- 2) **Botanist**—Teach general biology half-time at main campus and half-time at nearby branch campus. Preference will be given to candidates with a broad background in plant population biology and teaching experience in general biology. Ph.D. required. Send letter of application to:

Dr. Arthur C. Hulse, Chairperson, Search Committee, Biology Department, IUP, Indiana, Pa. 15705.

- 3) **Anatomy/Physiology**—Teach human anatomy and human physiology courses to nonbiology majors. Preference will be given to candidates with a background in environmental physiology and with experience in computer programming. Ph.D. required. Send letter of application to:

Dr. Alicia Linzey, Chairperson, Search Committee, Biology Department, IUP, Indiana, Pa. 15705.

Salary is competitive with ample fringe benefits. Applications should include résumé, transcripts, and three letters of reference. Deadline date is 9 March 1984.

IUP is an Affirmative Action/Equal Opportunity Employer.

In keeping with our historic interest in reproductive biology and our strong commitment to cell biology, the Worcester Foundation is seeking faculty candidates at all levels with expertise in

Cellular and Molecular Aspects of Reproduction

The Worcester Foundation offers excellent facilities and a highly interdisciplinary and interactive environment for independent researchers. The Foundation's campus is located in the pleasant New England town of Shrewsbury, Massachusetts, 38 miles west of Boston. Interested candidates should send a curriculum vitae with statement of research interests and names of three references to: **David E. Wolf, PH.D., C/O PERSONNEL OFFICE, Worcester Foundation for Experimental Biology, 222 Maple Avenue, Shrewsbury, Massachusetts 01545, USA**

AN EQUAL OPPORTUNITY/AFFIRMATIVE ACTION EMPLOYER M/F/H



WORCESTER FOUNDATION FOR EXPERIMENTAL BIOLOGY

HEALTH EFFECTS OF CYCLAMATES

This study will be undertaken by the Food and Nutrition Board of the National Research Council on the health effects of cyclamates. We seek candidates for the following positions.

PROJECT DIRECTOR

The incumbent will be responsible for study design, formation of a committee, data analysis, report preparation, and administrative management. Qualifications include a Ph.D. or equivalent in Toxicology, Epidemiology, Nutrition or Biochemistry, at least 5 years of post doctorate research experience with at least 2 years of supervisory duties, a good record of publications, and demonstrated ability to synthesize scientific data, supervise studies and communicate effectively.

STAFF SCIENTIST

This position will involve assisting in all facets of the study including collection and analysis of data and writing of drafts. Applicants should have a Ph.D. or equivalent in Toxicology, Epidemiology, Nutrition or Biochemistry, plus three years experience in one of those fields. A good record of scientific publications and demonstrated ability to synthesize and communicate scientific data is required.

Please send resume immediately to Dr. Sushma Palmer, Executive Director, Food and Nutrition Board.

NATIONAL RESEARCH COUNCIL
2101 Constitution Avenue, N.W.
Washington, D.C. 20418.

An Equal Opportunity Employer.

The National Center for Atmospheric Research located in Boulder, Colorado is recruiting for the following positions. NCAR is operated by the 53 institutions of the University Corporation for Atmospheric Research under the sponsorship of the National Science Foundation.

DIRECTOR OF ADMINISTRATION

This position will serve as the chief administrative and financial officer of NCAR, heading the Administration Division. The Director of Administration plans, develops and provides administrative and financial services, scientific support services, and plant facilities and services. Conducts administrative and business dealings with entities outside NCAR including: the National Science Foundation; universities; federal, local and state government entities; and business and financial organizations. Formulates policies and budgets. Participates on the NCAR Directors' Committee, a senior management body that advises the Director of NCAR on current and future objectives, plans, budget strategies and priorities, policies and procedures. Achieves positive results in meeting the affirmative action program goals for the Division. Requirements for this position include: Documented skill at high level management of diverse activities, with direct management responsibilities for a majority of the major areas of activities which comprise the Administration Division; evidence of effective participation on high-level management teams within a scientific or high-tech organization or in a medium-to-large-sized university; skill in identifying and solving problems in administration that are encountered by organizations like NCAR; evidence of good and consistent judgment, effective communication (orally and written); fair and tough negotiation and decision-making skills; skill in policy formulation, budget management and knowledge of financial and contracting procedures and evidence of ability to support and achieve affirmative action and equal employment opportunity objectives.

DIRECTOR OF BUDGET AND PLANNING

This position will act as chief aide and advisor to the Director of the Center, to design, execute and oversee NCAR's budget and planning process, develop funding strategies and prepare documentation in support of the organization's strategies, and to manage the funding proposal process. Requirements for this position include: documented skill in managing the budget and planning functions in a high-tech organization or in a medium-to-large-sized university; evidence of good and consistent judgment, and effective negotiation and decision-making with diverse staff; documented skills in writing budget justifications and analysis; documented skill in managing several tasks at once, in making priority judgments among them and in working under tight time constraints; evidence of participation on high-level management teams; evidence of familiarity with the Federal budgeting practices and procedures.

Compensation will be commensurate with the responsibilities of the position and the demonstrated skills of the successful candidate.

Prospective candidates may apply by submitting a letter of candidacy and a curriculum vitae to/or obtain additional information from: G.W. Curtis, Director of Personnel/EOP, NATIONAL CENTER FOR ATMOSPHERIC RESEARCH, P.O. Box 3000, Boulder, Colorado 80307. Equal Opportunity/Affirmative Action Employer.

NCAR

POSITIONS OPEN

ASSISTANT TO THE VICE PRESIDENT

Progressive Midwestern organization with an existing biological stain and dye operation is seeking someone to maintain our existing market and to open up new market areas.

We require a person with a technical degree, synthetic experience in stain and dye chemistry, and a desire and/or experience to work in the marketing/technical service field.

Managerial capabilities a definite plus since rapid advancement is possible for the right candidate. Our company offers excellent benefits and a competitive salary. Send résumé listing qualifications, references, and salary expectations to:

Box 32, SCIENCE

ASSOCIATE/ASSISTANT PROFESSOR OF MICROBIOLOGY. This position with tenure/on tenure track is available 1 June 1984. Candidates should have an M.D., Ph.D., D.D.S., or an equivalent degree. Preference will be given to applicants with teaching experience and an established research program in molecular immunology; however, candidates with expertise in related fields also will be considered. Interested persons should send curriculum vitae, brief description of research interests, and the names and telephone numbers of three individuals from whom recommendations may be obtained to: **Dr. C. John Abeyounis, Department of Microbiology, School of Medicine, State University of New York at Buffalo, 203 Sherman Hall, Buffalo, N.Y. 14214.** The University is an Equal Opportunity/Affirmative Action Employer. No person in whatever relations with the University will be subject to discrimination on the basis of age, color, national origin, race, religion, sex, or handicap.

BIOCHEMIST—CELL BIOLOGIST with a Ph.D. degree is desired for a postdoctoral experience in the area of transferrin receptors and iron transport. The specific topics to be explored include mechanisms of iron release from transferrin, iron transport into cells, isolation of iron transport proteins of the plasma membrane and cytosol, and effects of metal chelators on cell growth and DNA synthesis. These studies require familiarity with techniques including methods of protein separation, membrane biochemistry, DNA structural analysis, analytical immunology, and mammalian cell culture.

Interested applicants should send curriculum vitae and letters of recommendation to: **Dr. Jonathan Glass, Department of Medicine, Beth Israel Hospital, Harvard Medical School, 330 Brookline Avenue, Boston, Mass. 02215.** The Beth Israel Hospital is an Equal Opportunity/Affirmative Action Employer.

BIOCHEMISTRY FACULTY POSITION

ASSISTANT PROFESSOR. Tenure-track position available 1 July 1984 with appointment to 30 June 1986. Hamilton College, Biology Department, seeks a biochemist to teach microbiology as well as general biochemistry. Candidate sought preferably with postdoctoral as well as teaching experience, and a demonstrated research accomplishment in some area of cell biology. Applicants should have a strong interest in undergraduate education and expect to maintain an active research program that will involve undergraduates. Applications should be received by 2 March and include curriculum vitae, transcripts, and the names of three references. Send résumé to: **Professor E. C. Putala, Chairman, Biology Department, Hamilton College, Clinton, New York 13323.**

Hamilton College is an Equal Opportunity Employer. Women and members of minority groups are strongly encouraged to apply.

CHAIRPERSON DEPARTMENT OF PHYSIOLOGY

Case Western Reserve University, School of Medicine, invites applications and nominations for the position of chairperson, Department of Physiology. The new chairperson will develop the department's research effort, its graduate and medical student teaching programs, and lead the department's expansion plans. Qualified candidates must have a record of distinguished research contributions and academic achievement.

Applicants and nominations may be sent to: **Dr. Michael Dunn, Chairman, Physiology Search Committee, Case Western Reserve University, Department of Medicine, University Hospitals, Cleveland, Ohio 44106.** Case Western Reserve is an Affirmative Action/Equal Opportunity Employer.

POSITIONS OPEN

BIOLOGIST. Temporary position for 1984–1985 academic year. Master's degree minimum. Teaching responsibilities: physiology, anatomy, general biology. Rank and salary negotiable. Send résumé, transcripts, and three current letters of reference by 26 March 1984 to: **Dr. K. A. Meyer, Biology Department, Mansfield University (MU), Mansfield, Pa. 16933.** Affirmative Action/Equal Opportunity Employer. MU actively solicits the application of Blacks and other minorities.

BIOLOGISTS. Two faculty positions are available August 1984 in the Department of Biology, The Pennsylvania State University Commonwealth Educational System, Schuylkill Campus, Schuylkill Haven, Pennsylvania, position requires teaching introductory courses in general biology and botany; microbiology background desirable. Worthington Scranton Campus, Scranton, Pennsylvania, preferred areas: ecology, genetics or physiology; duties include teaching general biology and introductory courses in one or more of the above subject areas. Candidates must have Ph.D. degree. Continuing scholarly activity, including research and publication, will be required. Salary and rank commensurate with qualifications. Application deadline: 1 March 1984. Separate application materials are required for each position. Send curriculum vitae, transcripts, and three letters of reference to: **Dr. William H. Neff, Box G, 208 Mueller Building, University Park, Pa. 16802.** An Affirmative Action/Equal Opportunity Employer.

CELL BIOLOGIST

Tenure-track position at the assistant professor level for a cell biologist with a strong background in biology and postdoctoral experience. Applicants will be expected to develop a vigorous research program in an area at the forefront of cell biology, to participate in an active Ph.D. training program, and to teach cell biology at the sophomore level. Please forward an application, including curriculum vitae, three references, and a detailed research plan, to: **Cell Biology Search Committee, Biology Department, Wesleyan University, Middletown, Conn. 06457.** Wesleyan University is an Equal Opportunity/Affirmative Action Employer. We encourage applications from minority candidates and women.

LABORATORY OF RADIOBIOLOGY AND ENVIRONMENTAL HEALTH UNIVERSITY OF CALIFORNIA SAN FRANCISCO (UCSF)

Position Description

CELL AND MOLECULAR BIOLOGIST at adjunct assistant professor level. Must have at least 3 years of postdoctoral experience. Publications on cellular studies with radiation and chemical mutagens, indicating expertise in recombinant DNA techniques, DNA transfection methods with mammalian cells, 1- and 2-dimensional gel analyses, virological techniques, and alkaline and neutral elution procedures, are required.

Send curriculum vitae, a statement of research interest, and names and addresses of three references to: **Dr. James E. Cleaver, Chair, Search Committee, Laboratory of Radiobiology and Environmental Health, LR-102, University of California, San Francisco, California 94143.** Applications must be received by 31 March 1984.

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

DEAN OF THE COLLEGE OF DENTISTRY. New York University invites applications and nominations for the position of dean of the College of Dentistry. As leader of the faculty and chief academic and administrative officer of the college, the dean is responsible for the administration of all educational, clinical, and research programs at the college. The successful candidate will be a nationally recognized scholar and leader in dental education and will hold a dental degree. Substantial administrative experience, demonstrated skill in attracting external support, and fiscal management ability are required. Appointment is to be effective 1 September 1984. Nominations and applications should be submitted immediately. Curriculum vitae should be sent to: **NEW YORK UNIVERSITY DENTAL CENTER, Search Committee for Dean of the College of Dentistry, 421 First Avenue, 10th Floor, New York, N.Y. 10010; attention: Associate Dean Edward G. Kaufman.** New York University is an Equal Opportunity/Affirmative Action Employer.

POSITIONS OPEN

CHAIRMAN DEPARTMENT OF ANATOMY

Applications are invited for the position of professor and chairman, Department of Anatomy, Schools of Medicine and Dentistry, University of Alabama in Birmingham. We are seeking candidates with research and teaching experience, leadership qualities, and administrative skills. This department has teaching responsibilities for graduate students in anatomy, medical, dental, and other students. Please submit applications and curriculum vitae to:

**Antonietta D. Hyche
Administrative Officer
University of Alabama School of Medicine
Dean's Office—MEB 306
Birmingham, Alabama 35294**

An Equal Opportunity/Affirmative Action Employer

CHAIRPERSON, DEPARTMENT OF PSYCHIATRY University of California, San Francisco (UCSF)

A search committee has been established at UCSF to recommend the appointment of an individual to serve as professor of psychiatry, chairperson of the Department of Psychiatry, and director of the Langley Porter Psychiatric Institute. Letters of inquiry and curriculum vitae should be directed to: **Lloyd H. Smith, Jr., M.D., Chairman, Department of Medicine, M-997, UCSF, San Francisco, Calif. 94143.** UCSF is an Affirmative Action/Equal Opportunity Employer. Minorities and women are encouraged to apply.

CHEMIST/BIOCHEMIST—OBERLIN COLLEGE. Assistant professor. One-year replacement beginning September 1984. Ph.D. Teach biochemistry one semester, general chemistry the other, and supervise undergraduate research. To ensure consideration, send résumé, transcripts, and research plans, and have three letters of recommendation sent to: **Martin Ackermann, Chemistry Department, Oberlin College, Oberlin, Ohio 44074,** by 21 March. An Affirmative Action/Equal Opportunity Employer.

The Department of Parasitology and Laboratory Practice at the School of Public Health anticipates the need for a nontenure-track **CLINICAL ASSISTANT PROFESSOR.** Applicants must have a doctorate, postdoctoral experience, and the demonstrated potential to develop and obtain funding for service-oriented programs in community public health parasitology. Individuals with prior experience in the parasitological and other health problems of migrant workers or similar community groups will be given preference. Applicants should send curriculum vitae, a one- to two-page statement of research interests, two letters of recommendation, and any relevant publications to: **Chairman, Search Committee, Department of Parasitology and Laboratory Practice, 360 Rosenau Hall 21H, University of North Carolina, Chapel Hill, N.C. 27514,** by 1 April 1984. The University of North Carolina is an Equal Opportunity/Affirmative Action Employer.

DIRECTOR, Harvard Medical School, Office of Academic Careers. Works with Faculty Advisory Committee, deans, and department heads to encourage and facilitate appointment and advancement of women and minorities in academic positions. Services of office available to all junior faculty members and trainees interested in academic careers in medicine. Requires graduate degree or equivalent experience. Send curriculum vitae by 1 March 1984 to: **Dr. Eleanor Shore, Associate Dean for Faculty Affairs, Harvard Medical School, 25 Shattuck Street, Boston, Mass. 02115.** An Equal Opportunity/Affirmative Action Employer.

FACULTY POSITION, IMMUNOLOGIST

Applications are being sought for a tenure-track appointment at the assistant professor level in the Department of Microbiology, School of Medicine, Texas Tech University Health Sciences Center. Applicants must hold a Ph.D. degree or the equivalent and have postdoctoral experience and research interests in immunology. The individual will be expected to participate in the teaching program for sophomore medical students, train graduate students, and maintain a strong, independent research program. We anticipate filling the position by fall 1984. Please send curriculum vitae and the names of three references by 1 June 1984 to: **Dr. David J. Hentges, Chairman, Department of Microbiology, Texas Tech University Health Sciences Center, Lubbock, Texas 79430.** An Affirmative Action/Equal Opportunity Employer.

DIRECTOR, BIOTECHNOLOGY CENTER

The Ohio State University

The Ohio State University invites applications and nominations for the position of Director of the University's interdisciplinary Biotechnology Center. The candidate should have an earned doctorate and an outstanding record of achievement in an area of Biotechnology such as with microorganisms (including viruses), plants, animals, enzymes, nucleic acid and protein biochemistry, or biochemical engineering, as evidenced by publications, receipt of research grants and activities in national and international scientific organizations. The candidate should also have a demonstrated ability and willingness to interact with other scientists in a University setting.

The Director will provide leadership for and will coordinate the development of interdisciplinary programs in Biotechnology, conduct an active research program in a particular area of interest, and will draw on resources of existing programs in the Colleges of Agriculture, Biological Sciences, Mathematical and Physical Sciences (Chemistry), Engineering, Medicine, Veterinary Medicine and Pharmacy. The Director will have resources to appoint several additional faculty members for the Center beyond those appointments in Biotechnology being made by individual departments.

The Director will provide active leadership in promotion, direction and support of research and instruction activities of the Center, enhance academic excellence, maintain a high level of morale among its faculty, and encourage a spirit of learning among its students.

The Director is responsible for the development and advancement of the research, instruction and service activities of the Biotechnology program, for administering, where appropriate in coordination with other Directors or Deans, the personnel affairs, staffing patterns, budgetary projections and allocations of the Center. The Director reports to the Provost who is the chief academic officer of the University.

The position is available July 1, 1984, or at an earlier date. Salary is highly competitive and commensurate with background and experience.

Applications and nominations should be addressed to Dr. Patrick R. Dugan, Chairman, Search Committee for a Director of Biotechnology Center, The Ohio State University, 203 Bricker Hall, 190 North Oval Mall, Columbus, Ohio 43210. Deadline for applications and nominations is March 1, 1984.

*The Ohio State University is an Affirmative Action/
Equal Employment Opportunity Employer*

CARBOHYDRATE/ PROTEIN CHEMIST

The Biopolymer Chemistry unit of The Upjohn Company's Biotechnology Research Program seeks a BS/MS chemist or biochemist with expertise in carbohydrate analysis of glycoproteins. The successful candidate must be proficient in sequence and linkage position determination of sugar residues and have protein purification experience. This individual will be part of an integral team working on discovery and characterization of novel proteinaceous compounds which may have therapeutic value.

Kalamazoo is a medium-sized southwestern Michigan community with immediate access to a mix of excellent cultural, educational, and recreational pursuits, including numerous lakes and a four-season climate. Upjohn offers an excellent salary, commensurate with experience and an outstanding benefits program.

For confidential consideration, please call from outside of Michigan, toll free, 1/800-253-8600, extension 3-6767; or call from Michigan, collect, 616/323-6767 to request an application. Please refer to ad number 15668-B when calling.

Upjohn

An Equal Opportunity Employer M/F

DIVISION OF RESEARCH RESOURCES NATIONAL INSTITUTES OF HEALTH PUBLIC HEALTH SERVICE DEPARTMENT OF HEALTH AND HUMAN SERVICES

The National Institutes of Health (NIH), Division of Research Resources (DRR) invites nominations and applications for the position of Chief, General Clinical Research Centers Program Branch (GCRCPB).

The position is a Civil Service position established as Medical Officer, GM-602-15 with a salary range from \$53,407 to \$67,969 (currently limited to \$66,000 per annum. Physicians may also be eligible for Physicians' Comparability Pay up to \$10,000 per year.)

The GCRCPB Branch is responsible for administration of a grant-in-aid program currently supporting 74 clinical research centers with 600 research beds, which serve as institutional research resources for inquiry, examination, evaluation, and training in an effort to define the basic processes of human disease and its treatment. The Chief, General Clinical Research Centers Program Branch, is responsible for the program planning, development, evaluation, and management of the GCRCPB which utilizes resource grants and contracts to provide high quality clinical research environments throughout the nation.

Candidates must meet the minimum educational requirements for Medical Officer, GM-602-15 (or equivalent combination of experience and training as defined

by the U.S. Office of Personnel Management Handbook X-118 Qualification Standards for Positions under the General Schedule), plus at least five years of professional experience in research program administration in which professional judgements were exercised through the application of scientific knowledge of health and clinical research. In addition, the incumbent must have managerial experience, and knowledge of research programs in one or more areas related to clinical research.

Further information about the position and qualification requirements may be obtained by contacting Ms. Pathenia A. Wiggins at (301) 496-1524. Applications (Personal Qualifications Statement, SF-171) accompanied by current curriculum vitae and bibliography should be submitted to Ms. Wiggins at the DRR Personnel Office, National Institutes of Health, Building 31, Room 5B06, 9000 Rockville Pike, Bethesda, Maryland 20205. Applications should be postmarked no later than February 29, 1984.

Applications from women and minority group members are especially solicited.

THE NATIONAL INSTITUTES OF HEALTH IS AN EQUAL OPPORTUNITY EMPLOYER.

POSITIONS OPEN

University of Pennsylvania School of Medicine DEPARTMENT OF MICROBIOLOGY FACULTY POSITION

Applications are invited for a tenure-track position at the level of assistant professor to commence as early as January 1985. Consideration will also be given to individuals at the associate professor level. Applicants should have an established research interest in bacterial molecular biology specializing in prokaryotic cell biology, genetics, or basic aspects of pathogenesis. Potential to obtain funding as an independent investigator is important, together with an active commitment to teaching medical and graduate students.

The successful integration of all components of the University of Pennsylvania on a single urban campus offers a rich intellectual environment and many opportunities for collaborative and interdisciplinary research. Applicants should have a doctoral degree and at least 2 years of postdoctoral experience. Please send (i) curriculum vitae, (ii) names of at least three references, (iii) reprints of three papers, and (iv) a short account of professional background and future plans to: **Microbiology Search Committee, Department of Microbiology, School of Medicine, University of Pennsylvania, Philadelphia, Pa. 19104.** *Equal Opportunity/Affirmative Action Employer.*

Full-time **FACULTY MEMBER** for established Department of Pathology. Primary responsibility for developing and managing a computerized laboratory data system. Applicant must also participate in teaching and develop an independent research program. Rank, title, and salary competitive and commensurate with credentials. Requires M.D. degree and Board-certification in anatomic and clinical pathology and must be eligible for California licensure. Substantial experience needed in computer laboratory systems. Position open until 30 April 1984. Send curriculum vitae and five references to: **Murray B. Gardner, M.D., Chair, Department of Pathology, Room 3453, MSI-A, University of California, Davis, California 95616.**

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

FLOW CYTOMETRY POSITION

Case Western Reserve University is seeking a person capable of managing and operating a new, research-oriented, flow cytometry instrumentation facility. Applicants should have M.S. or Ph.D. degree and previous experience in flow cytometry. Depending on the interests and career goals of the applicant, the position will provide an opportunity for both independent and collaborative research equivalent to a postdoctoral fellowship. Salary will be commensurate with qualifications and experience. Send curriculum vitae and letters of reference to: **Dr. Dean G. Hafeman, Department of Pharmacology, School of Medicine, Case Western Reserve University, Cleveland, Ohio 44106.**

IMMUNOLOGIST

Ph.D. immunologist to direct in vitro RIA laboratory and participate in active monoclonal antibody research program. Written inquiry, to include curriculum vitae, to: **W. H. Beierwaltes, Director, Nuclear Medicine Division, Box 021, Room W5614, University of Michigan Hospitals, Ann Arbor, Mich. 48109.** *A nondiscriminatory, Affirmative Action Employer.*

INSECT NEUROBIOLOGIST. Full-time, tenure-track appointment at the rank of assistant professor. We will seek candidates having research interests in areas such as integrative functions of the insect CNS, neuroendocrine mechanisms, neurogenetics, neurodevelopment, neuron physiology, and pharmacology. Appointee will teach annual undergraduate course in general insect physiology and conduct graduate seminars. Applicants should have a Ph.D. and should demonstrate outstanding potential for research and teaching. Applications should include the following: (i) curriculum vitae, academic transcripts, and evidence of teaching skills and experience; (ii) bibliography and selected reprints or manuscripts; (iii) statement of research objectives and approaches proposed; and (iv) names and addresses of at least three people who can provide recommendations. Submit all materials by 1 April 1984 to: **E. S. Sylvester, Chair, Department of Entomological Sciences, 201 Wellman Hall, University of California, Berkeley, Calif. 94720.** *University of California is an Equal Opportunity/Affirmative Action Employer.*

POSITIONS OPEN

CURATORIAL POSITION IN INVERTEBRATE ZOOLOGY

Applications are solicited for a curatorial position in invertebrates at the Natural History Museum of Los Angeles County. Responsibilities consist of the conduct of collection-oriented research on the systematics of marine crustaceans or annelids, active participation in collection management, and participation in public programs of the museum. Applicants must possess a doctorate or provide certification that it will be granted within a short time. Position will be filled at the level of the best-qualified candidate. Starting curatorial salaries: assistant, \$20,176; associate, \$23,794; full, \$30,276. Applications, including names of three references, should be sent before 15 March 1984 to: **Dr. Daniel M. Cohen, Natural History Museum of Los Angeles County, 900 Exposition Boulevard, Los Angeles, Calif. 90007; telephone: 213-744-3367.** *An Equal Opportunity Employer.*

GENETIC ANALYSIS OF HORMONE ACTION

POSTDOCTORAL POSITION, available immediately, to study hormone action, using mutant yeast and mammalian cells, and a human genetic disease, pseudohypoparathyroidism. Goals include purifying and characterizing protein components of adenylate cyclase in vertebrate and yeast cells, as well as homologous proteins of retinal rod outer segments, and isolating and characterizing the genes that encode these proteins. Candidates should have expertise in isolation and characterization of proteins. Salary between \$16,000 and \$22,000, depending upon past experience. Send letter describing interests, plus curriculum vitae and names and addresses of three referees, to: **Henry R. Bourne, M.D., 1210 Medical Sciences Building, University of California, San Francisco, Calif. 94143.** *The University of California is an Equal Opportunity/Affirmative Action Employer. Women and minorities are encouraged to apply.*

TRUDEAU INSTITUTE

Applications are invited for an **IMMUNOBIOLOGIST** to develop an independent research program related to immunity to cancer or infectious diseases. Appointment may be made at either junior or senior faculty rank. Applicants should have at least 3 years of postdoctoral experience and provide visible evidence that they already have been scientifically productive. Funds are available to support the successful applicant for a minimum of 3 years. The Trudeau Institute is a not-for-profit pure research institute situated on the shore of Saranac Lake, N.Y., 8 miles from Lake Placid, N.Y. Send curriculum vitae and names of three references to: **Dr. Robert J. North, Director, Trudeau Institute, Inc., P.O. Box 59, Saranac Lake, N.Y. 12983.** *An Equal Opportunity Employer.*

TRUDEAU INSTITUTE

POSTDOCTORAL FELLOW IN IMMUNOBIOLOGY. A position exists for a postdoctoral fellow to study the immunobiology of the tumor-host relationship. Current research is directed at investigating T cell-mediated, down regulation of the anti-tumor immune response. Applicants should have a knowledge of immunology.

The Trudeau Institute is a not-for-profit basic research institute situated on the shore of Saranac Lake, 8 miles from Lake Placid, N.Y. Pay scale is \$15,500 to \$17,500 with generous fringe benefits. Campus housing is available.

Send curriculum vitae and names of three references to: **Dr. Robert J. North, Director, Trudeau Institute, Inc., P.O. Box 59, Saranac Lake, N.Y. 12983.** *An Equal Opportunity Employer.*

TRUDEAU INSTITUTE

POSTDOCTORAL POSITION is available to study mechanisms of host resistance to chronic mycobacterial lung infections. Candidates should have a strong background in cellular immunology of molecular biology. Experience with hybridoma technology would be helpful but not essential.

The Trudeau Institute is a not-for-profit basic research institute situated on the shore of Saranac Lake, 8 miles from Lake Placid, N.Y. Pay scale is \$15,500 to \$17,500 with generous fringe benefits. Campus housing is available.

Send curriculum vitae and names of three references to: **Dr. Frank M. Collins, Trudeau Institute, Inc., P.O. Box 59, Saranac Lake, N.Y. 12983.** *An Equal Opportunity Employer.*

POSITIONS OPEN

IMMUNOLOGY

A Challenging Postdoctoral Opportunity within Du Pont's expanding Life Science Research Program

This is a fine opportunity for a visiting scientist in immunology at our Central Research and Development Department in Glenolden, Pennsylvania. The primary assignments will be to probe inducible genes for lymphokines and lymphokine receptors and to study post-binding events of lymphokine-receptor interactions.

A background in recombinant DNA technology or molecular biology is essential. Familiarity with techniques in immunology and cell culture would be useful.

We offer a competitive salary and outstanding laboratory facilities in our highly professional environment. Candidates should send their curriculum vitae and a short statement of interest and experience, to: **Dr. S. T. Toy, Room X40328S, DU PONT COMPANY, Wilmington, Del. 19898.**

DU PONT

An Equal Opportunity Employer, M/F

INSTRUCTOR DEPARTMENT OF BOTANY

This nontenure-track position requires an individual with a M.S. degree in plant science with good academic strength in several botanical subdisciplines such as physiology, pathology, ecology, morphology, and so forth. Responsibilities include laboratory preparation and instruction in several second-level botany courses and some lecture instruction in general botany. This is a **teaching** position with no research responsibilities. Application deadline is 1 March 1984 or until a suitable candidate is selected, whichever is later. Applicants should submit a current résumé, including transcripts, a statement of career objectives, a list of teaching experiences, and three letters of reference, to: **Dr. G. W. Patterson, Department of Botany, University of Maryland, College Park, Md. 20742.** *An Equal Opportunity/Affirmative Action Employer.*

INVERTEBRATE ZOOLOGIST—The Biology Department of Hobart and William Smith Colleges, an undergraduate institution located on Seneca Lake in upstate New York, is searching for an invertebrate zoologist to fill a tenure-track position at the assistant professor level, effective 1 July 1984. Teaching responsibilities include invertebrate zoology, introductory biology, and an advanced course in the area of specialty, as well as participation in the colleges' general curriculum. In addition, the candidate must carry on a research program that is amenable to the participation of junior and senior biology majors. Applicants should send a complete résumé and three letters of recommendation by 9 March 1984 to: **Dr. Joel T. Kerlan, Department of Biology, Hobart and William Smith Colleges, Geneva, New York 14456.**

MICROBIOLOGIST, full time, tenure track. National College of Chiropractic has a teaching position in medical microbiology for a Ph.D. Salary range: \$18,500 to \$24,000 per calendar year; rank and salary dependent upon qualifications. Send résumé and three letters of recommendation to: **Dr. C. C. Kuehner, Chairman, Department of Microbiology, National College of Chiropractic, 200 East Roosevelt Road, Lombard, Ill. 60148.**

MICROBIOLOGIST

Research scientist. We are seeking a senior research scientist with a Ph.D. degree in microbiology or molecular biology and with at least 3 years of postdoctoral experience in the manipulation of genes in *Bacillus subtilis*. A working knowledge of *Bacillus subtilis* genetics, modern molecular biological techniques, and cellular immunology is also required. The applicant must have experience in independent research projects and novel approaches to plasmid construction and manipulation in order to contribute original ideas and directions to the progress of current projects and the identification of new research areas of potential commercial interests of the company. The applicant must be a U.S. citizen or permanent resident. Salary: \$35,000 per year. Job in San Diego. Send résumé to: **Syntro Corporation, 11095 Torreyana Road, San Diego, Calif. 92121.**



Harvard University Graduate School of Education

Applications invited for full-time, September 1984, junior faculty position in **Quantitative Social Science Methodology**.

Qualifications: recent doctorate in Statistics, Measurement, or Social Science discipline with methodology concentration; background in statistical theory, research design, measurement, and/or data analysis essential; evidence of teaching and interest in research on education, its organizations, and/or child development desirable.

Terms: 3-5 year renewable appointment as Assistant Professor; responsibilities: teaching intro and advanced quantitative methods; methodological consultation with students across the School; advising students in research programs on Measurement, Statistics, and Evaluation; engaging in research.

Application Deadline: March 15, 1984; application letter, 3 referees, curriculum vitae, graduate school transcript to:

Professor Anthony S. Bryk
Chairperson, Search Committee
Harvard Graduate School of Education
13 Appian Way
Cambridge, MA 02138

An equal opportunity/affirmative action employer.

HARVARD UNIVERSITY

Vancouver General Hospital

Ph.D. Immunologist Vancouver, B.C. Canada

A full-time position is available in the Immunology Laboratory, Division of Hematopathology, Vancouver General Hospital. Applicants must hold a Ph.D. in Immunology or a related field and two years post doctoral research training and experience, preferably in cell, transplantation or tumor immunology and tissue typing and monoclonal antibody technology.

The duties will include test development and quality assurance and active participation in research and education programs. An appointment at an appropriate rank in the Department of Pathology at the University of British Columbia is available.

In accordance with Canadian Immigration regulations applications from Canadian citizens and landed immigrants will be considered first.

Send curriculum vitae, research synopsis and the names of three referees, in confidence, to:

Dr. G. R. Gray
Head
Division of Hematopathology
Department of Pathology
Vancouver General Hospital
855 West 12th Avenue
Vancouver, B.C. Canada V5Z 1M9



RESEARCH HEAD

Drug Delivery Systems Research

The Upjohn Company, a worldwide leader in pharmaceutical research, is seeking applicants for the position of Research Head of the newly formed Drug Delivery Systems Research unit within the Pharmaceutical Research and Development division.

The successful candidate will lead an expanding interdisciplinary team of professionals dedicated to the elucidation of innovative drug delivery systems. The Unit will interact with other scientists responsible for development of specific human and veterinary products. Responsibilities will include the development of strategies for the discovery of future drug delivery systems, and the management of associated research activities. The successful candidate will be responsible for developing an effective program in drug delivery basic research and will assume responsibility for the evaluation, implementation, and development of collaborative research programs with academic institutions and other appropriate sources.

In addition to a Ph.D. in the biological, chemical, or pharmaceutical sciences, applicants must possess an outstanding publication record and have a minimum of three years' research management experience. Good leadership and communication skills, and the ability to relate to people at various levels, are essential.

Upjohn offers a stimulating research environment, opportunity for career growth, competitive salary and benefits, and relocation assistance.

Kalamazoo is a medium-sized Southwestern Michigan community with immediate access to a mix of excellent cultural, educational, and recreational pursuits, including numerous lakes and a four-season climate.

For confidential consideration, please call from outside Michigan toll-free 1-800-253-8600, ext. 3-6767, or inside Michigan collect (616)323-6767 to request an employment application be sent to you immediately. Please refer to Ad Number 15819-J when calling.

Upjohn

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An Equal Opportunity Employer M/F

POSITIONS OPEN

MICROBIAL PHYSIOLOGY. Tenure-track position in microbial physiology at the assistant professor level and available September 1984. Ph.D. required with postdoctoral experience desirable. Applicant must have a strong commitment to excellence in teaching and research and will be expected to develop a graduate course in appropriate area of expertise. Undergraduate teaching expected. Send curriculum vitae, transcripts, reprints, a brief statement of research interests, and three letters of recommendation by 15 March 1984 to: **Dr. Lewis Coons, Chairman, Search Committee, Department of Biology, Memphis State University, Memphis, Tenn. 38152.** *Memphis State is an Equal Opportunity University.*

MICROBIOLOGIST/ELECTRON MICROSCOPIST. Applications are invited in our search for a tenure-track position at the assistant professor level. Candidates must have at least 2 years of postdoctoral training and have demonstrated a potential for excellence in independent research. Research interests should be in the area of medical microbiology with expertise in electron microscopy and molecular biology. Teaching responsibility will include participation in team-taught courses for both medical and graduate students. Interested individuals should send curriculum vitae, brief description of research interests and long-term goals, and three letters of recommendation by 15 March 1984 to: **Dr. Page Morahan, Department of Microbiology and Immunology, THE MEDICAL COLLEGE OF PENNSYLVANIA, 3300 Henry Avenue, Philadelphia, Pa. 19129.** *An Equal Opportunity Employer, M/F.*

UNIVERSITY OF MANITOBA DIVISION OF HUMAN GENETICS MOLECULAR GENETICIST

The Division of Human Genetics of the Faculty of Medicine invites applications for a full-time assistant professor to commence by 1 July 1984. Preference will be given to individuals with demonstrated research experience in molecular genetics using recombinant DNA technology on mammalian systems, particularly in the areas of genome organization, control of gene expression, or gene mapping. A Ph.D., postdoctoral training, and potential for an independent career as an experimental scientist are prerequisites.

An interest in developing expertise and a desire to be an effective educator are desirable qualities. *The position is open to both women and men. Both women and men are encouraged to apply. In accordance with Canadian immigration requirements, priority will be given to Canadian citizens and permanent residents of Canada.*

For full consideration, send a concise description of projected research goals and interests, names of at least three individuals for letters of reference, and curriculum vitae to: **Dr. P. J. McAlpine, Division of Human Genetics, Faculty of Medicine, University of Manitoba, 770 Bannatyne Avenue, Winnipeg, Manitoba, Canada R3E 0W3.** Deadline for receipt of applications: 1 March 1984.

The Department of Pediatrics, Temple University School of Medicine, is seeking an M.D. or Ph.D. **MOLECULAR GENETICIST** at the assistant professor level with recombinant DNA capability to conduct research focusing on human chromosome structure and/or gene expression and regulation. To collaborate with active research group in medical cytogenetics and clinical genetics. Reply to: **Hope H. Punnett, Ph.D., St. Christopher's Hospital for Children, 2600 North Lawrence Street, Philadelphia, Pa. 19133.** *An Equal Opportunity Employer.*

NEUROENDOCRINOLOGIST (Ph.D.)—Assistant professor in residence. To direct laboratory studies of neuroendocrine responses in alcoholic and psychiatric patients, to collaborate in animal biobehavioral studies on the relationship between neuroendocrine function and behavior, to develop some independent work in neuroendocrinology. Please send curriculum vitae to: **Dr. Roger E. Meyer, University of Connecticut Health Center, Department of Psychiatry, Farmington, Connecticut 06032.** *An Affirmative Action/Equal Opportunity Employer, M/W/H.*

NUTRITIONIST, Ph.D.—Must have completed postdoctoral training. Wanted for research associate position at the University of Nebraska Medical Center. Interested applicants should submit curriculum vitae to: **Jon A. Vanderhoof, M.D., Nutrition Program Director, University of Nebraska Medical Center, Department of Pediatrics, 42nd and Dewey Avenue, Omaha, Neb. 68105.** *The University of Nebraska is an Equal Opportunity/Affirmative Action Employer.*

POSITIONS OPEN

POSITION IN MOLECULAR GENETICS

The Department of Immunology/Microbiology is searching for an established or promising investigator at the associate or full professor level who would bring a program in eukaryotic molecular genetics to Rush Medical College. We hope to attract a person strongly committed to investigation and teaching, who will maintain a program at a level of national recognition, in a department already strongly committed to research in inflammation, host defense and molecular virology in the basic and clinical perspectives. Ample space and equipment as well as initial funding for technical help have been committed, and the new appointee would play a leading role in the hiring of an additional faculty member in the same field. Inquiries should be directed by 1 April 1984 to:

**Henry Gewurz, Chairman
Department of Immunology/Microbiology
Rush Medical College
1753 West Congress Parkway
Chicago, Ill. 60612**

Rush is an Equal Opportunity/Affirmative Action Employer.

NEUROBIOLOGY POSTDOCTORAL RESEARCH ASSOCIATE

Position available for studies on the role of cell surface components in neural development with emphasis on cell-cell and cell-extracellular matrix interactions. Current studies utilize cell culture systems and monoclonal antibody techniques to analyze neuronal surface components and their functions [see *Dev. Biol.* 96, 304 (1983) and *Dev. Brain Res.* 7, 327 (1983)]. Experience in an area of cell and developmental neurobiology or neuroanatomy helpful. Position available early to mid-1984 for up to 3 years at an initial salary of \$16,000 per year. Send letter, curriculum vitae, and names of three references to: **Dr. Richard Akeson, Division of Cell Biology, Room 616 IDR, Children's Hospital Medical Center, Cincinnati, Ohio 45229.** *Equal Opportunity/Affirmative Action Employer.*

ORNITHOLOGY/WILDLIFE BIOLOGY. Tenure-track position, assistant professor (target level) beginning fall 1984. Ph.D. required; university experience desirable. Responsibilities include instruction of ornithology, development of a course in wildlife management, an active research program, and participation in service courses offered through the department. Send curriculum vitae, undergraduate and graduate transcripts, three letters of reference, and statements of teaching philosophy and research interest(s) to: **Dr. R. G. Johnson, Chairperson, Department of Biology, Southeast Missouri State University, Cape Girardeau, Mo. 63701,** by 16 March 1984. *An Equal Opportunity/Affirmative Action Employer, M/F.*

PLANT MOLECULAR BIOLOGIST: Assistant professor, tenure track, beginning on or after 15 August 1984, contingent on funding approval. To develop a research program in plant gene structure and function and teach graduate and undergraduate courses. Applicants should have a Ph.D. in an appropriate field and postdoctoral experience. Salary: \$22,000 to \$26,000 for 9 months, depending upon experience. Send curriculum vitae, statement of research goals, and reprints and have three letters of recommendation sent by 15 March 1984 to: **Dr. Robert Weaver, Division of Biological Sciences, University of Kansas, Lawrence, Kans. 66045.** *Affirmative Action/Equal Opportunity Employer.*

SEVERAL POSTDOCTORAL POSITIONS available during 1984 for research into mammalian appendage, organ, and tissue regeneration at the: **Developmental Biology Center, University of California, Irvine, Calif. 92717.** Ph.D. required, preferably in cell, molecular, or developmental biology; neurobiology; or genetics.

- 1) For work on the nervous system in fetal, neonatal, and adult mammals, contact: **Ronald Meyer** (address above) regarding the optic system and **Herb Killackey** (Department of Psychobiology, University of California, Irvine) regarding the somatosensory system of limbs.
- 2) For work on appendage, organ, or tissue regeneration in fetal, neonatal, and adult mammals, contact: **Susan Bryant** (address above).

Submit résumé, brief description of research interests and experience, and names of three individuals qualified to evaluate your work. *The University of California is an Equal Opportunity/Affirmative Action Employer.*

POSITIONS OPEN

PHARMACOLOGIST. It is anticipated that a tenure-track position will be available 1 July 1984 in the Department of Pharmacology, University of South Carolina School of Medicine. Rank and salary are open. Ph.D. and/or M.D. degree and postdoctoral experience required. The successful candidate will be expected to develop an independent research program which merits extramural support and teach medical/graduate students. Preference will be given to individuals whose research interests are compatible with current faculty—that is, metabolic control mechanisms and biochemical mechanisms of drug action. Individuals should submit curriculum vitae, list of publications, statement of professional goals, and the names of three references to: **Dr. D. O. Allen, Chairman, Department of Pharmacology, School of Medicine, University of South Carolina, Columbia, S.C. 29208.** *The University of South Carolina is an Equal Opportunity/Affirmative Action Employer.*

PHYSIOLOGIST: Applications are being accepted for a tenure-track position in the discipline of physiology, available 1 July 1984. Applicants should possess a Ph.D. degree and the ability to teach cardiovascular, respiratory, and renal physiology. Salary is competitive and commensurate with experience. Send curriculum vitae to: **Dr. Lee Grunden, Chairman, Physiology Search Committee, College of Osteopathic Medicine of the Pacific, College Plaza, Pomona, Calif. 91766-1889.**

Affirmative Action/Equal Opportunity Employer

PHYSIOLOGIST

Providence Hospital, a major suburban health care institution which is part of a multihospital system, is offering a challenging opportunity for an experienced physiologist.

Responsibilities include assisting in the teaching of basic sciences to physicians, supervising resident research programs, management of the Animal Laboratory, and budgetary and management activities of the Physiology Department.

Qualified candidates will have a Ph.D. in physiology and 3 to 5 years of postdoctoral experience teaching and conducting their own research. Management skills and familiarity with budget procedures essential.

Providence Hospital provides competitive salary compensation, outstanding benefit package, and an excellent environment for professional career growth. To apply, please submit a résumé with salary history and requirements, in confidence, to:



**Providence Hospital
Fisher Center
Employment Office
22500 Providence Drive
Southfield, Mich. 48075**

TWO POSTDOCTORAL POSITIONS open for recent Ph.D.'s. One in **ATMOSPHERIC CHEMISTRY** studying processes affecting rain chemistry in remote areas and the other in **GEOCHEMISTRY** studying influence of weathering and ion exchange on stream composition. Send curriculum vitae and references to: **Dr. James N. Galloway, Department of Environmental Sciences, Clark Hall, University of Virginia, Charlottesville, Virginia 22903.** *The University of Virginia is an Equal Opportunity/Affirmative Action Employer.*

THREE POSTDOCTORAL POSITIONS are available at the Brain Tumor Research Center, University of California, San Francisco.

- 1) Cell biologist or biochemist to study specificity of peptide and peptidic drug transport into mammalian cells in vitro (**Dr. Victor A. Levin**).
- 2) Cell biologist or molecular biologist to study polyamine-DNA interactions and the effects of polyamine depletion on subsequent cellular sensitivity to anticancer modalities (**Dr. Laurence J. Marton**).
- 3) Pharmacologist or molecular biologist to study nitrosourea-radiation interactions in vitro (**Dr. Dennis F. Deen**).

Send letters of inquiry or curriculum vitae and three letters of reference to the appropriate person at: **Brain Tumor Research Center, 783 Health Sciences West, University of California, San Francisco, California 94143.** *The University of California is an Equal Opportunity/Affirmative Action Employer. Women and minorities are encouraged to apply.*

SEARCHING FOR EXCELLENCE?

Molecular Genetics, Inc., a world leader in the biotechnology industry, is looking for talented individuals to join us in:

PROTEIN CHEMISTRY

Postdoctoral fellowships and technical positions at the B.S. and M.S. level are available in our Protein Chemistry group to work with Dr. James L'Italien. The principal areas of focus for the group are protein microsequencing and micromethods of protein purification. The laboratory offers extensive experience in these techniques and is equipped with state-of-the-art instrumentation. Candidates should have at least two years experience in one or more of the following areas: protein purification, HPLC, protein sequencing.

BIOCHEMICAL ENGINEERING

Positions are available for Biochemical Engineers with 2 to 5 years of experience. Expertise with protein separation and purification desirable.

PLANT MOLECULAR BIOLOGY

We seek a Plant Molecular Biologist with expertise in recombinant DNA technology to join our established Plant Sciences Division. Preference will be given to applicants with a Ph.D. degree in plant molecular biology, plant genetics, or a related area, such as yeast genetics or yeast molecular biology, and one to three years of postdoctoral experience. However, candidates with extensive experience in recombinant DNA technology and a commitment to the development of plant host/vector systems are encouraged to apply.

INFORMATION SYSTEMS

We currently seek a programmer analyst with a B.S./B.A. or M.S./M.A. in Computer Science or equivalent. Knowledge of PASCAL, PL1, or C, within operating systems such as UNIX, TSO, VAX/VMS, NOS, CP/M, RSX, or UCSD-p, is required. Familiarity with microprocessor (Z-80, 8088/8086 or M68000 equivalents) and minicomputer (DEC VAX/PDP, HP3000, Systems 36/38 equivalents) environments is preferred. A background in the biochemical sciences is valuable. The selected individual will participate in future hardware/software acquisitions and will be responsible for designing, coding, testing, implementing and supporting programs for both scientific and business applications.

If interested in one of our opportunities, send, in confidence, a resume, list of references and letter indicating the position of interest to:



Molecular Genetics Inc

10320 Bren Road East
Minnetonka, MN 55343

An Equal Opportunity Employer

INTERNATIONAL CROPS RESEARCH INSTITUTE FOR THE SEMI-ARID TROPICS (ICRISAT)



ICRISAT

near Hyderabad, India,
needs the following
personnel

PULSE AGRONOMIST

(To be based at ICRISAT Center, Hyderabad, India)

To lead programs of research involving both agronomy and microbiology in relation to N fixation, and to work on chickpea and pigeonpea in a multidisciplinary program also involving plant breeding, entomology, pathology, and biochemistry. The agronomic work will include studies on varietal response to chemical inputs, response to environmental factors controlling yield such as photoperiod, light, and temperature, and studies on limiting factors including drought, high salt concentration, and high soil pH. The microbiology program will emphasize the development of suitable strains of rhizobia for inoculants and selection criteria for legume host genotypes for breeding programs. Research on legume inoculant production will also be an important activity. **Qualifications:** Ph.D. in agronomy, physiology, or microbiology. Significant research experience in crop production and in relation to N uptake or fixation by legumes. Experience in organizing, guiding, and coordinating research and in working with a team of research scientists. A minimum of 10 years experience is desirable.

AGRONOMIST—FARMING SYSTEMS RESEARCH PROGRAM (To be based at ICRISAT Center, Hyderabad, India)

To conduct research both at the research center and at selected on-farm locations. Specific responsibility will be to lead a research team in the development and evaluation of cropping system components of farming systems technologies, and working in close collaboration with principal scientists in the farming systems and crop improvement programs. The objectives of ICRISAT's Farming Systems Research Program are to identify more productive farming systems for defined agroclimatic regions. The technologies developed must recognize the resource base of farmers in the rain-fed seasonally dry semi-arid tropics, and meet the special needs of small farm holders of limited means. **Qualifications:** Ph.D. in agronomy (crop production, soil management) or crop physiology. Several years of relevant experience and a solid record of scientific achievement with evidence of a systematic approach to the solution of agronomic problems are essential. Should be able to work with scientists from other disciplines to identify and solve crop production problems and with scientists from a wide range of cultures and professional levels in an international team of scientists. Research and/or teaching/extension experience in a developing country is desirable.

CROPPING SYSTEMS AGRONOMIST (At ICRISAT Sahelian Center, Niamey, Niger)

To work in close coordination with other farming systems research staff in West Africa and at the ICRISAT headquarters. Will work in a team whose work is focused on evolving, evaluating, and testing more productive farming systems, and on the development of appropriate production technology to overcome constraints identified through on-farm testing of alternative farming systems. The objectives of ICRISAT's Farming Systems Research Program at the Sahelian Center are to identify more productive millet- and groundnut-based cropping systems for sub-Saharan agroclimatic region. The technologies developed must recognize the resource base of the small farmers and be acceptable to small farm holders of limited means. Research conducted by the agronomist will involve both on-station and on-farm research. For the latter, farmers participate in testing new soil management and cropping systems. **Qualifications:** Ph.D. in agronomy (crop production, soil management) or crop physiology with relevant field experience in crop production. Several years of postdoctoral experience working with scientists of other disciplines on research to identify and solve crop production problems is required; applicant also must be able to work with scientists from a range of cultures and professional levels in an international team of scientists. Agronomic research and/or teaching/extension experience in a developing country and a working knowledge of French desirable.

Salary is at principal staff level, according to qualifications and experience, with attractive fringe benefits.

Send résumé and names of three referees by 15 March 1984 to:
Director General, ICRISAT Patancheru P.O. 502 324, A.P., India.

CLAY MINERALOGY

University of Illinois at Urbana-Champaign

The Department of Geology invites applicants for a tenure-track faculty position in clay mineralogy. We are seeking candidates who have clearly demonstrated the potential to be outstanding researchers in the general areas of mineralogy, crystallography, and chemistry of clay minerals, in the origin, diagenesis, and metamorphism of argillaceous sediments and whose future research will complement our existing programs in the petrology and diagenesis of sediments, experimental studies of compaction and of kinetics of burial diagenesis, behavior of clay minerals during deformation, petroleum geology, and stable isotope geochemistry. In addition to the development of a strong research program, the successful candidate is expected to participate in all aspects of teaching and advising at the graduate and undergraduate levels.

The Department of Geology houses a variety of facilities for clay mineralogy research, including x-ray diffraction and fluorescence units, an atomic absorption spectrophotometer, two NMR spectrometers, an isotope ratio mass spectrometer, and electron microprobes. Numerous other analytical services are available on campus, particularly at the Materials Research Laboratory where there is equipment for Auger electron spectrometry, x-ray photoelectron spectrometry, scanning electron microscopy, transmission electron microscopy, and ion microprobe studies.

This position is available immediately. Ph.D. is required. Rank and salary will be commensurate with experience and qualifications. For equal consideration, please submit a letter of application that includes a statement of current and future research interests as well as curriculum vitae, bibliography, and the names of at least three references willing to comment on your qualifications and promise, by 1 April 1984 to: Dr. Albert V. Carozzi, Chairman, Search Committee, Department of Geology, 245 Natural History Building, 1301 West Green Street, Urbana, Ill. 61801. Telephone: 217-333-3008. *The University of Illinois is an Equal Opportunity/Affirmative Action Employer.*

EMORY UNIVERSITY SCHOOL OF MEDICINE MEDICAL DIRECTOR CLINICAL RESEARCH FACILITY

Emory University School of Medicine, located in Atlanta, Georgia, is seeking an established M.D./Ph.D. investigator to direct its Clinical Research Facility. This facility is a fully staffed 12-bed hospital unit which is approved for funding through NIH for the next 5 years (through November 1989). The facility is an active and pivotal resource for over 80 clinical research projects. It incorporates education of medical students and clinical trainees and provides a broad base of core laboratory facilities for clinical research. It is located on the Emory University campus in a newly constructed wing of the Emory University Hospital and is juxtaposed to the science departments of the Medical School and the Graduate School of Arts and Sciences.

This position is for the academic rank of full professor with the responsibility to conduct clinical research, to direct the facility, its core laboratory and educational aims.

Applicants for this position should possess M.D. or M.D./Ph.D. degrees and be established investigators with experience in clinical research and demonstrated leadership ability. The successful candidate should also demonstrate ability to conduct creative research programs and to successfully obtain peer-reviewed funding or its equivalent for his/her research. Applications will be received until 1 April 1984. *Emory University is an Affirmative Action/Equal Opportunity Employer.*

To apply, please send résumé and three references to:

Clinical Research Search Committee
409 WMCAB, 1440 Clifton Road, NE
Emory University School of Medicine
Atlanta, Georgia 30322

POSITIONS OPEN

POSTDOCTORAL POSITION available immediately to study molecular biology of eukaryotic ribosome structure-function; effect of microbial pathogenic factors on macromolecule biosynthesis. Investigative approach includes 2-D separation of proteins, HPLC analysis of protein and nucleic acid components, RNA sequencing. Biochemical research background desired. Salary: \$17,000 per year. Please send complete curriculum vitae with three references to: Dr. Tom G. Obrig, Department of Microbiology and Immunology, Albany Medical College, Albany, N.Y. 12208. *Equal Opportunity/Affirmative Action Employer, M/F.*

POSTDOCTORAL POSITION available to study the immunobiology of macrophages in cellular immune disorders of the nervous system. Research experience in immunology/cell biology desirable. Salary: \$18,000 to \$23,000. Position initially for 1 year, renewable for a further year. Send résumé and three references to: Dr. John Prineas, Department of Neurosciences, University of Medicine and Dentistry of New Jersey-New Jersey Medical School, 100 Bergen Street, Newark, N.J. 07103. *An Equal Opportunity/Affirmative Action Employer.*

POSTDOCTORAL POSITION IN BIOCHEMISTRY available immediately for individual with strong enzymology/protein chemistry background. Research will involve enzyme structure/function relationships with emphasis on protein sequence analysis. Knowledge of kinetic analysis and peptide/protein isolation techniques, including HPLC, is highly desirable. Send résumé and the names of two or three references to: Dr. L. F. Hass, Department of Biological Chemistry, The M.S. Hershey Medical Center of the Pennsylvania State University, Hershey, Pa. 17033. *An Equal Opportunity/Affirmative Action Employer.*

POSTDOCTORAL POSITION available 1 July 1984 for cell biologist with experience in E.M. immunocytochemistry and E.M. techniques. The project will involve study of cytoskeletal structure and function in a variety of transporting epithelia. Applicants should send curriculum vitae and two references to: Dr. Richard Hays, Department of Medicine, ALBERT EINSTEIN COLLEGE OF MEDICINE, 1300 Morris Park Avenue, Bronx, New York 10461. *An Equal Opportunity/Affirmative Action Employer.*

POSTDOCTORAL POSITION: Molecular biology of tumour promotion. Suitable for a Ph.D. or M.D. with research experience who will join our program employing recombinant DNA technology to investigate effects of TPA on mammalian cells. Supported by the Terry Fox Training Grant Program established by the National Cancer Institute of Canada. Send curriculum vitae and references to: Dr. David Denhardt, Cancer Research Laboratory, University of Western Ontario, London, Ontario, Canada N6A 5B7.

POSTDOCTORAL POSITIONS available in molecular endocrinology. (i) Research on steroid-mediated events at the molecular level in cultured cells, including specific aspects of RNA and protein synthesis. (ii) Research in molecular effects of hormones on smooth muscle relaxation, including phosphorylation of muscle proteins and 2+-mediated events. Send résumé and two references to: Dr. B. Sanborn, Department of Biochemistry and Molecular Biology, University of Texas Medical School at Houston, P.O. Box 20708, Houston, Texas 77025. *An Equal Opportunity Employer; women and minorities are encouraged to apply.*

POSTDOCTORAL POSITION available immediately for up to 3 years to study molecular genetics of gene copy number changes in *Drosophila*. Experience in genetics and molecular biology desired. Send curriculum vitae with description of research background and names of three references to: Dr. Sharyn A. Endow, Department of Microbiology, Duke University Medical Center, Durham, North Carolina 27710. *Duke University is an Equal Opportunity/Affirmative Action Employer.*

TWO POSTDOCTORAL POSITIONS are available during 1984 through 1987 at Health Research, Inc., to study estrogen receptor and DNA interactions. Candidates with experience in the isolation and characterization of mRNA using available monoclonal antibodies and cloning of cDNA in plasmid vectors are desirable. Send résumé and names of two references to: Dr. S. Anand Kumar, Center for Laboratories and Research, New York State Department of Health, Empire State Plaza, Albany, New York 12201.

POSITIONS OPEN

POSTDOCTORAL POSITION available at the Research Institute of Scripps Clinic to study the vertical molecular organization of cell-cell and cell-substrate contacts. Involves use of mono- and polyclonal antibodies against adhesive, cytoskeletal, and membrane proteins or peptides to visualize ultrastructural molecular topology in frozen ultrathin sections of adhesion sites. Background in cell or molecular biology or biochemistry desirable. Reply with curriculum vitae to: Dr. Mark Ginsberg, Department of Immunology, Scripps Clinic and Research Foundation, 10666 North Torrey Pines Road, La Jolla, Calif. 92037.

POSTDOCTORAL POSITION IN PROTEIN CHEMISTRY available immediately. Studies include physicochemical characterization, structure-function studies and microsequencing of a steroid hormone receptor, and interaction of the receptor with nucleic acids. Send curriculum vitae and names of three references to: Dr. Frank Markland, Cancer Research Laboratory #106, Department of Biochemistry, University of Southern California, School of Medicine, 1303 North Mission Road, Los Angeles, California 90033. *Affirmative Action/Equal Opportunity Employer.*

POSTDOCTORAL POSITION available immediately to study enzymic lipid oxidation in membrane systems from skeletal muscle. Experience in membrane and protein biochemistry preferred. Salary commensurate with experience. Send curriculum vitae and three letters of recommendation by 2 March 1984 to: Dr. H. O. Hultin, University of Massachusetts Marine Station, P.O. Box 128, Lanesville, Gloucester, Mass. 01930. *An Affirmative Action/Equal Opportunity Employer.*

POSTDOCTORAL RESEARCH ASSOCIATE. Several positions open immediately for research involving molecular genetics and molecular biology. Candidates should have a Ph.D. in biochemistry, genetics, or molecular biology. Send curriculum vitae and names of three references to: Dr. Pudur Jagadeeswaran, or Dr. Richard L. Davidson, Center for Genetics, University of Illinois College of Medicine, 808 South Wood Street, Chicago, Ill. 60612. For fullest consideration, applications should be received by 15 March 1984. *The University is an Affirmative Action/Equal Opportunity Employer.*

POSTDOCTORAL RESEARCH ASSOCIATE

Position available immediately to study the molecular biology of phytochrome, a regulatory photoreceptor that controls plant gene expression in response to light. Project will include sequencing phytochrome cDNA clones. Previous experience with recombinant DNA techniques desirable. Individuals experienced with mammalian, lower eukaryotic, or prokaryotic systems wishing to explore plant systems encouraged to apply. Salary: \$16,000 minimum. Send curriculum vitae and three letters of reference to: Peter H. Quail, 139 Birge Hall, University of Wisconsin, Madison, Wisc. 53706.

PROGRAM DIRECTOR, ENVIRONMENTAL ECONOMICS AND POLICY RESEARCH HOLCOMB RESEARCH INSTITUTE, BUTLER UNIVERSITY

The Holcomb Research Institute is establishing a program in environmental economics and policy research and requires a senior economist as its director. A range of experience would be appropriate, but work in regional macroeconomic modeling, benefit/cost analysis and areas complementary to the existing water science and biotic resources programs will be preferred. The Institute has internal support to expand and develop the program immediately. Interaction with risk analysis and regulatory concerns of the Midwest business community is expected. Training at the Ph.D. level is required, in addition to a substantial research record and some administrative experience. Salary will be commensurate with experience. Position available 1 July 1984 or later, up to 1 January 1985.

Send letter, including statement of experience, research interests, curriculum vitae, and three names for reference letters, by 15 March 1984, to:

Dr. Orie L. Loucks, Director
Holcomb Research Institute
Butler University
4600 Sunset Avenue
Indianapolis, Indiana 46208

Butler University is an Equal Opportunity Employer.

NATIONAL INSTITUTE OF
ARTHRITIS, DIABETES, AND
DIGESTIVE AND KIDNEY DISEASES
OFFICE OF THE DIRECTOR

ASSOCIATE DIRECTOR FOR NUTRITION

Incumbent must be a recognized and respected leader in the field who plans, develops, and implements a high quality research program in nutrition. This involves identifying research needs and opportunities; working with other leaders in individual/specialized fields of nutrition; reviewing existing training programs to evaluate their effectiveness and identifies new training that might advance the field; and plans and develops conferences, workshops, and/or seminars in those areas that might be most productive.

Salary Range — \$56,945 to \$63,800 per annum

Position information and qualifications requirements may be obtained by contacting:

**Mr. Clifford Moss, Executive Secretary,
Search Committee for Associate Director for Nutrition
Building 31, Room 9A34, National Institutes of Health
Bethesda, Maryland 20205 (301) 496-4231**

Applications (SF-171, CV and Bibliography) must be submitted to above address and postmarked not later than January 31, 1984.

AN EQUAL OPPORTUNITY EMPLOYER



Harvard University Graduate School of Education

Human Development, Reading and Counseling Area seeks candidates for full-time senior position, non-tenured, for September, 1984, for **Program in Counseling and Consulting Psychology**. Candidates should have strengths as senior research and teaching scholars in counseling psychology and interests in processes of development/change in individual/social systems from educational perspectives.

Qualifications: Doctorate; licensure eligibility, ABPP diploma, APA Fellowship, or other equivalent professional distinction; leadership capabilities to assist in program direction; evidence of teaching ability and doctoral research supervision.

Terms: 5 year, renewable term as full Professor or as Senior Lecturer, depending on strengths in research/practice.

Application Deadline: March 24, 1984; application letter and curriculum vitae to:

Professor Charles V. Willie
Chairperson, HDRC Search Committee
Harvard Graduate School of Education
13 Appian Way
Cambridge, MA 02138

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HARVARD UNIVERSITY

Prize competition

announced by the

Anna Monika Foundation

for the investigation of the physical substrate and functional disturbances of endogenous depressions
by approval of the Minister of the Interior of Nordrhein-Westfalen, Düsseldorf, 9th of June, 1965.

The Foundation announces the following prizes:

First Prize	US-Dollar 15.000,-
Second Prize	US-Dollar 5.000,-
Third Prize	US-Dollar 2.500,-

preferably for studies of biochemical, histological, neurophysiological, neuropathological, psychopharmacological, psychiatric or psychosomatic nature. The studies should be carried out in close cooperation with a psychiatric clinic, an university or an equivalent scientific institution. As far as possible, the papers should give information about recent advances in knowledge that should be helpful in promoting treatment and would open up new paths of progress. The papers may be written in German, French or English and should be submitted to the Chairman of the Committee, *Professor Dr. P. Kielholz, Basle/Switzerland*. Besides hitherto unpublished studies, papers published in the past two years in a German or international professional journal may also be submitted. *Deadline for submission to the Committee is 30th of September, 1984.* To help the Committee to come to a speedy decision it is requested that a maximum of three publications in four copies as well as a summarizing report (approx. 600 words) of the studies submitted for the competition should be included. *Prizes will be awarded on 30th of June, 1985.* If, in the opinion of the Committee, no papers of sufficient merit are submitted, it reserves the right to make no award. Prizes and their amounts will be awarded according to the merits of the study in question. Subject to the Committee's decision, each prize can be divided between two papers.

The Committee of Judges:

Chairman: Professor Dr. med. P. Kielholz, Psychiatrische Universitätsklinik Basel, Wilhelm-Klein-Straße 27, CH-4056 Basle/Switzerland

Members:

Professor Dr. G. Baumgartner, Neurologische Universitäts-und Poliklinik, Zürich/Switzerland.

Professor Dr. Otto Creutzfeldt, Max-Planck-Institut für Biophysikalische Chemie, Göttingen/Fed. Rep. of Germany.

Professor Dr. H. J. Dengler, Medizinische Universitätsklinik, Bonn-Venusberg/Fed. Rep. of Germany

Professor Dr. Alfred M. Freedman, Department of Psychiatry, New York Medical College Valhalla, New York/USA.

Professor Dr. K. Heinrich, Psychiatrische Universitätsklinik, Düsseldorf/Fed. Rep. of Germany.

Professor Dr. Albert Herz, Max-Planck-Institut für Psychiatrie, München/Fed. Rep. of Germany.

Professor Dr. H. Hippus, Psychiatrische Klinik und Poliklinik der Universität München/Fed. Rep. of Germany.

Professor Dr. Horst Jatzkewitz, Max-Planck-Institut für Psychiatrie, München/Fed. Rep. of Germany.

Professor Dr. Dr. Palm, Zentrum für Pharmakologie der Johann-Wolfgang-Goethe-Universität, Frankfurt/Main.

Professor Pierre Pichot, Chaire de Psychologie Médicale, Centre Psychiatrique Sainte-Anne, Paris/France.

Professor Dr. Dr. Wilhelm Stoffel, Institut für Physiologische Chemie der Universität Köln/Fed. Rep. of Germany.

Managing Director: Professor Dr. Benno Hess, Töllnerstraße 9/11, D-4600 Dortmund 1/Fed. Rep. of Germany.

POSITIONS OPEN

POSTDOCTORAL POSITION available immediately for study of cholinergic system in mammalian retina and its interactions with other neurotransmitter systems. Work will include autoradiographic, immunocytochemical, and biochemical techniques. Background in electron microscopy or HPLC desirable. Send curriculum vitae to: **Dr. Roberta Pourcho, Department of Anatomy, Wayne State University School of Medicine, Detroit, Michigan 48201.**

RESEARCH ASSOCIATE/POSTDOCTORAL POSITION available immediately to study transglutaminases in cultured vascular cells. The candidate should have experience with protein isolation, enzyme kinetics, and tissue culture methods. Two-year position with a competitive salary. Send curriculum vitae, statement of research interests, and three letters of reference to: **Dr. C. S. Greenberg, Box 3934, Duke University Medical Center, Durham, N.C. 27710. Affirmative Action/Equal Opportunity Employer.**

RESEARCH ASSOCIATE to conduct research on the synthesis of new amino acids and peptides. Work will involve synthesis of new amino acids, new analogs of angiotensin, and NMR study. Salary: \$15,500 per year; 40 hours per week. Required: Ph.D. in chemistry with strong background in synthesis of new diazo compounds and carbene reaction mechanism is essential. Send résumé to: **June Carroll, Missouri Division of Employment Security, 505 Washington Avenue, St. Louis, Mo. 63101. Refer to: 203809. Equal Opportunity/Affirmative Action Employer.**

RESEARCH ASSOCIATE position available for research in chemical carcinogenesis. Research areas include metabolism of nitrogen-heterocyclic polynuclear aromatic hydrocarbons, their interaction with DNA, and microsomal enzyme induction. Ph.D. in biochemical pharmacology, toxicology, or biochemistry required; experience in metabolite isolation by HPLC preferable. Position provides opportunity for developing programs of candidates' interest. Submit résumé and names of three references to: **Dr. Harish C. Sikka, Director, Great Lakes Research Laboratory, State University of New York College at Buffalo, 1300 Elmwood Avenue, Buffalo, N.Y. 14222.**

RESEARCH ASSOCIATE. Department of Medicine. To identify alterations in oncogene structure and expression in human hematological malignancies and to clone and sequence aberrant genes and cDNA's. Candidates must have experience in DNA and RNA blotting, cloning and sequencing techniques, and proven skills in investigating structure and expression in a viral or cellular oncogene system. Ph.D. in biochemistry or molecular genetics is required. Full-time position with annual salary of \$15,400. Interested applicants should submit their résumés to: **Box 31, SCIENCE.**

RESEARCH ASSOCIATE IN STREAM ECOLOGY—A stream ecologist is sought for a 3-year NSF-funded postdoctoral research associate position. The successful applicant will manage a large field study to investigate the response of stream biota to whole tree harvest in New Hampshire. Qualifications must include: (i) an earned Ph.D., (ii) research experience with algal-invertebrate or microbial-algal-invertebrate interactions in streams, and (iii) ability to manage a field project including supervision of technicians. This position will involve about 6 months of field research at Hubbard Brook in New Hampshire and 6 months on campus at Michigan State University. The position is available immediately. Send curriculum vitae and list of three references by 9 March to: **Dr. Thomas M. Burton, Department of Zoology, Michigan State University, East Lansing, Mich. 48824. An Affirmative Action/Equal Opportunity Employer.**

VIROLOGIST

Bioassay Systems Corporation is an exciting biotechnology company with an energetic research and development program in medical diagnostics. We are seeking a qualified candidate with a Ph.D. in virology or related science and experience in infectious or sexually transmitted diseases. Industry experience in diagnostic product development. Please send résumé to:

**Mark Bear, Ph.D.
Director Cell Culture Services
Bioassay Systems Corporation
Woburn, Mass. 01801**

POSITIONS OPEN

RESEARCH ASSOCIATE POSITIONS (two): Veterinarian, D.V.M. (possible Ph.D. or M.S. given right experience) in biochemistry, immunology, microbiology, or genetics. Immediate openings for two individuals in a university-based biotechnology program dealing with domestic animal lymphokines, including interferon. Full-time research positions; funded 3-year program. Candidates must be experienced in cell culture, gene cloning, and macromolecule purification. Candidates must be clinically innovative and have experience in dealing with domestic animals in a research setting. Expertise in basic biomedical research is essential. Salary dependent upon experience. Applications should consist of curriculum vitae, statement of research and clinical experiences and interests, and list of three references. *Michigan State University is an Affirmative Action/Equal Opportunity Institution.*

Applications and inquiries should be directed to: **Dr. Robert W. Bull, Department of Medicine, Michigan State University, East Lansing, Michigan 48824-1317. Telephone: 517-355-4616.**

RESEARCH ASSOCIATE PROFESSOR OF PEDIATRICS

Temple University School of Medicine

Applications are invited from Ph.D. scientists with an established reputation in cell biology. Applicants must have extensive experience and publications in the role of cyclic nucleotides, calcium, and protein phosphorylation in the control of cancer cell morphology and growth. Expertise in the enzymology and immunocytochemistry (light and electromicroscopic) of cytoskeletal proteins and protein kinases is necessary. Send résumé to: **Donald Pinkel, M.D., Chairman, Department of Pediatrics, Temple University School of Medicine, c/o St. Christopher's Hospital for Children, 2600 North Lawrence Street, Philadelphia, Pa. 19133. An Equal Opportunity Employer.**

SCIENTIFIC DIRECTOR

Large regional blood center searching for a scientific director for the direction of an expanding research and development program in collaboration with academic departments of the University of Connecticut Health Center. Significant internal research support and faculty appointment at University of Connecticut Health Center and/or Yale University School of Medicine available to qualified applicants. Applicant should possess an M.D. or Ph.D. degree and have at least 5 years of research experience at the postdoctorate level with demonstrated ability to perform independent research and direct the research of others. Salary is competitive and a complete benefit package is available. Submit curriculum vitae and research plans to: **Dr. Richard Cable, Director, American Red Cross Blood Services, Connecticut Region, 209 Farmington Avenue, Farmington, Conn. 06032.**

SUPERVISORY PHYSICAL SCIENTIST

The Great Lakes Environmental Research Laboratory of the U.S. Department of Commerce, National Oceanic and Atmospheric Administration (NOAA), Ann Arbor, Michigan, solicits applications for a **supervisory physical scientist** position, GS-13, -14, or -15 (entry salary: \$36,152 to \$50,252), to head an Environmental Systems Studies Group which will include six scientists and technicians conducting research on limnologic and oceanographic systems. Great Lakes and marine resources and water related activities involving developing and testing improved simulation and prediction models, data bases and other environmental information to support management decisions by government and private organizations. Duties include directing a major research program, scientific initiative on selected research projects, and participation in a Cooperative Research Program with the University of Michigan. Applicants should have demonstrated research ability and should be capable of directing research in environmental sciences (including such fields as systems analysis, water chemistry, environmental engineering, systems ecology, oceanography, resource economics) and in numerical prediction and simulation methods. **Telephone: Eugene J. Aubert at 313-668-2245**, for additional technical information.

Submit Form 171 and detailed résumé, including bibliography and relevant publications, research experience, references, and education, to: **NOAA Personnel Division, 601 East 12 Street, Room 1747, Kansas City, Mo. 64106; telephone: 816-374-5016.** Applications must be received no later than 16 March 1984 to receive consideration. *An Equal Opportunity Employer.*

POSITIONS OPEN

PULMONARY SPECIALIST

We seek a pulmonary physiologist, preferably a Ph.D., to join a laboratory team developing new liposome inhalation therapy technology and studying the effects of inhaled aerosols on airflow resistance. Basic skills in animal surgery and in measuring mechanical properties of the lungs are required. Demonstrated ability to organize, carry out, and analyze results of experiments a must. Knowledge of statistics, microcomputers, and aerosol technology will be helpful. We offer excellent salary and benefits, a stimulating work environment, and opportunity for career advancement. Send curriculum vitae and salary requirements to: **Sally Davenport, Liposome Technology, Inc., 1030 Curtis Street, Menlo Park, California 94025.**

RESEARCH DIRECTOR, DEPARTMENT OF ANESTHESIOLOGY. Applications are invited for the position of director of research for a large and active department. This is a full-time position available for associate professor or above. Ph.D. desired but D.V.M./Ph.D. or M.D./Ph.D. will be considered. Candidate should demonstrate area of interest relevant to anesthesiology and high potential for developing independent extramural funded research. Willingness to develop and direct basic and clinical faculty research essential. Excellent facilities and personnel available. Salary negotiable. Send curriculum vitae and three references to: **Noel W. Lawson, M.D., Chairman, Search Committee, Department of Anesthesiology, E-91, University of Texas Medical Branch, Galveston, Texas 77550-2778. An Affirmative Action/Equal Opportunity Employer.**

RESEARCH PROFESSOR OF SURGERY

Will teach the history of surgery to medical students and surgery residents. Will foster surgical education with faculty and staff of the Department of Surgery. No patient care is involved.

Education: M.D. and completion of residency in surgery. Must have at least 10 years of clinical experience and a proven ability in the education and training of medical students and housestaff in an academic setting. Salary: \$80,000 per annum for a full-time, that is, 40-hour-per-week, position.

Qualified and interested applicants should apply at: **The Texas Employment Commission, Dallas, Texas,** or send résumé to: **The Texas Employment Commission, TEC Building, Austin, Texas 78778, J.O. Number 3220535. Ad paid by an Equal Opportunity Employer.**

SYNTHETIC ORGANIC CHEMIST—POSTDOCTORAL. Position available to join project (directed by J. H. Kaplan and Y. E. Goldman) using modern photochemical techniques (caged-ATP and similar approaches) to study regulation of muscle contraction. Studies will involve synthesis, characterization, and application of novel photogenerated probes. Available immediately for 1 to 3 years. Send curriculum vitae and names of references to: **Dr. Jack H. Kaplan, Department of Physiology/G4, University of Pennsylvania, Philadelphia, Pa. 19104.**

ANNOUNCEMENT

OHIO RIVER BASIN RESEARCH CONSORTIUM—A consortium of universities, private concerns, and government agencies is being planned for water-related issues in the Ohio River Basin. Quarterly newsletter will be initiated. A planning meeting will be held to develop details of the consortium. If interested in participation, contact: **Dr. William J. Mitsch, Energy and Ecological Systems, Systems Science Institute, University of Louisville, Louisville, Kentucky 40292; telephone: 502-588-6482.**

FINANCIAL ASSISTANCE

Lerner-Gray Fund for Marine Research provides **FINANCIAL ASSISTANCE** in marine zoology, exclusive of botany. Level: advanced predoctoral students and postdoctoral researchers. Range: \$200 to \$1000. Projects can be carried out anywhere in the world. Applications are due by 15 March on prescribed forms. Write: **Lerner-Gray Fund for Marine Research, American Museum of Natural History, Central Park West at 79th Street, New York, New York 10024.**

PROGRAM DIRECTOR MOLECULAR IMMUNOLOGY NATIONAL CANCER INSTITUTE

The National Cancer Institute is seeking candidates for the position of Program Director in the Immunology Program of the Cancer Biology Branch, Division of Cancer Biology and Diagnosis. The incumbent will be responsible for the scientific administration of research grants and contracts. Duties will include overseeing active and competing research grants and contracts in the Molecular Immunology Section, evaluating and integrating knowledge in the area of immunology, developing and recommending plans for payment of research grants and contracts, initiating actions for support of targeted research including the development of workshops, and projecting the scientific and budgetary needs of this program area.

Applicants must have a Ph.D., M.D. degree or equivalent; minimum of three years of independent research experience as either a principal investigator or co-principal investigator on a grant or contract or equivalent experience in the management of a research laboratory at the advanced post-doctoral level; substantial experience and training in molecular immunology, preferably cancer-related. Experience in the following area is preferable: immunogenetics; transplantation genetics; molecular aspects of the synthesis, structure and function of lymphokines, antibodies and other soluble immune factors; molecular mechanisms of cytotoxicity, including mechanisms of cell-mediated and antibody-mediated lysis, and characterization of cell-surface target structures.

This is a Career Civil Service position starting at a salary of \$36,152 (GS-13) with potential for advancement to GS-14 (\$42,722). Letters of interest, Personal Qualifications (Form SF-171), curriculum vitae and bibliography should be sent by March 2, 1984 to: Dr. Faye C. Austin, National Cancer Institute, National Institutes of Health, Westwood Building, Room 10A07, Bethesda, Maryland 20205 (Call for information using 301-496-7815). An Equal Opportunity Employer.

Group Leader Microbiology R & D

CALBIOCHEM-BEHRING, based in San Diego, Ca., is a world wide supplier of clinical chemistry reagents, immunodiagnostics and research biochemicals. We are seeking a Group Leader for our Microbiology Research and Development Department who will be responsible for development of fermentation processes for production of enzymes, antibiotics and related biochemicals.

Qualified candidates will have a Ph.D. or equivalent in microbiology or biochemistry and a minimum of 3 yrs. progressively responsible professional experience in these fields. Training in the techniques of industrial microbiological research including microbial metabolism, fermentation strain improvement and culture maintenance is essential. Responsibilities will include supervising a staff of six professionals and interaction with production staff during scale-up and commercialization. This is an excellent opportunity for a creative individual to contribute to all phases of development of a biological process for production of industrial products.

CALBIOCHEM-BEHRING is a moderately sized division of American Hoechst Corporation and the clinical chemistry resource for Hoechst AG, the world's largest chemical manufacturer.

We offer an excellent salary and benefits package and pleasant work surroundings. Please submit resume and salary history to JOYCE PEDLOW, EMPLOYMENT MANAGER:

Calbiochem-Behring
Division of American Hoechst Corporation
P.O. Box 12087 · San Diego, California 92112

Hoechst 

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Genentech, Inc., a recognized leader in the field of biotechnology research, has immediate opening in our Assay Development Department.

Scientist

Be responsible for:

- Developing EIAs and RIAs
- Making enzyme-protein conjugates
- Producing and purifying antisera
- Characterizing and purifying proteins
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PhD/Immunology, Microbiology, Biochemistry or allied field required; 4-6 yrs. experience in immunoassay development, clinical chemistry, and/or clinical diagnostic industry is preferred. This is a challenging position in a company that is at the forefront of research. (#374).

We offer competitive salaries and excellent benefits including equity participation opportunities. Please send resume to Human Resources Department, with reference number, Genentech, Inc., 460 Point San Bruno Blvd., South San Francisco, CA 94080. Genentech is an equal opportunity employer.

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PRIZE

THE ARCTIC SCIENCE PRIZE

The North Slope Borough is pleased to announce the establishment of The Arctic Science Prize. The Prize (\$10,000) is to be given to distinguished scientists who have made significant contributions to man's understanding of natural processes in the Arctic. The purposes of the Prize are: to serve as recognition of the recipient's contributions, to further stimulate excellence in arctic science, and to focus attention upon the Arctic and its unique problems. An 11-member Candidate Review Committee will make the nominations and select the recipient.

The North Slope Borough is a local jurisdiction (county-like) that occupies most of the Alaskan Arctic. The Borough is very large (88,000 square miles) and sparsely populated (approximately 9,000 people).

Further information regarding The Arctic Science Prize may be obtained from: Eugene Brower, Mayor, North Slope Borough, Box 69, Barrow, Alaska 99723.

WORKSHOP

NIH-SPONSORED TUBEROUS SCLEROSIS WORKSHOP

Friday, 13 April 1984
Massachusetts Institute of Technology (MIT)
Cambridge, Massachusetts

Scientists and clinicians working directly on tuberous sclerosis (T.S.) or in related scientific fields are invited to participate in the first T.S. workshop. This NIH-funded workshop is designed to develop a community of scholars interested in furthering the understanding of this genetic disorder. The preliminary program includes presentations by an assembly of leading clinicians, epidemiologists, geneticists, cellular and molecular biologists, and biochemists. The proceedings of the workshop, which is timed to coincide with the meetings in Boston of the American Academy of Neurology, will be published.

For workshop program and registration information, contact: Dr. H. Frederick Bowman, Harvard-MIT Division of Health Sciences and Technology, MIT E25-518, Cambridge, Mass. 02139; telephone: 617-253-7426. Preregistration is required.

SYMPOSIUM

HUMAN VISUAL DEVELOPMENT AND ITS CLINICAL EVALUATION

This symposium will address monocular, binocular, and ocular-motor development, the progression of myopia, management of the pediatric patient, and perceptual development in infants and children. Speakers include: Richard Aslin, Martin Banks, Colin Blakemore, Nigel Daw, Nathan Flax, Merton Flom, Richard Held, Matthew Rabinowicz, Elio Raviola, Clifton Schor, and Francis Young.

Abstracts for contributed paper session due 1 March 1984. For program information: Visual Science Symposium Committee, School of Optometry, University of Missouri-St. Louis, 800 Natural Bridge Road, St. Louis, Mo. 63121. Telephone: 314-553-5606.

COURSES

PULMONARY PATHOLOGY FOR THE NONPATHOLOGIST 5 to 10 August 1984

Comprehensive morphologic and mechanistically oriented course for pulmonary physicians and non-M.D. scientists. Nationally recognized faculty.

For information contact:

John E. Craighead, M.D.
Department of Pathology
University of Vermont
College of Medicine
Burlington, Vt. 05405

COURSES

HOW TO MAKE MICROCAPSULES— A HANDS-ON COURSE

A 3-day laboratory course designed to teach the art and science of microcapsule making. Suitable for biologists, pharmacists, chemists, life scientists, and engineers. Enrollment limited to nine. Lectures and laboratory sessions by Dr. Curt Thies, professor of chemical engineering at Washington University in St. Louis. Two spring sessions: 3 to 5 April; 1 to 3 May. For information, telephone: 314-889-6014 or 6066.

GRADUATE STUDY

GRADUATE STUDY IN CELL BIOLOGY

The Department of Anatomy at the University of Massachusetts Medical School offers a graduate program in cell biology leading to a Ph.D. degree in medical sciences. Graduate stipends are available at approximately \$7000 plus tuition. For further information and application forms, contact: Dr. R. Singer, Department of Anatomy, University of Massachusetts Medical School, 55 Lake Avenue North, Worcester, Mass. 01605.

PROGRAM

Graduating seniors. PROGRAM LEADING TO M.S. DEGREE IN BIOLOGY. Modern, well-equipped department. Thesis and nonthesis options. Assistantships (stipend plus tuition waiver) available. For information and applications, contact: Dr. W. W. Baker, Graduate Admissions, Department of Biology, Villanova University, Villanova, Pa. 19085.

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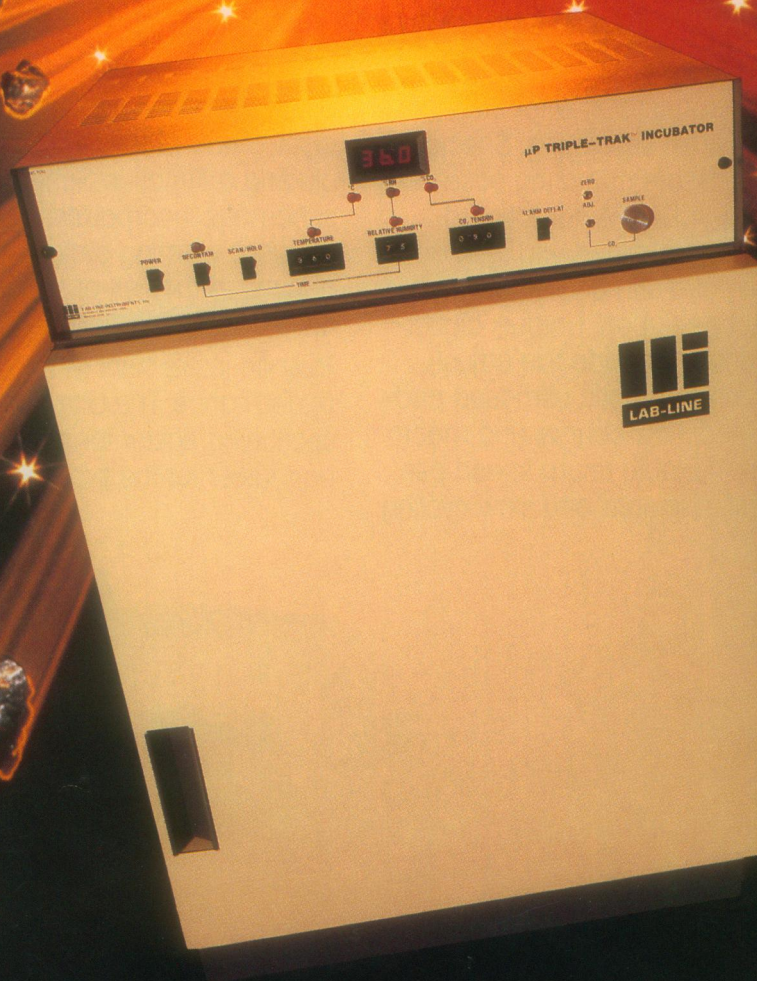
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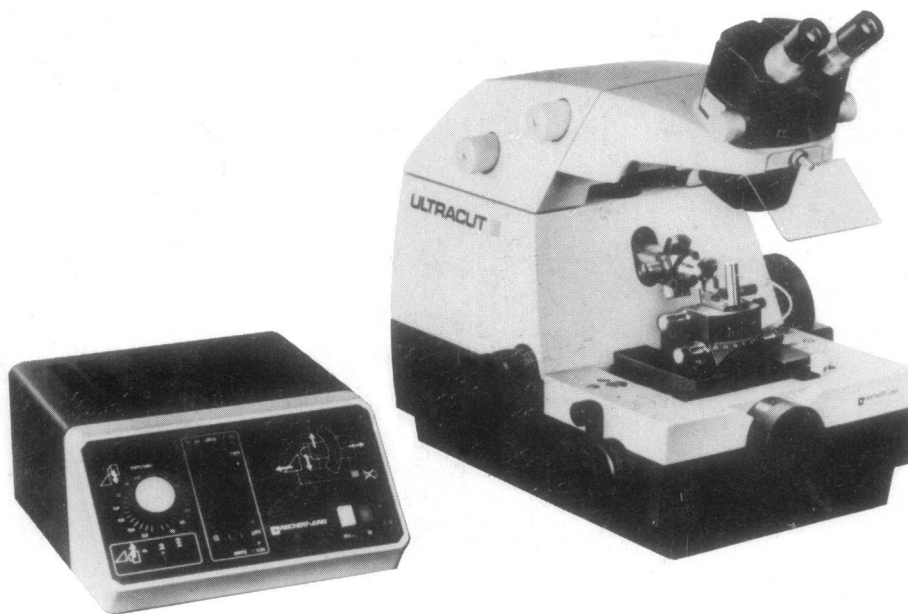
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