

tions—intensity-limiting environments, scattering media, color-biased environments, the directional distribution of light—and with coloration as a means of camouflage and advertisement. The treatment is strongly oriented toward Lythgoe's own research interests. Thus, in the account of visual mechanisms photochemistry is emphasized and electrophysiology and neuroanatomy are largely ignored, and in the chapters on vision in various challenging environments Lythgoe emphasizes problems of vision under water (he is an avid scuba diver and has published extensively on various aspects of underwater science).

Despite the narrow choice of topics, the book is a valuable contribution, for its abundant observations concerning natural history point up interesting biological problems the visual scientist might want to investigate. The prose is lucid, and the illustrations, particularly the plates, are helpful. Many of the analyses and explanations are superficial and speculative, but the extensive bibliography enables the interested reader (advanced undergraduate and beyond) to extend the level of inquiry. The book can be recommended both as an introduction to vision for the natural historian and as an introduction to natural history for the visual scientist. It is more successful in the latter capacity.

STEPHEN S. EASTER, JR.
Division of Biological Sciences,
University of Michigan,
Ann Arbor 48109

Social Judgment Processes

Progress in Social Psychology. Vol. 1. MARTIN FISHBEIN, Ed. Erlbaum, Hillsdale, N.J., 1980. xii, 240 pp. \$14.95.

Social psychology as a discipline has grown tremendously and in increasingly rigorous and sophisticated directions over the last four decades. *Progress in Social Psychology* is the latest monograph series in the field, and its eclectic debut volume is a fine addition to the literature of basic and applied social psychology.

The theme of the series is that progress in a comparatively young field like social psychology is advanced as much by developments outside the field as it is by the systematic growth of theory and research inside the field. Indeed, the first three of the five chapters in this volume reflect the influence of cognitive psychology, behavioral decision theory, and the study of individual differences on the

long-standing interest of social psychology in the fundamental nature of those cognitive and affective processes that mediate social judgment and the processing of complex social stimuli.

Steiner, for example, focuses on the extent to which feelings of "choice" mediate an individual's decision-making process. His theory of choice not only clarifies the meaning of choice as a social psychological construct but also specifies the conditions under which people may be expected to experience and report considerable or negligible choice in their decisions. Tversky and Kahneman, whose work on the shortcomings of human inference has deservedly received much attention from researchers interested in social cognition, discuss the role and strength of causal reasoning in judgments under conditions of uncertainty and the concomitant biases associated with this mode of thinking. The psychological impact of evidence, in their view, is critically dependent on the relationship between data and preexisting causal schemata. Tversky and Kahneman demonstrate that in the making of probabilistic judgments "causal data have greater impact than other data of equal informativeness" and "in the presence of data that evoke a causal schema, incidental data which do not fit that schema are given little or no weight." A chapter by the late Nancy Hirschberg, to whom this volume is dedicated, argues for the usefulness of a multivariate approach to the study of individual differences in social and clinical judgment. Her lucid review of psychometric assumptions and empirical applications associated with the more popular and complex multidimensional scaling models will be of particular interest to those interested in social and person memory and "the relationship between structural and dynamic representations of mental events."

Social judgment at the level of group, rather than individual, decision-making is the focus of chapters by Laughlin and Davis. Laughlin applies Davis's social decision scheme theory to group problem-solving on verbal tasks in which the problems have a demonstrable solution (for example, verbal analogies). A social decision scheme is "a rule or procedure by which the group formulates a single group decision from a distribution of individual member preferences for different alternatives." Laughlin tests several theories of the social combination process. The concluding chapter, by Davis, embraces Kurt Lewin's well-known dictum that there is nothing so practical as a good theory. The emphasis there-

fore is on the important role of theory in applied research, in this case as a guide to changes in policy and procedure in our legal system. Drawing upon a considerable body of empirical research on group performance and mock-jury decision-making, much of which has been conducted by him and his colleagues, Davis clearly illustrates "the hazards attendant on adopting legal policy or procedures simply because they are consistent with 'well-known' canons of social behavior."

Although the volume probably overrepresents group decision-making and does not fully reflect the resurgence of interest in other subjects (attitudinal phenomena, the role of affect, emotion, and motivation in social judgment, and the role of self-schemata in social information processing, to name a few), it nevertheless effectively showcases the exciting diversity of contemporary social psychology.

EUGENE BORGIDA

Department of Psychology,
University of Minnesota,
Minneapolis 55455

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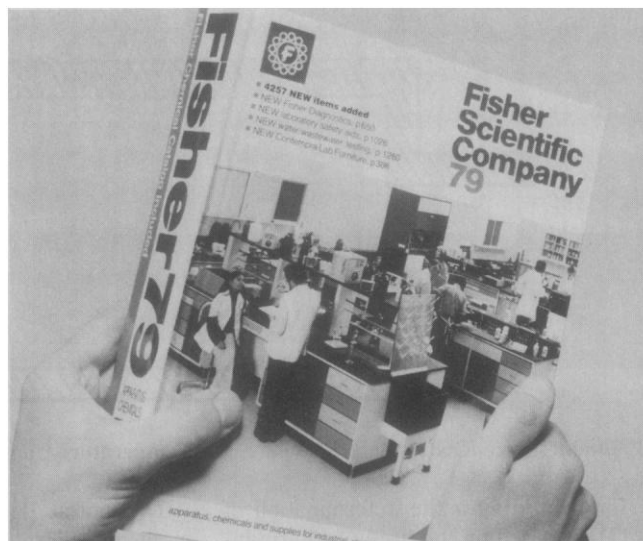


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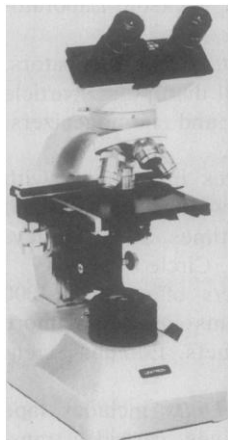
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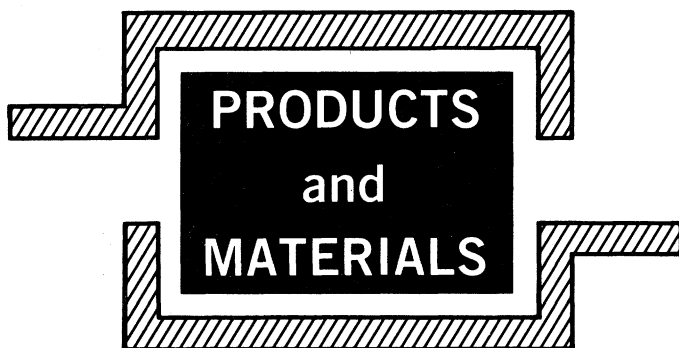
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The Image-80 uses a graphics terminal and digitizing tablet to enable the operator to create, store, and manipulate a data base. Each mark on the tablet is stored along with its numeric values and special attributes assigned by the user. Marks and sets of marks may be retrieved for viewing or manipulation by a variety of descriptors. The terminal offers a Z-80 microprocessor and resolution of 512 (H) by 484 (V). The host computer features its own Z-80 microprocessor, 64K bytes of random access memory and either a 10M-byte disk or two double-density floppy disks. The CP/M-compatible operating system is highly versatile. Laboratory Computer Systems. Circle 835.

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Spark Chamber Detector

The Radioisotope Camera 450-4 images tritium and carbon-14 on thin-layer and paper radiochromatograms. It can detect spots with 75 disintegrations of carbon-14 per minute with a resolution of 3 millimeters and spots with 2500 disintegrations of tritium per minute with a resolution of 1.5 millimeters. Exposure times, dependent upon amount of activity, vary from 40 to 80 minutes. There is also a Print Projection Unit to transfer spot positions from the Polaroid print back to the original chromatogram, with facilities to view and photograph the chromatograms under natural and ultraviolet light. Birchover Instruments. Circle 820.

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Literature

Instrumentation Techniques is a book catalog. It lists 13 titles relevant to atomic absorption and nuclear magnetic resonance spectroscopy and gas and liquid chromatography. Varian Instrument Group. Circle 824.

Genetically Standardized Mice is a handbook that describes the JAX lines of laboratory animals. Jackson Laboratories. Circle 825.

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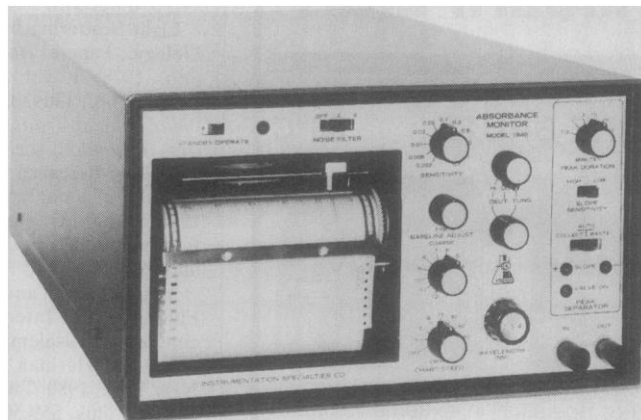
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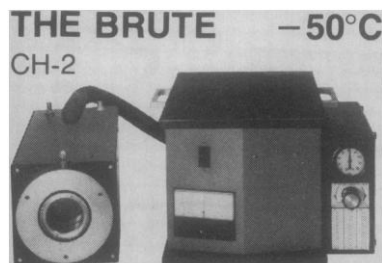
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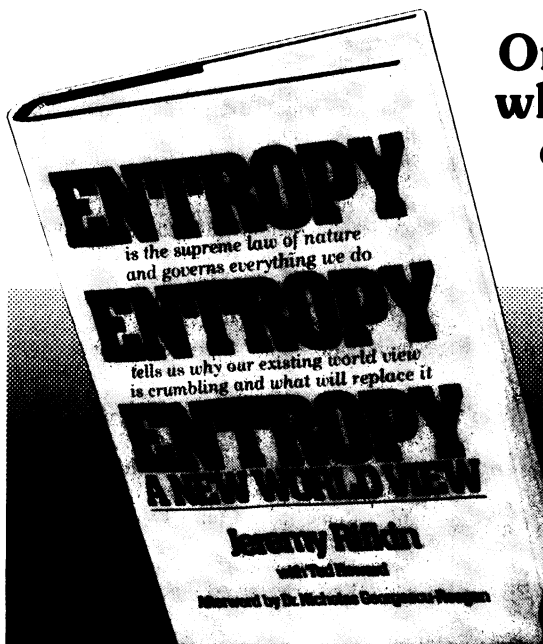
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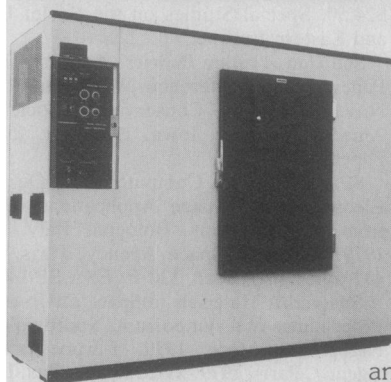
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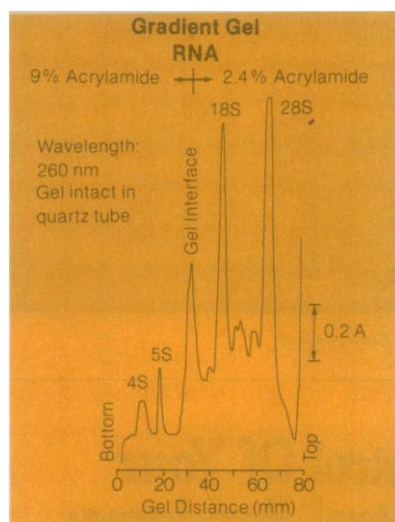
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Technology Assessment. Creative Futures. Perspectives from and beyond the Second International Congress. Mark A. Boroush, Kan Chen, and Alexander N. Christakis. North-Holland, New York, 1980. xxii, 406 pp., illus. \$39. North-Holland Series in System Science and Engineering, vol. 5.

Technology in Mental Health Care Delivery Systems. Joseph B. Sidowski, James H. Johnson, and Thomas A. Williams, Eds. Ablex Publishing Corporation, Norwood, N.J., 1980. xiv, 338 pp. \$24.95.

Theoretical Methods in Sociology. Seven Essays. Lee Freese, Ed. University of Pittsburgh Press, Pittsburgh, 1980. xii, 378 pp., illus. \$19.95.

Theories of Counseling and Psychotherapy. C. H. Patterson. Harper and Row, New York, ed. 3, 1979. xviii, 686 pp. \$18.95.

Transliterated Dictionary of the Russian Language. An Abridged Dictionary Consisting of Russian-to-English and English-to-Russian Sections. Eugene Garfield, Ed. ISI Press, Philadelphia, 1979. xiv, 382 pp. Cloth, \$25; paper, \$14.95.

Underground Power Transmission. The Science, Technology, and Economics of High Voltage Cables. Peter Graneau. Wiley-Interscience, New York, 1979. xii, 516 pp., illus. \$30.

Use of Data from Meteorological Satellites. Proceedings of a conference, Lannion, France, Sept. 1979. European Space Agency, Paris, 1979. xxiv, 240 pp., illus. Paper, 75 F. ESA SP-143.

The Visual Arts. Plastic and Graphic. Papers from a congress, Chicago, 1973. Justine M. Cordwell, Ed. Mouton, The Hague, 1979 (U.S. distributor, Walter de Gruyter, Hawthorne, N.Y.). xii, 818 pp., illus. \$87.50.

Wasted Lives. A Study of Children in Mental Hospitals and Their Families. Lillian Cohen Kovar. Gardner Press, New York, 1979 (distributor, Halsted [Wiley], New York). viii, 214 pp. \$16.95.

Weather Modification. Prospects and Problems. Georg Breuer. Translated from the German edition (Stuttgart, 1976) by Hans Mörth. Cambridge University Press, New York, 1980. xiv, 178 pp., illus. Cloth, \$24.95; paper, \$8.95.

Wildflowers of the Outer Banks. Kitty Hawk to Hatteras. By Dunes of Dare Garden Club. Illustrated by Jane Sutton. University of North Carolina Press, Chapel Hill, 1980. xviii, 166 pp. Paper, \$6.95.

The Winters of the World. Earth under the Ice Ages. Brian S. John, Ed. Halsted (Wiley), New York, 1979. 256 pp., illus. \$22.50.

World Guide to Battery-Powered Road Transportation. Comparative Technical and Performance Specifications. Compiled by Jeffrey M. Christian. Newsletter Publishing Center (McGraw-Hill), New York, 1980. iv, 392 pp., illus. \$49.50.

Personnel Placement

SCIENCE publishes each Friday, except the last Friday of the year. Advertising closing for a particular Friday issue is Wednesday, 3 1/2 weeks before. Advertising is accepted only in writing; no abbreviations. Also, personnel advertising is accepted only with the understanding that the advertiser does not discriminate among applicants on the basis of race, sex, religion, age, color, national origin, or handicap.

POSITIONS WANTED: 40¢ per word, plus \$4 for use of box number, per insertion. \$10 minimum, per insertion. Prepayment required. This rate is available only to individuals seeking jobs.

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SCIENCE
1515 Massachusetts Ave., NW
Washington, D.C. 20005

POSITIONS WANTED

Applied Microbiologist. B.S., M.S., Ph.D. (1980) in bacteriology. Degrees from three different universities. Research experience in food microbiology, E.I.A., protein purification, genetics, taxonomy. Teaching experience. Seeking academic/industrial position. Excellent credentials and references. S. A. Minnich, Department of Bacteriology, Iowa State University, Ames, Iowa 50011. X

Ecologist. Ph.D. 1979. Seeking research post in ecology of aquatic systems, theoretical and applied. Research experience and publications on community structure, autecology, and conservation of fish and avian communities in fresh, brackish, and coastal waters. Box 224, SCIENCE. X

Ecologist. Ph.D. Four years of experience in interdisciplinary studies/wetland valuation. Can program in FORTRAN; has strong background in remote sensing/environmental impact assessment. Seeks position with consulting firm, power/coal company, or university. Box 225, SCIENCE. X

Immunologist. Ph.D. 1970. Eight years of university research experience in lymphocyte-mediated target cell destruction, cellular immunity in infectious diseases, immunosuppressive effects of endotoxin and bacterial vaccines. Numerous publications. Seeking research position within project investigating neuro-immunology and/or aging research. Box 226, SCIENCE. 9/26; 10/10, 24

Microbiologist. M.S., desires position of research associate and laboratory manager. Independent research. Strong interest and experience in microbial ecology. Broad background in microbiology and science. Also has editing and writing experience. L. Loudon (formerly M. L. Brock), 26 Fairway Court, Appleton, Wis. 54911. Telephone: 414-734-9251, extension 368. 9/26; 10/3, 10, 17

Population Biologist. Ph.D. 1980. Seeks position in research, teaching, or administration that would allow time weekly with young family. Experience with ecological and behavioral fieldwork, electrophoresis, editing, computer programming. Colorado preferred but would commute farther if salary commensurate. Box 227, SCIENCE. X

POSITIONS WANTED

Hybrid Chemist/Biochemist/NMR Spectroscopist. Ph.D. 1975, extensive experience with lipids and membranes. Publications include synthesis and analysis of unusual phospholipid analogs, lipid-protein interactions, toxin-receptor binding, and intact tissue evaluation. Manager of multinuclear FT-NMR and collaborator in numerous NMR studies. Innovative individual seeks position with career opportunities and is open to all ideas. G. Y. Wedmid, 304 9th Street, SW, Austin, Minnesota 55912; telephone: 507-437-6022, work: 433-8804. X

POSITIONS OPEN

The Section of Gastroenterology, University of Michigan, invites applications from suitably qualified individuals for training in **ACADEMIC GASTROENTEROLOGY**. Applicants should be trained in a clinical specialty (generally in internal medicine) and, preferably, have had 1 year of experience in clinical gastroenterology. A commitment to academic medicine is essential. Training is focused in three areas: (i) immunopathology (preceptor, Dr. W. O. Dobbins, III); (ii) hepatic pathophysiology (preceptor, Dr. J. J. Gumucio); and (iii) GI endocrinology (preceptor, Dr. C. Owyang). Program emphasizes interdisciplinary activity and course work in the relevant basic sciences. Starting date negotiable. Salary determined by funding agency (NIH). Inquiries should be directed to: **Keith S. Henley, M.D., Program Director, Physician in Charge, Section of Gastroenterology, Room 6590, Kresge I, University of Michigan Medical Center, Ann Arbor, Michigan 48109.** An Equal Opportunity/Affirmative Action Employer.

TENURE POSITION IN ARCHAEOLOGY

University of Minnesota, Minneapolis

A position as associate professor or professor of archaeology and director of the Center for Ancient Studies will be available in September 1981. Tenure and primary teaching responsibilities will be either in the Department of Anthropology or the Department of Classics. The Center for Ancient Studies is an interdisciplinary graduate program concerned with various facets of early human cultures. Applicants should send curriculum vitae, three letters of reference, and statement of interdisciplinary interests and experience to: **H. E. Wright, Pillsbury Hall, University of Minnesota, Minneapolis, Minn. 55455,** before 1 November 1980.

Department of Biochemistry, Purdue University, invites applications for a tenure-track position at the **ASSISTANT PROFESSOR** level in the area of plant molecular biology and gene transfer technology. Candidates must have significant postdoctoral experience in the field and will be expected to develop a strong research program. In addition to classroom teaching at the graduate or undergraduate levels, the appointee will be expected to direct Ph.D.-level dissertation research. Excellent opportunities exist for collaboration with established groups in photosynthesis, nitrogen fixation, plant cell culture, biochemical genetics, molecular biology, gene expression, and enzyme regulation. Applicants should include curriculum vitae, a brief description of past, ongoing and proposed research, and the names and addresses of three or four individuals well acquainted with the applicant's research and teaching abilities. *Purdue University is an Equal Opportunity/Affirmative Action Employer.* Deadline for submission: 15 November 1980. Applications should be addressed to:

Dr. Don M. Carlson, Head
Department of Biochemistry
Purdue University
West Lafayette, Ind. 47907

VISITING ASSISTANT PROFESSOR OF BIOCHEMISTRY

VISITING ASSISTANT PROFESSOR OF BIOCHEMISTRY—Nontenure-track position available immediately. Recent Ph.D. in biochemistry. The position will involve teaching of medical and graduate students and participation in research in ongoing projects. Initial 12-month appointment with opportunity for renewal. Minimum salary will be \$15,000 per year. Send detailed curriculum vitae, statement of research interests, and three letters of recommendation to: **Joseph G. Cory, Department of Biochemistry, University of South Florida College of Medicine, Tampa, Florida 33612.** *University of South Florida is an Equal Opportunity Employer in full compliance with the promise of the Fair Employment Act.*

POSITIONS OPEN

ASSISTANT PROFESSOR, Division of Pharmacology. We are seeking to fill three positions at the assistant professorship level in the Division of Pharmacology of the Sidney Farber Cancer Institute and the Department of Pharmacology at Harvard Medical School. Candidates should be prepared to develop independent research programs in an area of biochemical or clinical pharmacology relevant to cancer. Areas of interest include, but are not limited to: membrane biology (receptors, hormones); drug-DNA interaction (including repair); cell differentiation (as influenced by drugs); and pharmacokinetics. Applicants should send curriculum vitae and bibliography, including a short description of research interest and the names of three references, to: **Fran Whitfield, Division of Pharmacology, SIDNEY FARBER CANCER INSTITUTE, 44 Binney Street, Boston, Mass. 02115.** An Affirmative Action/Equal Opportunity Employer.

ASSISTANT PROFESSOR OF BIOLOGY

A full-time faculty position opening in the Science Division. Teaching human anatomy and physiology, immunology, biochemistry, cell physiology, and other courses as assigned on a rotation basis in the area's department. Also would assist in administering the Medical Technology Program offered by the college. A Ph.D. in cell biology/biochemistry is required and teaching experience is preferred. Appointment date will be January 1981. Send letter of application, detailed résumé, and names of three references by 15 October 1980 to:

Dianna B. Lammert
Director of Personnel
Maryville College
13550 Conway Road
St. Louis, Missouri 63141

Affirmative Action/Equal Opportunity Employer

ASSISTANT PROFESSOR, CELL BIOLOGY—The University of Tennessee-Oak Ridge Graduate School of Biomedical Sciences, located within the Biology Division of the Oak Ridge National Laboratory, invites applications for a tenure-track position from individuals with a background in cell biology. Position available September 1981. Research expertise in genetic engineering-recombinant DNA techniques is desirable although qualified individuals in other research areas are encouraged to apply. Responsibilities will include teaching graduate cell biology and advanced courses in the candidate's area(s) of expertise as well as maintaining an active research program. Excellent P2 and P3 research facilities are available. Applicants should send up-to-date curriculum vitae and the names of three referees before 31 October 1980 to: **Dr. W. E. Barnett, Director, The University of Tennessee-Oak Ridge Graduate School of Biomedical Sciences, P.O. Box Y, Biology Division, Oak Ridge National Laboratory, Oak Ridge, Tenn. 37830.** An Equal Opportunity/Affirmative Action Employer.

ASSISTANT PROFESSOR OF HEALTH PHYSICS AND NUCLEAR PHARMACY, PURDUE UNIVERSITY. Tenure-track (12-month) position for teaching undergraduate and graduate courses in health physics and nuclear pharmacy. Also, conduct and direct research in area of interest. A Ph.D. in health physics, nuclear pharmacy, or closely related area required. Teaching or industrial experience preferred. Send résumés before 1 November 1980 to: **Dr. Paul L. Ziemer, Associate Head, School of Health Sciences, Purdue University, West Lafayette, Ind. 47907.**

An Equal Opportunity/Affirmative Action Employer

The Plant Growth Laboratory invites individuals with a Ph.D. in plant physiology, plant ecology, or botany to apply for a position as an **ASSISTANT RESEARCH PHYSIOLOGICAL ECOLOGIST**. The individual is expected to have research experience in nitrogen fixation in an aquatic environment. The research is to be directed toward the evaluation of nitrogen fixation by *Azolla-Anabaena* in a rice paddy. The person will be responsible for managing rice research plots growing both *Azolla* and rice in flooded paddies. The research will require physiological and ecological studies on *Azolla* and the characterization of the effect of microclimatic and nutrient environments on *Azolla* production. Applicants should submit résumé, transcripts, copies of publications, and the names and addresses of at least three referees to: **D. W. Rains, Plant Growth Laboratory, University of California, Davis, Calif. 95616.** Position available 1 November 1980. *The University of California is an Equal Opportunity/Affirmative Action Employer and invites applications from all qualified individuals.* Final filing date: 15 October 1980.

POSITIONS OPEN

ASSISTANT AND ASSOCIATE PROFESSOR OF PHYSIOLOGY

The University of Florida, College of Medicine, has two faculty openings, each requiring a Ph.D., M.D., or equivalent to begin 1 December 1980.

ASSISTANT PROFESSOR: a developmental physiologist, preferably with ongoing research interest in fetal or newborn development of hormone balance and renal or cardiovascular system. The candidate should have at least 2 years of postdoctoral experience with strong evidence of potential as a researcher and teacher.

ASSOCIATE PROFESSOR: cell physiologist competent in cell culture, radioimmunoassay receptor analysis, and with interest in peptides. Record of productivity and competence in teaching endocrinology and cell physiology. Able to obtain grants and supervise graduate students.

Send curriculum vitae and names of three references by 15 October 1980 to:

Chairman, Search Committee
Department of Physiology
University of Florida College of Medicine
Box J-274, JHMHC
Gainesville, Fla. 32610

Competitive salary and set up funds. *An Equal Opportunity Employer. Women and minorities are encouraged to apply.*

ASSISTANT RESEARCH POSITION

Research position available immediately in the Division of Medical Genetics for person experienced in tissue culture. Experiments involve studies of fetal antigens and endocrinology. Salary commensurate with experience (\$17,000 to \$23,000). Submit curriculum vitae to:

Dr. Barbara F. Crandall
Mental Retardation Research Center
Center for the Health Sciences
University of California, Los Angeles
Los Angeles, Calif. 90024

Equal Opportunity/Affirmative Action Employer

ASSOCIATE SCIENTIST, BIOCHEMISTRY

International Harvester has formed a new advanced product development team which is offering outstanding career opportunities in applied science. This position requires an individual with a Ph.D. degree and several years of experience in biochemical research. Duties will involve group leadership in conducting experiments with biological material from agricultural sources in support of crop harvesting systems.

Send your résumé and letter of application to: **Dr. Donald W. De Jong, Associate Staff Scientist, Biological Sciences, International Harvester Company, 4415 West Harrison Street, Suite 530, Hillside, Illinois 60162.**

An Equal Opportunity Employer, M/F

AVIAN ECOLOGY, FIELD ORIENTATION. Assistant/associate professor. Rank and salary open. Includes teaching field ornithology, general biology, and other appropriate courses; directing graduate students; active research program. Send résumé, transcripts, three letters of recommendation, and statement of teaching/research goals by 14 November to: **Paul Monson, Department of Biology, University of Minnesota, Duluth, Duluth, Minn. 55812.** *An Affirmative Action/Equal Opportunity Employer.*

BEHAVIORAL ECOLOGIST

The Department of Biological Sciences of the State University of New York at Albany (SUNYA) invites applications for a behavioral ecologist. Preference will be given to candidates who combine theoretical and empirical approaches on terrestrial animals. Teaching responsibilities include supervision of graduate student research; introductory and advanced ecology courses. Level: assistant professor, tenure track. Candidates must have publications, postdoctoral experience, and clear evidence of research productivity. Closing date for applications is 1 November 1980. Please send curriculum vitae and names of three references to: **H. Ronald Pulliam, Department of Biological Sciences, State University of New York at Albany, 1400 Washington Avenue, Albany, N.Y. 12222.** *SUNYA is an Equal Opportunity/Affirmative Action Employer. Applications from women, minorities, and the handicapped are especially welcome.*

POSITIONS OPEN

BENTHIC ECOLOGIST

Permanent position at research laboratory on the Chesapeake Bay for Ph.D. with experience studying animal-sediment interactions in estuarine or marine systems, and interests in population dynamics, community structure, or physiological ecology of benthic invertebrates preferred. Should be broadly trained with demonstrated quantitative and statistical abilities. Duties include participation in interdisciplinary applied ecological studies and development of an active personal research program. Applicants should submit curriculum vitae, statement of research interests, and three letters of recommendation by 31 October 1980 to:

Dr. Louis E. Sage
Academy of Natural Sciences of Philadelphia
Benedict Estuarine Research Laboratory
Benedict, Maryland 20612

Equal Opportunity Employer

BIOCHEMICAL ENDOCRINOLOGIST. Tenure-track position at assistant professor level to begin about 1 July 1981. Minimum of 2 years of postdoctoral experience with demonstrated expertise in natural products chemistry, in vitro techniques, and microsurgery. Current interests in insect neuroendocrinology preferred. Send résumé, including statement of specific research plans, and have three letters of recommendation sent to: **Chairman of Search Committee, Department of Zoology, University of North Carolina, Chapel Hill, N.C. 27514,** by 1 December 1980. *The University of North Carolina is an Affirmative Action/Equal Opportunity Employer.*

BIOCHEMICAL ENDOCRINOLOGY. To study mechanism of cyclic AMP regulation of human estrogen biosynthesis in placental and gonadal tissue. Experience in any of the following preferred: cell/tissue culture, in vitro protein synthesis, membrane-bound protein purification. Postdoctoral position with opportunity for subsequent permanent staff appointment. Stipend: \$13,300 to \$17,000. Excellent facilities. Send curriculum vitae to: **Dr. Francis Belino, Medical Foundation of Buffalo, Inc., 73 High Street, Buffalo, N.Y. 14203.**

BIOCHEMISTRY-BIOPHYSICS POSTDOCTORAL POSITIONS are available for functional and structural studies (using x-ray crystallography, fluorescence, kinetics, and synchrotron radiation) on either polypeptide hormones, or calcium-binding proteins, or hemoglobins and other heme proteins. Experience in at least one of the following is highly desirable: protein chemistry, biophysical chemistry, or x-ray diffraction. One position available in January, the second in May 1981. Send curriculum vitae and the names of three references to: **Dr. Keith Moffat, Section of Biochemistry, Molecular and Cell Biology, Clark Hall, Cornell University, Ithaca, N.Y. 14853.**

Cornell University is an Equal Opportunity/Affirmative Action Employer.

FLORIDA STATE UNIVERSITY DEPARTMENT OF BIOLOGICAL SCIENCE BIOCHEMICAL GENETICIST

A nontenure-line faculty-level position in biochemical genetics is available immediately. A specific research background in fungal (neurospora) genetics/biochemistry/molecular biology will be favored. This research assistant professorship level appointment will be with the departmental chairman and relate to his research and graduate program. Annual appointments may be renewed for an indefinite period of time and independent grant proposals may be submitted. Full participation in faculty affairs to the extent professionally desirable is encouraged. Send curriculum vitae, reprints, support letters, and a brief statement of research interests to:

A. Gib Debusk, Chairman
Department of Biological Science
Florida State University
Tallahassee, Florida 32306

We are an Affirmative Action/Equal Opportunity Employer.

BOTANIST. Associate curator in charge of the Herbarium, with curatorial experience and Ph.D.; major interest in systematics and evolution of extant or extant tropical plants. Teaching opportunities. Deadline: 30 October 1980. Begins 1 January 1981, or soon thereafter. Send letter giving five references and curriculum vitae to: **Search Committee, Department of Natural Sciences, Florida State Museum, University of Florida, Gainesville, Fla. 32611.** Attention: **Walter Aufferberg.** *An Equal Opportunity/Affirmative Action Employer.*

POSITIONS OPEN

BIOLOGIST. Seek Ph.D. in mammalian or cellular physiology to join a research group evaluating the toxicity and mutagenicity of environmental pollutants. Experience in cryogenetics and cell culture is most desirable. Send curriculum vitae and names of two references to: **Dr. D. C. Borg, Chairman, Medical Department, Brookhaven National Laboratory, Associated Universities, Inc., Upton, Long Island, N.Y. 11973.** *An Equal Opportunity Employer, M/F.*

CHAIRMAN, DEPARTMENT OF PATHOLOGY

The Uniformed Services University School of Medicine invites applications for the position of chairman, Department of Pathology. Candidates should be Board-certified in anatomic or clinical pathology, should have records of demonstrated excellence in teaching and research, and should have administrative abilities. Interested candidates should submit curriculum vitae, bibliography, and names of three references by 1 November 1980 to: **Dr. Francis J. Haddy, Chairman, Pathology Search Committee, c/o Personnel/Manpower Division, Uniformed Services University of the Health Sciences, 4301 Jones Bridge Road, Bethesda, Md. 20014.** *The Uniformed Services University is an Equal Opportunity/Affirmative Action Employer.*

DIVISION CHAIRMAN. Applications are invited for the position of chairman, Division of Natural Science and Mathematics at Hillsdale College, a private liberal arts college. Division includes: Biology, Chemistry, Mathematics, and Physics Departments. Tenure-track appointment as associate or full professor in biology. Applicant should have a commitment to undergraduate teaching. Administrative experience and leadership skills are essential. Ph.D. required; expertise in developmental biology with strong cell biology/biochemistry background preferred. Salary competitive. Teaching load: two courses per semester, summer school extra. Starting date: 25 August 1981. Send résumé and letters of reference to: **Dr. James J. Peters, Physics Department, Hillsdale College, Hillsdale, Mich. 49242.** Closing date for applications: 15 November 1980.

CHEMICAL CARCINOGENESIS

Postdoctoral: two positions available immediately for the study of the metabolic activation and detoxification of polyaromatic hydrocarbons and nitrogen-containing heterocyclics in rodents and in rodent and human cell cultures. Send applications to:

Dr. James K. Selkirk
Chemical Carcinogenesis and Carcinogen Metabolism
Biology Division
Oak Ridge National Laboratory
P.O. Box Y
Oak Ridge, Tenn. 37830

An Equal Opportunity/Affirmative Action Employer

DIRECTOR OF CLINICAL LABORATORIES sought for San Francisco General Hospital Medical Center, with professorial appointment in the University of California, San Francisco (UCSF), Department of Laboratory Medicine. Qualifications include Board-certification in a relevant medical field. The candidate should have demonstrated ability to direct and administer a busy service laboratory. Please send curriculum vitae to:

Stephen N. Cohen, M.D.
Clinical Laboratories
Room M-506
University of California, San Francisco
San Francisco, Calif. 94143

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

THE DEPARTMENT OF ECOLOGY AND EVOLUTIONARY BIOLOGY of the University of Arizona seeks applicants with interests in plant ecology, plant population biology, sociobiology, or macro-evolutionary processes to fill a tenure-track position starting in August 1981. Preference will be given to applicants intending to develop strong programs of field research using the diverse natural habitats accessible from southern Arizona, and to those working on plants or invertebrates. Salary and rank will depend on qualifications. Applications consisting of curriculum vitae, statement of research interests, and three letters of reference should be sent to: **Dr. James H. Brown, Department of Ecology and Evolutionary Biology, University of Arizona, Tucson, Arizona 85721.** Deadline is 30 November 1980. *Equal Opportunity/Affirmative Action/Title IX/Section 504 Employer.*

ASSISTANT PROFESSORS: BASIC MEDICAL SCIENCES

The Fort Wayne Center for Medical Education, Indiana University School of Medicine, is seeking five full-time, tenure-track basic scientists at the assistant professor level, beginning 1 July 1981, to develop the first-year medical school curriculum and active and fundable research programs. Applicants should have an earned doctorate, zero to 2 years of post-doctoral research/teaching experience, and the ability to develop a course in their respective discipline for medical students and graduate courses in their area of specialization in the future.

Preferred areas of expertise for each position are as follows:

- 1) **Gross Anatomist:** teaching experience in embryology or neurosciences is also desirable.
- 2) **Histologist:** teaching experience in embryology or neurosciences and training in electron microscopy are desirable.
- 3) **Neuroscientist:** concentration in neuroanatomy is preferred.
- 4) **Physiologist:** specialization in cardiovascular research is preferred; renal or respiratory physiology is also acceptable.
- 5) **Microbiologist:** expertise in bacteriology is preferred; research in immunology or virology is also acceptable.

Applicants for any one of these positions should send curriculum vitae and names/addresses of three references to:

Barth H. Ragatz, Ph.D., Associate Director
Fort Wayne Center for Medical Education
Indiana University School of Medicine
2101 Coliseum Boulevard, East
Fort Wayne, Indiana 46805

Indiana University is an Equal Opportunity/Affirmative Action Employer.

DEAN COLLEGE OF ALLIED HEALTH PROFESSIONS TEMPLE UNIVERSITY

Temple University invites nominations and applications for the position of dean of the College of Allied Health Professions. The dean will provide dynamic leadership for programs in health records administration, medical technology, nursing, occupational therapy, and physical therapy. Baccalaureate and master's degrees and continuing education programs are offered within the College. Applicants must be knowledgeable about the health care system and have demonstrated administrative ability, with prior experience in higher education and a terminal degree in a field appropriate to the mission of the College.

Temple University is a large, urban, state-related university with strong academic programs and faculty, a diverse student body, and multiple affiliations in the health care community.

Applications or nominations should be received by 15 December 1980. Letters of application should be accompanied by curriculum vitae and the names of at least three referees. Forward all materials to:

Professor Joyce Shoemaker
Chairperson, Dean's Search Committee
Temple University
College of Allied Health Professions
3307 North Broad Street
Philadelphia, Pennsylvania 19140

Temple University is an Equal Opportunity/Affirmative Action Employer.

VICE PRESIDENT OF THE ROCKEFELLER FOUNDATION

The Rockefeller Foundation is seeking a senior vice president with a proven record of leadership in the medical or natural sciences.

The Rockefeller Foundation is a private philanthropic organization, chartered in 1913 "to promote the well-being of mankind throughout the world." It is currently active in five program areas: Arts, Humanities and Contemporary Values; Conquest of Hunger; Equal Opportunity; International Relations; and Population and Health. The Foundation operates primarily by making grants to organizations and individuals and, secondarily, through cooperative programs in the international field that require staff as well as funding.

The individual selected for the position of vice president will have primary responsibility for the coordination within the Foundation of strategies for science-based activities, especially in the fields of agriculture, health, and population. Candidates should be committed to the value of applying science to the amelioration of social problems and have direct experience in one of the Foundation's program areas. In addition, the vice president will share in the overall management of the Foundation, and he or she should, therefore, have had prior administrative responsibilities, as well as interest in the broad scope of the Foundation's programs.

Applications and nominations for the position of vice president, including curriculum vitae and a list of references, should be sent to:

Dr. Richard W. Lyman
President
The Rockefeller Foundation
1133 Avenue of the Americas
New York, New York 10036

The Rockefeller Foundation is an Equal Opportunity Employer.

SENIOR CHEMIST PHYSICAL CHEMISTRY RESEARCH

Growth in our Corporate Physical Chemistry Research Section has created an opening for a Senior Physical Research Chemist. This position will be responsible for the Section's activities in the characterization of surfaces and colloids, particularly in the areas of organic coatings, emulsions, and dispersions.

The ideal candidate for this position will have a Ph.D. in Physical Chemistry, minors in math or physics and a background in the application of computers in laboratory work. Candidates must also have a demonstrable track record of solving challenging problems of both a long and short term nature in thin film and fiber properties, electrokinetics, colloidal particle interactions and sorption phenomena.

An ability to interface with all levels of R&D personnel and above average oral and written communication skills are also expected.

Johnson Wax is a multi-national chemical specialties company located in a pleasant medium sized community between Milwaukee and Chicago. Coupled with professional growth opportunity, we offer a competitive salary plus an excellent benefits program including cash and deferred profit sharing. Send a detailed resume to R. W. Clark, Personnel Manager—Administrative & Professional, S. C. JOHNSON & SON, INC., 1525 Howe Street, Racine, Wisconsin 53403.

Johnson wax

An Equal Opportunity Employer M/F

POSITIONS OPEN

CHAIRPERSON DEPARTMENT OF BIOCHEMISTRY

THE MEDICAL COLLEGE OF WISCONSIN is conducting a national search for a chairperson for the college's Department of Biochemistry. Applications are invited from established scholars with the highest academic credentials in teaching and research, with demonstrated leadership ability, capable of administering a department with 13 full-time faculty members, three part-time faculty, and a staff of 20. The Medical College of Wisconsin is a private, free-standing, state-assisted school of medicine located on the 1000-acre campus of the growing Milwaukee Regional Medical Center on the west side of Milwaukee, Wisconsin. The Biochemistry Department presents the basic course in biochemistry for 200 first-year medical students and trains graduate students in programs leading to the master of science and doctoral degrees in biochemistry. The department occupies one floor of the research wing of the college's new 427,000 square foot Medical Education Building which is adjacent to two of the college's major teaching facilities: The Milwaukee County Medical Complex and the new Froedtert Memorial Lutheran Hospital, a private, tertiary care hospital opening this month. Interested candidates should submit complete curriculum vitae and the names of three references by 15 October 1980 to: **John J. Lech, Ph.D., Chairman of the Biochemistry Search Committee, Department of Pharmacology and Toxicology, The Medical College of Wisconsin, Box 26509, Milwaukee, Wisconsin 53226. The Medical College of Wisconsin is an Equal Opportunity/Affirmative Action Employer. Minority and women candidates are encouraged to apply.**

DIRECTOR—ANIMAL RESOURCES FACILITY GEORGETOWN UNIVERSITY

Animal Facility Director—D.V.M., laboratory animal specialist with postgraduate training in laboratory animal medicine. ACLAM diplomate or eligibility for certification desirable. Have demonstrated interest and competence in research, administration, and communicative skills. The director is responsible for the management, development, and accreditation of a facility serving the research and educational needs of the Georgetown University Medical Center. Opportunity exists for the successful candidate to develop his/her research programs and to collaborate on a professional level with other scientific colleagues at the university. Salary and academic appointment are commensurate with experience and qualifications. Position is available immediately. *Georgetown University is an Equal Opportunity/Affirmative Action Employer.* Send curriculum vitae and names of references to:

Dr. Kenneth Dretchen
Chairman, Search Committee
Department of Pharmacology
Georgetown University
Schools of Medicine and Dentistry
3900 Reservoir Road, NW
Washington, D.C. 20007

Deadline for receipt of application: 1 December 1980.

EDUCATOR-ZOOLOGIST

Job duties include educational programming, public relations, and assistance in operation of wildlife center. Qualifications include advanced degree, knowledge of native wildlife, and familiarity with educational techniques. Probable starting salary is \$13,500 to \$14,500. Closing date for receipt of application is 1 November 1980. Send résumé, official transcripts, and letters of recommendations to:

Dr. Paul Beaver
FOREST PRESERVE DISTRICT
OF DU PAGE COUNTY
881 West St. Charles Road
Lombard, Ill. 60148

ELECTRON MICROSCOPIST: Ph.D. Research associate position investigating morphologic correlates of blood-retinal barrier permeability. Techniques include TEM, electron/dense probes, morphometric serology, freeze-fracture, SEM. Ability to perform independent investigations suitable for publication essential. Good organizational and supervisory capabilities are important. Postdoctoral experience desirable. Potential for long-term position with faculty appointment. Salary: \$14,000 to \$18,000; excellent fringe benefits. Send curriculum vitae and three references to: **Roy W. Bellhorn, D.V.M., Associate Professor, Department of Ophthalmology, Montefiore Hospital and Medical Center, Albert Einstein College of Medicine, 111 East 210 Street, Bronx, N.Y. 10467. Equal Opportunity Employer, M/F.**

POSITIONS OPEN

ENDOCRINE PHYSIOLOGIST: a tenure-track faculty position in the Department of Physiology is available in fall 1981 at the assistant professor level. The applicant must have broad training and productivity in endocrine physiology with the capacity to teach reproductive physiology. Teaching responsibilities will include participation in courses for allied health, dental, graduate, medical, and nursing students. Submit curriculum vitae and a résumé of research to: **Dr. Byung P. Yu, Department of Physiology, The University of Texas Health Science Center at San Antonio, San Antonio, Texas 78284. An Affirmative Action/Equal Opportunity Employer.**

ENERGY/POLICY RESEARCH PROGRAM MANAGERS

We are a university-based, state-supported research organization providing energy policy information to the executive and legislative branches of Colorado government. We have openings for two client-oriented program managers who can administer as well as conduct policy-related research. These are unique opportunities to influence the future in a dynamic and rapidly changing state environment. (i) For one of the positions, applicants should have several years of experience in energy or mineral resource development. We prefer a person with an undergraduate technical education and an advanced degree in economics, business, or one of the policy sciences. (ii) The second position is for a civil or mechanical engineer, P.E. preferred, who wants to work on technical and policy problems of energy management, energy consumption and conservation in structures, and alternative energy development. Both positions require strong written and oral communication skills and project management experience; interest in working with state legislators and executive branch officials necessary; background in problems of the Rocky Mountain West helpful. Apply in writing (no telephone inquiries) with full résumé to:

COLORADO ENERGY RESEARCH INSTITUTE
3000 Youndfield Street
Lakewood, Colorado 80215

An Equal Opportunity/Affirmative Action Employer

Work in the Sunshine State! The Florida Department of Environmental Regulation (DER) is recruiting for **TWO ENGINEER IV POSITIONS**. Both require a bachelor's degree and 4 years of appropriate (sanitary and/or pollution control) experience. A master's degree can be substituted for 1 year of experience. Monthly salary: \$1421 to \$1919. One position requires a sound knowledge of coastal processes, tidal inlet hydraulics, and surface water hydrology. The other position is responsible for the review of applications of domestic or industrial facilities for NPDES permits to determine the conditions for issuance of a state certification. Contact: **Suzanne Walker, Bureau of Permitting, DER, 2600 Blair Stone Road, Tallahassee, Florida 32301, or telephone: 904-488-0130. An Equal Opportunity/Affirmative Action Employer.**

ENZYMOLOGIST/NEUROCHEMIST. Postdoctoral position available immediately to study control of GABA synthesis. Project involves studies of structural and regulatory properties of purified glutamate decarboxylase and may include studies with surviving tissue preparations. Send résumé and names of three references to: **Dr. David L. Martin, Division of Laboratories and Research, New York State Department of Health, Empire State Plaza, Albany, New York 12201.**

HOWARD UNIVERSITY AVAILABLE FACULTY POSITIONS

The Department of Anatomy invites applications for a faculty position in gross anatomy-embryology beginning 1 July 1981. The candidate must be qualified to teach gross anatomy and embryology to medical, dental, and graduate students. The candidate should have at least 2 years of postdoctoral research training; a strong academic background in the anatomical sciences; an active and independent research program; and be able to secure research grant support. Prior medical or dental school teaching experience is highly desirable. The salary is competitive. The departmental and university environments are highly conducive to the pursuit of first rate research and instruction. Qualified applicants are invited to submit curriculum vitae, transcripts, and four references to: **Chairman, Department of Anatomy, College of Medicine, Howard University, 520 W Street, NW, Room 1105, Washington, D.C. 20059.**

Howard University is an Equal Opportunity/Affirmative Action Employer.

POSITIONS OPEN

FACULTY OPENING

The Biology Department of Reed College will have an opening for a recent Ph.D. in **cellular biology (animal)** for September 1981. The successful candidate will be expected to teach cellular biology to excellent undergraduates and guide their research. Moreover, the appointee will be expected to develop and maintain an active research program.

Résumés and three recent letters of reference should be sent to:

Dr. L. N. Ruben
Department of Biology
Reed College
Portland, Oregon 97202

Closing date for receipt of application will be 10 January 1981.

Reed is an Equal Opportunity Employer

FACULTY POSITIONS IN PATHOLOGY

The Uniformed Services University School of Medicine invites applications for tenured or tenure-track faculty appointments in the Department of Pathology at the levels of professor, associate professor, or assistant professor. Levels of appointment and salaries will be commensurate with training and experience. Candidates should have M.D., Ph.D., or related professional degrees, appropriate postdoctoral training or experience, teaching abilities, and demonstrated excellence in research. Interested candidates should submit curriculum vitae, bibliography, and names of three professional references by 1 November 1980 to: **Dr. Francis J. Haddy, Chairman, Pathology Search Committee, c/o Personnel/Manpower Division, Uniformed Services University of the Health Sciences, 4301 Jones Bridge Road, Bethesda, Md. 20014. The Uniformed Services University is an Equal Opportunity/Affirmative Action Employer.**

FACULTY POSITIONS IN BIOCHEMISTRY

The Department of Biochemistry and Biophysics at Texas A&M University invites applications for several 12-month, tenure-track positions. Academic rank and salary will be commensurate with experience. Applicants should have a terminal doctorate, postdoctoral experience, and the demonstrated ability to either continue or establish an independent research program in collaboration with biochemists and molecular biologists who have similar interests. Particular interest is expressed in biochemists with experience in recombinant DNA technology, gene sequencing, and post-translational processing; however, exceptionally qualified individuals with interests in other areas of biochemistry will be considered. Responsibilities will include research, teaching at the graduate level in the area of expertise, and participation in the undergraduate teaching program.

Applicants should send complete curriculum vitae, a list of publications, a summary of future research plans, and the names of three references no later than 1 November 1980 to: **Dr. E. G. Sander, Head, Department of Biochemistry and Biophysics, Texas A&M University, College Station, Texas 77843; telephone: 713-845-5032. Texas A&M University is an Equal Opportunity/Affirmative Action Employer.**

FACULTY POSITIONS AT THE OHIO STATE UNIVERSITY

The Chemistry Department expects to add **three** tenure-track faculty positions, effective June or September 1981. Appointment at the **assistant professor** rank is expected; however, outstanding individuals with experience will be considered also for the **higher ranks**. Preference will be given to persons with postdoctoral experience and with research interests in the **physical or biochemical** areas. For one of the physical positions, preference will be given to candidates with interests in laser applications to spectroscopy or multi-photon processes; the other position will be in a different area such as statistical mechanics and thermodynamics or surface structures and processes. For the biochemical position, preference will be given to candidates with research interests in the areas of membranes, nucleic acids, or enzymology. Applicants should submit: (i) a detailed résumé, (ii) transcripts of graduate studies, (iii) a summary of research interests, and (iv) reprints of representative papers. In addition, please supply the names of five persons we could contact for references; preferably, the candidate should have four letters of reference sent directly to: **Professor Devon W. Meek, Chairman, Department of Chemistry, The Ohio State University, 140 West 18 Avenue, Columbus, Ohio 43210. Deadline for completed applications: 1 November 1980. The Ohio State University is an Affirmative Action/Equal Opportunity Employer.**

POSITIONS OPEN

FACULTY POSITION FOR FLUID AND ELECTROLYTE TRANSPORT PHYSIOLOGIST

Applications are invited for a tenure-track opening at the level of assistant professor, in the Section of Physiology and Biophysics, Division of Biology and Medicine, at Brown University beginning 1 September 1981. Applicants must have a Ph.D. or M.D. degree, a minimum of 2 years of postdoctoral training, demonstrated productivity in research, and a commitment to excellence in teaching. The successful applicant will participate in teaching medical physiology courses with major laboratory components as well as graduate and undergraduate courses. He/she will be expected to develop an externally supported, independent experimental research program in the area of transport of fluids and electrolytes across cell membranes to complement the section's existing interests in fluid and electrolyte physiology. Applicants should send curriculum vitae, bibliography, summary of research interests, and the names of at least three references by 31 October 1980 to: Dr. Morris Povar, Chairman of the Search Committee, Division of Biology and Medicine, Box G, Brown University, Providence, R.I. 02912. *Brown University is an Equal Opportunity/Affirmative Action Employer.*

University of Michigan Medical School. **FACULTY POSITION** open in Department of Physical Medicine and Rehabilitation, Rehabilitation Engineering Division. Ph.D. in engineering field required. Two to 3 years of work experience in rehabilitation engineering and clinical neurophysiology. Duties will include directing of Rehabilitation Engineering Division, directing on-going research activities and establishing new projects in the areas of mobility, seating, environment control, and nonvocal communication. Teaching responsibilities will include direct teaching of residents and medical students relative to rehabilitation engineering, guidance of students working on their doctorate dissertations, and supervision of graduate and undergraduate engineering students. Reply to: Box 222, SCIENCE. Code 08FO. *A nondiscriminatory, Affirmative Action Employer.*

FACULTY POSITION IN MEDICAL BIOCHEMISTRY

Applications at the assistant professor level for a faculty position to be filled September 1981 are sought. Applications at the level of associate or full professor will receive consideration as well. Applicants in any area of biochemistry will be fully considered, but applicants in the area of recombinant DNA cloning, eukaryotic molecular genetics, or clinical biochemistry are especially sought. Current departmental research interests include electron microscopy of nucleic acids, DNA replication, transposons, molecular biology of phage λ , prokaryotic and eukaryotic protein synthesis, membrane bound viral receptors, and liposomes and other carrier systems. Candidates will be expected to carry out an independent research program and to participate in teaching medical students in new and expanding medical school. Past experience with clinical research or medicine useful. Department moves into new Basic Medical Sciences Building (presently under construction) late in 1982. Sunbelt climate in College Station, Texas, located near Houston and Austin. Send curriculum vitae and names of references to: Dr. Garret M. Ihler, M.D., Ph.D., Head, Department of Medical Biochemistry, College of Medicine, Texas A&M University, College Station, Texas 77843.

Equal Opportunity through Affirmative Action

FACULTY POSITION IN TOXICOLOGY

The Philadelphia College of Pharmacy and Science (PCPS) invites applications for tenure-track position in **toxicology**. Depending upon experience and qualification, the appointment may be as **assistant or associate professor**. Candidates should have a Ph.D. in toxicology or related sciences. Preference will be given to individuals with postdoctoral experience. Experience in industrial toxicology is desired. Primary responsibility will be instruction in undergraduate toxicology program and in future toxicology graduate program. The candidate will also be expected to pursue independent research in toxicology. The position is to be filled on or before 1 July 1981. Applicants should submit curriculum vitae by 1 January 1981 to: Dr. Gary L. Lage, Director, Toxicology Programs, The Philadelphia College of Pharmacy and Science, 43rd and Kingsessing Mall, Philadelphia, Pa. 19104. *PCPS is an Affirmative Action/Equal Opportunity Employer.*



Am Seminar für Angewandte Mathematik der Universität Zürich ist eine Professur (Ass. Professur oder Extraordinariat) zu besetzen.

Gedacht ist an einen Vertreter der

Angewandten Statistik oder Biomathematik.

Zu den Aufgaben des Stelleninhabers gehören Kurs-Vorlesungen sowie die Betreuung eines Beratungsdienstes für Biologen. Bevorzugt werden Bewerber, die mit biologischen Fragestellungen vertraut sind. Bewerbungen sind mit den üblichen Unterlagen bis zum 15. November 1980 zu senden an den Dekan der Philosophischen Fakultät II der Universität Zürich, Rämistr. 71, CH-8006 Zürich.

Two research scientist positions at a small research laboratory in metropolitan New York area to study the detection, purification and response to human tumor antigens. Successful candidates for both positions will hold a Ph.D. or equivalent degree. A minimum of 2 years of post doctoral training and a proven record of independent research. The immunology position requires expertise in immediate hypersensitivity and immuno-chemistry. The biochemistry position requires expertise in fractionation and purification of glycoproteins and biochemical characterization of antigens. For both positions experience with immunoassays such as ELISA and RIA is an asset. Responsibilities include supervision of technical staff, design and execution of experiments, and interaction with other staff scientists in our interdisciplinary group. Send curriculum vitae and the names of 3 references to:

Box 228, Science

An Equal Opportunity Employer M/F

VICE PRESIDENT Research & Development

Flourishing surgical/health care products company offers demanding job with limitless potential.

Join a medium-sized company whose advanced theory products have produced a spectacular growth in sales in recent years. The individual sought can be characterized as an innovator, organizer, motivator and top administrator.

More specifically, the position requires a background in Class II and Class III medical devices; a demonstrated ability to take charge of theoretical and applied research efforts; capability to interact with top surgeons and physicians; working knowledge of information resources; and success in overseeing clinical studies, regulatory affairs and product planning. You should, moreover, have a Ph.D. in an appropriate discipline, be knowledgeable in polymers, fibers, textiles and biologicals, and have established a record of innovation and achievement with a major pharmaceutical or health care company.

Position is in Metropolitan New York area. Your curriculum vitae will be forwarded unopened to our client. Write to BOX 303, Deutsch, Shea & Evans, Inc., 49 East 53rd Street, New York, N.Y. 10022. Our client is an equal opportunity employer, m/f.

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DEUTSCH, SHEA & EVANS, INC.

POSITIONS OPEN

FACULTY POSITION available in Department of Anatomy for **developmental biologist** with research program in biochemical and functional aspects of a developing system at an intracellular level, for example, gene expression, regulation of intracellular molecular events. Must have postdoctoral experience and ability to develop independent, productive research program. Prior training and teaching in anatomy desirable but not required. Responsibilities include: teaching anatomical disciplines in the medical-dental curriculum; participation in graduate program in cell and developmental biology; development of active, independent research program in developmental biology. Apply to: **Dr. J. A. Grasso, Developmental Biology Search Committee, Department of Anatomy, University of Connecticut Health Center, Farmington, Conn. 06032.** *An Equal Opportunity Employer, M/F.*

FACULTY POSITION—BIOCHEMISTRY

The Department of Biochemistry, University of Kansas Medical Center, is seeking to fill, as soon as possible, a state-supported position leading to tenure at the assistant or associate professor level. Candidates should have a Ph.D. in biochemistry or in a related field, and have postdoctoral experience. Candidates are expected to develop and maintain a vigorous research program complementary to interests of the department and teach in medical and graduate biochemistry. Candidates should send curriculum vitae, detailed statement of current and proposed research, and the names of three references to: **Dr. K. E. Ebner, Chairman, Department of Biochemistry, University of Kansas Medical Center, Kansas City, Kansas 66103.** Applications close 15 November 1980. *An Equal Opportunity/Affirmative Action Employer.*

HEAD OF PATHOLOGICAL ANATOMY

The Department of Pathology and Laboratory Medicine at the University of Pennsylvania School of Medicine is seeking an individual with strong research experience and a commitment to excellence in service and teaching to be head of the Division of Pathological Anatomy. The individual should be trained in pathological anatomy and have expertise in a subspecialty area. This person will be responsible for the sections of autopsy pathology, surgical pathology, and cytology, each of which will have its own director. The individual is expected to have an established research program and an awareness of the new frontiers that should be brought into the service arena in order to advance the field of pathological anatomy into a molecular era. The position as defined will have ample time and space for basic research activities but will require administrative talents and responsibilities. This person will be partly responsible for the direction and coordination of training of house officers and medical students, and for developing an integrative approach to teaching pathological anatomy and laboratory medicine to both groups of trainees. Academic rank and salary will be commensurate with research and clinical expertise. *The University of Pennsylvania is an Equal Opportunity/Affirmative Action Employer.*

Send curriculum vitae and list of three references to:

**Dr. Leonard Jarrett, Professor and Chairman
Department of Pathology and Laboratory Medicine
Hospital of the University of Pennsylvania
3400 Spruce Street/G1/Box 671
Philadelphia, Pennsylvania 19104**

LABORATORY MEDICINE UNIVERSITY OF PENNSYLVANIA MEDICAL SCHOOL DEPARTMENT OF PATHOLOGY AND LABORATORY MEDICINE

Applicants are solicited for **FACULTY POSITIONS** in the chemistry, blood bank, hematology-coagulation, immunology, microbiology, and data processing sections. Individuals with strong research interests and backgrounds, as well as a commitment to excellence in patient care, are sought. Academic appointment and salary will be commensurate with previous experience and service responsibility. Send curriculum vitae, list of at least three references, and a statement about research goals and areas of service interest to:

**David B. P. Goodman, M.D., Ph.D.
Director, William Pepper Laboratory
Hospital of the University of Pennsylvania
3400 Spruce Street
Philadelphia, Pennsylvania 19104**

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

POSITIONS OPEN

FACULTY POSITION in synthetic organic chemistry, associate professor or professor. Tenure-track position in synthetic organic chemistry starting fall 1981. Ph.D. and several years of postdoctoral experience required. The candidate is expected to teach graduate and undergraduate organic chemistry and develop a strong research program in synthesis. Candidates should supply a graduate transcript, curriculum vitae, résumé of future research plans, and have three letters of recommendation sent to: **Dr. Pierre Crabbe, Chairman, Department of Chemistry, University of Missouri, Columbia, Mo. 65211** before 30 November 1980. *An Affirmative Action/Equal Opportunity Employer.*

FACULTY POSITION in physical chemistry, assistant professor, tenure-track position, fall 1981. Ph.D. required and postdoctoral experience desirable. The successful candidate is expected to establish a strong research program in experimental physical chemistry. Candidates with expertise in the NMR area will be given preference. Teaching duties include graduate and undergraduate physical chemistry with some assignment in the general chemistry program likely. Candidates should supply a graduate transcript, curriculum vitae, résumé of future research plans, and have three letters of recommendation sent to: **Dr. Pierre Crabbe, Chairman, Department of Chemistry, University of Missouri, Columbia, Missouri 65211**, before 30 November 1980. *An Affirmative Action/Equal Opportunity Employer.*

GENETICIST

The Department of Zoology, University of Wisconsin-Milwaukee, anticipates an opening for a tenure-track position at the **ASSISTANT PROFESSOR** level, effective 31 August 1981. The candidate must have demonstrated potential to develop and maintain an active research program in developmental or molecular genetics. Preference will be given to applicants with postdoctoral research experience. Responsibilities include teaching undergraduate and graduate courses in genetics and the supervision of M.S. and Ph.D. students. Applications, including curriculum vitae, transcripts, a summary of research goals, and three letters of professional recommendation, should be sent to: **Professor Ethel Sloane, Chairperson, Personnel Committee, Department of Zoology, P.O. Box 413, University of Wisconsin-Milwaukee, Milwaukee, Wisconsin 53201.** Closing date is 15 December 1980.

The University of Wisconsin-Milwaukee is an Equal Opportunity/Affirmative Action Employer. Qualified women and members of minority groups are strongly urged to apply.

University of Michigan Medical School. One position at **INSTRUCTOR OR ASSISTANT PROFESSOR** level, 1 July 1981, in the Department of Anesthesiology. Board-certified or -eligible anesthesiologist with Michigan licensure. Research, clinical, and didactic experience. Reply to: **Box 221, SCIENCE, Code 26FO.** *A nondiscriminatory, Affirmative Action Employer.*

UNIVERSITY OF WESTERN AUSTRALIA Perth

LECTURER AND SENIOR TUTOR IN ANATOMY AND HUMAN BIOLOGY

Applications are invited for the above two positions in the Department of Anatomy and Human Biology. The lectureship will be available on 1 February 1981 and the senior tutorship on 1 December 1980. The appointees will be expected to teach and have active research interests in at least two of the following areas: human morphology, neurobiology, cytology and histology, developmental biology and growth, human genetics, evolution and human ecology. A human geneticist will be preferred for one of the positions. Research by staff is strongly encouraged and good facilities are available. Further details may be obtained from the head of department.

Current salaries—lecturer: A\$17,739 to A\$23,303 per annum; senior tutor: A\$15,289 to A\$17,515 per annum. Benefits include superannuation, fares to Perth for appointee and dependent family, removal allowance, study leave and long service leave, and housing loan scheme.

Application in duplicate stating full personal particulars, qualifications, and experience should reach: **The Acting Staffing Officer, University of Western Australia, Nedlands, Western Australia, 6009, Australia**, by 18 October 1980. Candidates should request three referees to write immediately to the Acting Staffing Officer.

POSITIONS OPEN

IMMUNOLOGIST—U.S. subsidiary of international biological products company is inviting applications for Ph.D. immunologist to participate in the development of vaccines of viral and bacterial origin. The successful candidate will have a broad background in immunology and immunochemistry with experience relating to antigen enhancement and the development of evaluation methods in appropriate animal test systems. CONNAUGHT is located in the Pocono Mountain region of northeastern Pennsylvania. We offer a competitive starting salary and a comprehensive benefits package. To apply, submit résumé, including current salary, to: **D. H. Gattone, Personnel Director, CONNAUGHT LABORATORIES, INC., Swiftwater, Pa. 18370.** *An Equal Opportunity Employer, M/F.*

LIMNOLOGIST. JACA Corp., a multidisciplinary environmental consulting firm, has an opening for a professional in lake restoration. Master's or Ph.D. in limnology or related field of science or engineering and minimum of 3 years of practical experience with in-lake and watershed management techniques required. Please send résumé to: **Thomas E. Walton III, JACA Corp., 550 Pinetown Road, Fort Washington, Pa. 19034.**

LIPID BIOCHEMIST. Career Federal Service. Develop independent research program to study synthesis and/or degradation of lipid at the cellular level in meat animals. Position located at Roman L. Hruska U.S. Meat Animal Research Center, Clay Center, Neb. GS-11/12/13; salary based on qualifications and experience. For applications, contact: **J. Brooks USDA/SEA/AR-B4, 2000 West Pioneer Parkway, Peoria, Illinois 61615.** Telephone: 309-671-7813. *An Equal Opportunity Employer.*

MANAGER OF ENERGY RESEARCH. The manager, who will have faculty rank, will be responsible for policy concerning energy research at the University of Alaska. The manager will seek innovative ideas on both conventional and alternative energy resources, issue requests for proposals, evaluate proposals, and be responsible for monitoring the progress of research on energy. Opportunities will be provided for part-time personal research in association with one of the research institutes. Candidates should have a Ph.D. in science or engineering, or the equivalent in training and experience. Previous administrative experience is desirable. Applications, including the names of at least three referees, should be sent to: **Vice Chancellor for Research and Advanced Study, University of Alaska, Fairbanks, Alaska 99701**, by 20 October 1980. *An Equal Opportunity/Affirmative Action Employer and Educational Institution.*

MARINE SCIENCE—UNIVERSITY OF MIAMI

The University of Miami is searching for a director of its oceanographic and atmospheric institution which has 77 full-time faculty, 170 graduate and 350 undergraduate students, and an \$11 million budget. The main function of this position is to provide leadership to a thriving, multidisciplinary community of oceanographic researchers and students, including biological, chemical, physical and geological oceanographers, ocean engineers, atmospheric scientists, and specialists in marine affairs. The person who directs this institution will be expected to promote its aims and provide liaison with federal agencies as well as private foundations, and to encourage new programs to meet the needs of both developed and developing nations, especially those of the Caribbean and South America.

Applications, including a current professional résumé, nominations, and further information should be sent to: **Dr. Michael R. Reeve, Chairman of the Search Committee, RSMAS, University of Miami, 4600 Rickenbacker Causeway, Miami, Fla. 33149.** Nominations and applications desired by 15 November 1980. Position will remain open until filled.

An Equal Opportunity/Affirmative Action Employer

MEDICAL ENTOMOLOGIST

Doctoral level position available to work on experimental transovarial transmission of dengue viruses in *Stegomyia* mosquitoes. Collaborative research project between the Vector Biology Laboratory, University of Notre Dame, and the Pacific Research Unit, Research Corporation of the University of Hawaii. Position is located at Notre Dame but employment will be with the Research Corporation. Send résumé and names and addresses of at least two references to: **Dr. Leon Rosen, P.O. Box 1680, Honolulu, Hawaii 96806.**

CHIEF PROJECT ENGINEER Spectrophotometry

Beckman Instruments, Inc., a Fortune 500 Company and a leader in the development and manufacture of medical and scientific instrumentation, is currently searching for a Chief Project Engineer.

Candidates must be degreed and have several years of experience in the commercial design and production of spectrophotometers or other closely related scientific instruments, with emphasis on achievement of low costs and volume production of the end product.

Primary responsibility is to supervise a small technical group engaged in the design of spectrophotometers. Design disciplines represented in the group include, among others, electronic engineering, mechanical engineering, computer programming, optics and electronic technicians.

The selected candidate will receive an excellent compensation and benefits package along with an outstanding career opportunity.

Please forward your resume including salary history and requirements in complete confidence to:

**Professional Employment
Scientific Instruments Division of
BECKMAN**

**BECKMAN INSTRUMENTS, INC.
P. O. Box C-19600
Irvine, Calif. 92713**

Equal Opportunity Employer M/F

R & D SCIENTISTS

Meloy Laboratories, Inc., a member of the Revlon Health Care Group of companies, is a diversified, high-technology organization located in suburban Washington, D.C. Our organization conducts long-range studies for the medical research community, develops and markets a line of sophisticated immunodiagnostic products, and produces a variety of instruments to monitor environmental quality.

We are currently seeking candidates in the following areas:

- **IMMUNOLOGY** (Ph.D.): immunoassay development; experience with enzyme and fluorescent immunoassays required.
- **IMMUNOLOGY** (Ph.D.): cellular immunologist with established experience in performing animal-based immunological research. Supervisory experience required.
- **BIOCHEMISTRY/MICROBIOLOGY** (Ph.D.): recombinant DNA cloning research; experience in Maxam, Gilbert, and Sanger sequencing methods.
- **REGULATORY AFFAIRS** (M.S./Ph.D.): coordinates QA and GMP for development of new biological production facility. Management experience required.

Salary commensurate with background and experience. Full benefits package offered. Interested candidates should submit résumé in complete confidence to:

**MELOY
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INC.**

**6715 Electronic Drive
Springfield, Virginia 22151
CODE: RL**

Equal Opportunity Employer, M/F.



MARINE BIOLOGICAL LABORATORY Woods Hole, Massachusetts 02543

announces **EIGHT SHORT COURSES FOR FALL, 1980** including a new offering on X-ray microprobe analysis. These residential programs emphasize laboratory practice and are intended primarily for scientists who require the techniques and information for their own work.

ELECTRON PROBE X-RAY MICROANALYSIS IN BIOLOGY AND MEDICINE November 2-7, 1980

Offered for the first time, this course is limited to 12 participants. The instruction includes comprehensive theoretical treatment of X-ray production from scanning electron microscopes and their analysis and interpretation both with wavelength and energy dispersive detectors. The Instructor in Chief is A.J. Tousimis of Tousimis Research Corporation, assisted principally by L.S. Birks, Naval Research Laboratories, Oliver Wells of IBM, and Robert Ogilvie of MIT.

QUANTITATIVE ANALYSIS OF ELECTRON MICROGRAPHS — Stereology, Morphometry, Optical Diffraction, and Three-Dimensional Reconstruction December 7-12, 1980

Lee Peachey of the University of Pennsylvania is Instructor in Chief of this course offered for the fourth time. Associated Instructors are Brenda Eisenberg of Rush College of Health Sciences and John Haselgrove and Larry Palmer of the University of Pennsylvania. Attendance is limited to 20 students.

OPTICAL MICROSCOPY AND PHOTOMICROGRAPHY IN THE BIOLOGICAL SCIENCES December 7-12, 1980

Limited to 16 participants who will have access to a wide array of modern microscopical and photographic equipment, this course will be offered for the fourth time at MBL by a faculty led by Robert Day Allen of Dartmouth College. Other instructors include Shinya Inoue of MBL and Nina Allen of Dartmouth.

SMALL COMPUTERS IN BIOMEDICAL RESEARCH November 30 - December 5, 1980

Offered for the second time and limited to 16 participants, this program consists of a mixture of lectures and hands-on problem solving sessions using complete microprocessor based computer systems. There are no specific prerequisites;

students will learn to adapt computer techniques to their own application requirements. Larry Palmer of the University of Pennsylvania is Instructor in Chief, assisted principally by Lee Peachey, also of Pennsylvania.

COMPARATIVE LIGHT AND ELECTRON MICROSCOPY IN CLINICAL DIAGNOSIS November 9-14, 1980

Offered for the second time, the maximum of 16 participants will consider the diagnostic application of imaging from a wide spectrum of light and electron microscope types and systems. The Instructor in Chief is Harry Carter of St. Vincent Charity Hospital, Cleveland, Ohio.

SCANNING ELECTRON MICROSCOPY IN THE BIOLOGICAL SCIENCES October 26-31, 1980

Limited to 12 participants, this program will be offered for the third time and will be led by Bruce Wetzel of NIH, assisted principally by Ralph Albrecht of the University of Wisconsin. Emphasis is on critical preparation of biological specimens.

LIQUID SCINTILLATION COUNTING IN BIOLOGY AND MEDICINE October 26-31, 1980

This program, offered for the third year at MBL, is led by Yutaka Kobayashi of New England Nuclear. The course provides theory and practice in the application of liquid scintillation counting and related techniques to biological and medical research. A section on RIA and protein binding assays will be taught by Gerald Litt of New England Nuclear. No more than 16 students will be accepted.

MARICULTURE: CULTURE OF MARINE INVERTEBRATES FOR RESEARCH PURPOSES September 28 - October 4, 1980

Carl Berg, Jr. of Harvard and MBL will lead this program for the second time. Limited to 20 participants, the instruction allows ample opportunity for individual work and consultation with a distinguished faculty numbering twelve.

ADDITIONAL INFORMATION on course content and application materials may be obtained from the Admissions Office, Marine Biological Laboratory, Woods Hole, Massachusetts 02543; Telephone 617-548-3705. MBL is an Equal Opportunity Institution.

POSITIONS OPEN

A Ph.D. in **CLINICAL BIOCHEMISTRY** is wanted to supervise an analytical laboratory in a major university hospital in the northeast. Fifty percent of time will be available for independent or collaborative research in nutrition and the metabolic response to injury and infection. Starting time and salary negotiable. Send curriculum vitae only to:

Box. 223, SCIENCE

The **INSTITUTE FOR ENZYME RESEARCH** at the University of Wisconsin-Madison is accepting applications for a position at the full professor, associate professor or, for an exceptionally gifted investigator, at the assistant professor level. This position is independent of the Institute's other research sections but requires a joint (one-half time) appointment with one of the teaching departments, such as the Department of Genetics. The duties involve basic research and training of postdoctoral associates at the Institute and participation in the activities of the teaching department. An applicant is expected to have an outstanding record of independent, original research, to have shown ability in leading a research group, and to have established a reputation for excellence in her/his field of research. Preference will be given to an individual whose research area is in molecular biology.

To ensure consideration, an application should be submitted before 1 November 1980 to: **Professor Masayasu Nomura, Chairman of the Search Committee, Institute for Enzyme Research, University of Wisconsin, 1710 University Avenue, Madison, Wis. 53706.** The University of Wisconsin is an Equal Opportunity Employer.

MICROBIAL OR ALGAL PHYSIOLOGIST

An immediate opening exists for an individual with an M.S. or Ph.D. with zero to 5 years of experience in microbial or algal physiology with good background in biochemistry. The position involves research on: (i) excretion of glycolic acid by algae and its conversion by bacteria to methane, methanol, or hydrogen, and (ii) microbial degradation or organic chemicals of environmental concern. The position provides an opportunity for the successful candidate to develop his/her own area of research interest.

Syracuse Research Corporation (SRC) is a multidisciplinary not-for-profit research organization located on the south campus of Syracuse University. SRC offers a competitive salary, excellent benefits, and a stimulating research environment. Send résumé, including salary history and names of three references, to:

**Personnel Manager
Syracuse Research Corporation
Merrill Lane
Syracuse, New York 13210
Equal Opportunity Employer, M/F/H**

MOLECULAR GENETICS—Individuals or groups are invited to apply for several positions with the Issaquah Health Research Institute (IHRI). The Institute sponsors grant-funded research in fundamental cellular processes. Principal investigators will find an atmosphere which encourages free inquiry and group cooperation. IHRI is situated near Seattle and enjoys the cooperation of the University of Washington and other research centers. Address inquiries to: **Chairman, Scientific Advisory Committee, IHRI, 1595 Northwest Gilman Boulevard, Issaquah, Washington 98027.** An Equal Opportunity Employer.

NEUROPHYSIOLOGIST. The Yerkes Primate Center invites applications for a research position in the Division of Neurobiology at the assistant or beginning associate research professor level with the opportunity for an adjunct appointment in a university academic department. Ph.D. required; postdoctoral experience expected; good overall background in neurosciences desirable. Applicants are expected to conduct independent and collaborative neurophysiologic research on the motor and/or somatosensory system of primates. The Center is committed to research in neurobiology, behavior, reproductive biology, and pathology in a wide variety of primates, including the great apes. Initial basic support is provided; however, researchers are expected to acquire grant support for their projects. Qualified applicants should send a description of future research goals, relevant reprints, curriculum vitae, and names of three references to: **Johannes Tigges, Ph.D., Chief, Division of Neurobiology, Yerkes Regional Primate Research Center, Emory University, Atlanta, Georgia 30322.** Affirmative Action/Equal Opportunity Employer.

POSITIONS OPEN

THE UNIVERSITY OF CHICAGO DEPARTMENT OF MICROBIOLOGY, MICROBIOLOGIST/CELL BIOLOGIST. The Department of Microbiology is accepting applications for a tenure-track faculty position. The major criteria for consideration are: (i) demonstrated potential for developing an active research program in molecular biology, particularly in the area pertaining to the pathogenesis of infectious disease, and (ii) desire and ability to participate in the department's teaching program. Send curriculum vitae and the names of three references to: **Patricia G. Spear, Search Committee Chairman, Department of Microbiology, The University of Chicago, 920 East 58 Street, Chicago, Illinois 60637.** An Affirmative Action/Equal Opportunity Employer.

DARTMOUTH-HITCHCOCK MEDICAL CENTER is searching for a Board-certified **PATHOLOGIST** to play a major role in surgical and anatomic pathology. This person would be expected to have an active interest in educational programs for residents and medical students, as well as a serious interest in participating in biomedical research. The level of appointment would be at the associate professor or professor level. Please direct inquiries to: **Howard M. Rawnsley, M.D., Chairman, Department of Pathology, Dartmouth-Hitchcock Medical Center, Hanover, N.H. 03755.** Equal Opportunity/Affirmative Action Employer

DEPARTMENT OF PHARMACOLOGY UNIVERSITY OF HOUSTON

Applicants are invited for tenure-track faculty positions in pharmacology at **assistant and associate professor** levels. Applicants should be engaged in research in the general field of autonomic cardiovascular pharmacology and possess expertise in areas such as neurochemistry; neurophysiology; receptors; brain peptides and CNS mechanisms related to cardiovascular homeostasis. Candidates in other related fields are also encouraged to apply. Applicants for the associate professor position should have demonstrated excellence in research and have an established research program. Candidates for positions of assistant professor should have preferably 2 years of postdoctoral experience and should demonstrate potential for developing an independent research program.

The successful candidates would also be expected to participate in teaching physiology and pharmacology courses to undergraduate pharmacy students and advanced pharmacology courses to graduate students. Applicants should send curriculum vitae, a short statement of research goals, and names of three references to:

**Dr. Mustafa F. Lokhandwala, Chairman
Department of Pharmacology
UNIVERSITY OF HOUSTON CENTRAL CAMPUS
Houston, Texas 77004**

An Equal Opportunity/Affirmative Action Employer

Wanted: **PHYSICIAN** who is fully trained in pulmonary medicine and who has strong interest in teaching and research to fill a job as **assistant or associate professor of medicine.** The position is on hard money and tenure-track. The department has a multidisciplinary research program administered through a Program Project Grant and a fellowship program funded through an Institutional Training Grant. Interested individuals should send letter of interest and curriculum vitae to: **Allen B. Cohen, M.D., Ph.D., Pulmonary Division, Temple University Medical Center, 3401 North Broad Street, Philadelphia, Pa. 19140.** Equal Opportunity/Affirmative Action Employer.

PHYSIOLOGIST

The Geriatric Research, Education, and Clinical Center (GRECC) of the Minneapolis Veterans Administration (VA) Medical Center invites applications for the position of physiologist. We are seeking a highly qualified individual with a strong commitment to aging research. The position is available immediately.

Preference will be given to candidates with records of research accomplishment. The appointee will be expected to carry on an independent research program and/or collaborate in interdisciplinary, neurogerontologic research projects with members of the GRECC research team. Applicants should submit curriculum vitae and a summary of research goals to: **Dr. Francis J. Pirozzolo, GRECC-127F, VA Medical Center, 54th Street and 48th Avenue South, Minneapolis, Minn. 55417.**

POSITIONS OPEN

PHYSIOLOGIST

Assistant or associate professorship for a Ph.D., M.D., or equivalent degree holder is available beginning 1 January 1981. Rank of this tenure-track position depends on the qualifications of the candidate. For consideration as assistant professor, a minimum of 2 years of postdoctoral experience is required. We are seeking a well-qualified individual working in any area of physiology. Teaching responsibilities include instruction of medical and paramedical students in **gastrointestinal physiology.** Applicants are expected to have an independent, vigorous research program, capable of competitive support from national granting agencies. Deadline for applications is 15 October 1980.

Applicants should submit curriculum vitae, a summary of current and future research plans, and the names of three references to:

**Chairman, Department of Physiology
University of Kansas Medical Center
39th and Rainbow Boulevard
Kansas City, Kansas 66103**

An Equal Opportunity/Affirmative Action Employer

PHYSIOLOGIST/GROWTH ENDOCRINOLOGIST. Career Federal Service. To develop independent research program studying the effects of various metabolic hormones on protein and lipid metabolism in beef cattle, sheep, and swine. Position located at Roman L. Hruska U.S. Meat Animal Research Center, Clay Center, Neb. GS-11/12/13; salary based on qualifications and experience. Applications: **J. Brooks, USDA-SEA-AR-B7, 2000 West Pioneer Parkway, Peoria, Illinois 61615.** Telephone: 309-671-7813. An Equal Opportunity Employer.

PLANT CELL BIOLOGIST/ MOLECULAR BIOLOGIST

We wish to attract candidates who have strong interests in teaching and research and who have already initiated, or are clearly able to initiate, an effective research program in plant cell or molecular biology. Teaching duties may be in the area of cell, metabolic, developmental, or molecular biology depending upon the qualifications of the individual and the needs of the department. This is a tenure-track position at the assistant or associate professor level. Send curriculum vitae and names of three references to: **J. E. Varner, Biology Department, Washington University, St. Louis, Mo. 63130.**

Washington University is an Equal Opportunity/Affirmative Action Employer.

POSTDOCTORAL FELLOW OR RESEARCH ASSOCIATE—A position as a postdoctoral fellow or research associate is available immediately in a grant-supported project on the fetal alcohol syndrome in subhuman primates. A Ph.D. in pharmacology, reproductive biology, or developmental biology or equivalent is required. Experience with subhuman primates is desirable but not required. This position offers a qualified and motivated individual the opportunity to participate in a broadly based research program dealing with alcoholism and drug abuse in the environment of the Texas Medical Center. Send curriculum vitae and three letters of recommendation to: **Dr. H. L. Altshuler, Chief, Neuropsychopharmacology, Texas Research Institute of Mental Sciences, Texas Medical Center, 1300 Moursund Avenue, Houston, Texas 77030.** Telephone: 713-797-1976, extension 384. Equal Opportunity Employer.

UNIVERSITY OF MASSACHUSETTS/AMHERST Immediate opening in Amherst, on consortium grant with Johns Hopkins School of Medicine, for **POSTDOCTORAL FELLOW** interested in working on immunology and pathogenicity of *Trichomonas vaginalis*. Candidate must have experience in microbiological and modern immunological techniques. Stipend from \$13,000 to \$15,000 per annum, depending upon experience. Write or telephone: **Dr. B. M. Honigberg, Department of Zoology, Morrill Science Center, University of Massachusetts, Amherst, Mass. 01003;** telephone: 413-545-2088. An Affirmative Action/Equal Opportunity Employer.

POSTDOCTORAL POSITION to work on the hormonal control of glycogen metabolism, protein phosphorylation, and protein kinases. Projects could range from studies with purified proteins to hormone action in whole tissue systems. Please send curriculum vitae and arrange for three referees to write to: **Peter J. Roach, Department of Biochemistry, Indiana University School of Medicine, Indianapolis, Indiana 46223.** Telephone: 317-264-2931. An Equal Opportunity/Affirmative Action Employer, M/F.

**THE LADY DAVIS FELLOWSHIP TRUST
P.O. BOX 1255, JERUSALEM, ISRAEL
FELLOWSHIPS FOR STUDY AND/OR RESEARCH AT
GRADUATE OR POST-DOCTORAL LEVELS
AND VISITING PROFESSORSHIPS**

in 1981-82

**at the Hebrew University of Jerusalem and
at the Technion—Israel Institute of Technology, Haifa
GRADUATE AND POST-DOCTORAL
FELLOWSHIPS**

Eligibility: Lady Davis Fellows will be selected on the basis of demonstrated excellence in their studies, promise of distinction in their chosen fields of specialization and qualities of mind, intellect and character.

Post-doctoral candidates shall have completed their doctoral dissertation before arrival in Israel.

The Graduate and Post-doctoral Fellowships are tenable for a period of one year. They may be renewed for a second year and in special circumstances extended to a third year.

The grant is intended to defray the cost of the Fellow's travel and tuition fees and to meet reasonable living expenses.

Application: Graduate candidates may apply during their senior academic year after they have undertaken study in a graduate school. Post-doctoral candidates may apply at an early stage of their professional career (not later than 3 years after completion of their doctoral dissertation).

Graduate and Post-doctoral candidates (including Israelis abroad) may obtain application forms from the Lady Davis Fellowship Trust at the above address, after they indicate the category of Fellowship for which they are eligible.

Completed applications must reach the office of the Trust not later than December 1, 1980.

VISITING PROFESSORSHIPS

These Fellowships are intended for candidates with the rank of Full or Associate Professor at their own institution. They are tenable for periods from one trimester (or semester) to a full academic year.

Application. Forms may be obtained from the Lady Davis Fellowship Trust at the above address. Completed application forms must reach the office of the Trust not later than December 1, 1980.

**U.S. ENVIRONMENTAL PROTECTION
AGENCY (EPA)
Supervisory Toxicologist
Supervisory Pharmacologist
Supervisory Physical Scientist
(BRANCH CHIEF)**

The Hazard Evaluation Division of the Office of Pesticide Programs, EPA, invites applicants for the position of **CHIEF, TOXICOLOGY BRANCH**. The position is open to individuals with strong scientific credentials in toxicology, emphasizing quantification of risk to humans. The Toxicology Branch is the lead scientific branch of the EPA Pesticides Program, and is charged with evaluating the carcinogenic, teratogenic, and mutagenic risk to humans of pesticides.

Serious applicants will be recognized toxicologists of significant peer standing, with strong management credentials. Desirable management experience is experience in managing multidisciplinary scientific organizations, contractual resources, and evidence of influence on corporate or government decision-making. Strong communication and interpersonal skills are also desirable. Knowledge of the federal pesticides regulatory program, experience in the administration of health-related regulatory programs, and successful experience in communicating with government officials, industry, and the concerned public are also desirable qualifications.

This position may be filled by Civil Service or Public Health Service appointment. Applicants must have at least a bachelor's degree, plus 3 years of appropriate professional experience in a health-related field. Salary ranges from \$40,832 to \$50,112, depending on qualifications.

APPLICATION SUBMISSIONS—Please submit a completed SF-171, available at federal job information centers and federal agency personnel offices, to reach EPA no later than 10 October 1980, to: **Ginny Hoover, Environmental Protection Agency, Hazard Evaluation Division, Mail Code (TS-769-C), 401 M Street, SW, Washington, D.C. 20460**. Also submit SF-171 to Office of Personnel Management, if this has not been done previously or if previous submission needs to be updated. (Please do not send résumés.) If you are now or have ever been employed in the federal service, you must also submit a performance appraisal and an appraisal of supervisory potential dated within 1 year of the closing date of the announcement. All applications (SF-171's) postmarked after the above date will be returned. *An Equal Opportunity Employer.*

**U.S. ENVIRONMENTAL PROTECTION AGENCY (EPA)
Statistician (Health)
Epidemiologist
Environmental Health Scientist
(BRANCH CHIEF)**

The Hazard Evaluation Division (HEB) of the Office of Pesticide Programs, EPA, invites applications for the position of **CHIEF, HEALTH EFFECTS BRANCH**. The position is open to individuals with strong scientific credentials in the statistical health, biological, or physical sciences who are also experienced managers. HEB develops and analyzes data on the exposure and the health effects of pesticides through a \$5-million program of cooperative agreements with nine major medical schools and three state public health departments and with 25 in-house staff. The Branch has access to consultant specialists in veterinary and human medicine, oncology, toxicology, physiology, epidemiology, pathology, environmental and analytical chemistry, biostatistics, and other relevant disciplines. Specific programs include field studies to determine effects on farmworkers and other exposed populations, systematic collection and analysis of pesticide poisoning data, evaluation of pesticide hazard and exposure data, and investigation and special studies related to incidences of unintentional exposure.

Serious applicants will have considerable knowledge and experience in the development and evaluation of scientific data on the health impacts of pesticides on similar chemicals as well as experience in managing contractual program activities particularly in a matrix-management environment. Knowledge of the federal pesticides regulatory program, experience in the administration of health-related regulatory programs, and successful experience in communicating with government officials, industry, and the concerned public are also desirable qualifications.

This position may be filled by Civil Service or Public Health Service appointment. Applicants must have at least a bachelor's degree, plus 3 years of appropriate professional experience in a health-related field. Salary ranges from \$40,832 to \$50,112 depending on qualifications.

APPLICATION SUBMISSIONS—Please submit a completed SF-171, available at federal job information centers and federal agency personnel offices, to reach EPA no later than 10 October 1980 to: **Ginny Hoover, Environmental Protection Agency, Hazard Evaluation Division, Mail Code (TS-769-C), 401 M Street, SW, Washington, D.C. 20460**. Also submit SF-171 to Office of Personnel Management, if this has not been done previously, or if previous submission needs to be updated. (Please do not send résumés.) If you are now or have ever been employed in the federal service, you must also submit a performance appraisal and an appraisal of supervisory potential dated within 1 year of the closing date of the announcement. All applications (SF-171's) postmarked after the above date will be returned. *Equal Opportunity Employer.*

**U.S. ENVIRONMENTAL PROTECTION
AGENCY (EPA)
Supervisory Chemist
Supervisory Environmental Scientist
(BRANCH CHIEF)**

The Hazard Evaluation Division of the Office of Pesticide Programs, EPA, invites applicants for the position of **CHIEF, ENVIRONMENTAL FATE BRANCH**. The position is open to individuals with strong scientific credentials in chemistry or environmental science which demonstrate expertise in the analysis and modeling of chemical transport and fate in the environment, including human exposure.

Serious applicants will be recognized scientists of significant peer standing, with strong management credentials. Knowledge of the federal pesticides regulatory program, experience in the administration of health-related regulatory programs, and successful experience in communicating with government officials, industry, and the concerned public are also desirable qualifications.

This position may be filled by Civil Service or Public Health Service appointment. Applicants must have at least a bachelor's degree, plus 3 years of appropriate professional experience in a health-related field. Salary ranges from \$40,832 to \$50,112 depending on qualifications.

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POSITIONS OPEN

POSTDOCTORAL FELLOWSHIPS. Postdoctoral positions available in a large immunology group. Opportunities available for individuals to actively participate with faculty members in several areas of immunology research including immunochemistry, cellular immunology, bacterial immunology, clinical immunology, immunopathology, allergy, autoimmunity, tumor immunology, immunogenetics, inflammation, and host defense mechanisms. Opportunities for extensive collaboration with faculty members and with immunology groups at the University of Colorado Health Sciences Center. Send three copies of curriculum vitae and names and addresses of three references to: **Dr. Ronald Harbeck, Department of Medicine, National Jewish Hospital and Research Center, 3800 East Colfax Avenue, Denver, Colo. 80206.**

POSTDOCTORAL POSITION in one of several areas including chemical carcinogenesis, hormone receptors, recombinant DNA, cell proliferation, virology, and aging at Fels Research Institute, Temple University School of Medicine. Send inquiries to: **Dr. Renato Baserga, Temple University School of Medicine, Fels Research Institute, 3400 North Broad Street, Philadelphia, Pa. 19140. Equal Opportunity/Affirmative Action Employer.**

POSTDOCTORAL POSITIONS available dealing with membrane structure and function relationships. Studies involve tissue culture and isolated intestinal cells. Some work related to enterotoxin mode of action. Training in membrane physiology, biochemistry, or molecular microbiology desirable. Send curriculum vitae and three letters to: **Dr. James L. McDonel, Department of Microbiology, Cell Biology, Biochemistry, and Biophysics, Pennsylvania State University, University Park, Pa. 16802.**

An Equal Opportunity Employer

POSTDOCTORAL POSITION available immediately for research on the membrane-associated events of insulin action. Experience with membrane biochemical techniques is desirable. Funds are available for 1 year with further support potentially available. Send curriculum vitae and names of references to: **Dr. H. Joseph Goren, Division of Medical Biochemistry, Faculty of Medicine, University of Calgary, Calgary, Alberta, Canada T2N 1N4.**

POSTDOCTORAL POSITION. Available immediately for research on genetic and molecular mechanisms of hormonal signal transfer and cellular response with emphasis on insulin, EGF and other bioactive polypeptides. Applicant must have strong desire to challenge new approach to above problem in combination with somatic cell genetics, membrane receptor biochemistry, and molecular biology (see *BBRC* 91: 143, 1979; *PNAS* 77: 3600, 1980). Appointment renewable up to 3 years. Salary dependent upon qualifications. Send curriculum vitae, description of research interests, and three letters of recommendation to: **Dr. N. Shimizu, Department of Cellular and Developmental Biology, University of Arizona, Tucson, Arizona 85721. Telephone: 602-626-4777. An Equal Opportunity/Affirmative Action Employer.**

POSTDOCTORAL POSITIONS available immediately. First position, strong biochemistry background desired for a study of enzymatic activation of drugs. Second position, FT-NMR experience desired to study the mechanism of anticancer drugs. salary: \$14,000 per year, possible second-year renewal. Send curriculum vitae and names of three references to: **Dr. N. J. Oppenheimer, Department of Pharmaceutical Chemistry, University of California, San Francisco, California 94143.**

POSTDOCTORAL POSITION for research on the photochemistry of skin photosensitizing compounds. Mechanistic and product studies which require experience with separation and product identification methods in organic chemistry and biochemistry. Send résumé to: **Dr. L. C. Harber, Department of Dermatology, Columbia University, 630 West 168 Street, New York, N.Y. 10032.**

POSTDOCTORAL POSITION available to work in cellular immunology. Send curriculum vitae and three references to: **Dr. Marius Teodorescu, Department of Microbiology and Immunology, University of Illinois at the Medical Center, P.O. Box 6998, Chicago, Ill. 60680.**

POSITIONS OPEN

The Department of Neurology at the University of California, Los Angeles (UCLA) School of Medicine is seeking a **NEUROLOGIST/CLINICAL NEUROLOGIST** interested in developing and expanding the ataxia-neuromuscular program at UCLA. Opportunities available for independent and collaborative research. Applicants must be Board-eligible in neurology and have demonstrated expertise in ataxias and/or neuromuscular disease. Prefer demonstrated expertise in neurochemical research. Appointment at the assistant or associate professional level depending upon qualifications. *The University of California is an Affirmative Action/Equal Opportunity Employer.* Submit curriculum vitae to: **R. A. Pieter Kark, M.D., Associate Professor of Neurology, Reed Neurological Research Center, UCLA School of Medicine, Los Angeles, California 90024.**

DARTMOUTH-HITCHCOCK MEDICAL CENTER, Department of Pathology, has a position available for a Board-eligible or -certified **NEUROPATHOLOGIST.** This individual will be expected to provide the service needs in neuropathology and to interact with neurologists and neurosurgeons in the clinical setting. Applicants should be prepared to meet the neuropathology teaching responsibilities related to the Residency Training Program and the Medical School Teaching Program. This individual will also be encouraged to develop and/or participate in a research program in his/her area of interest. The level of appointment of this position will be based upon the credentials of the chosen candidate. Interested individuals should contact: **James D. Yager, Jr., Ph.D., Department of Pathology, Dartmouth-Hitchcock Medical Center, Hanover, N.H. 03755. Equal Opportunity/Affirmative Action Employer**

TWO POSTDOCTORAL POSITIONS are available in the Program in Neuroscience, Baylor College of Medicine. One will be involved in a study of transmitter channels and membrane properties of isolated retinal cells. The work will be a collaborative effort between the laboratories of Dr. Dominic M. K. Lam, Department of Ophthalmology, and Dr. Daniel Johnston, Department of Neurology. The other position will be involved in ongoing voltage clamp studies of hippocampal neurons from in vitro slices. Candidates for both positions should have some experience with intracellular recordings and a good knowledge of cellular neurophysiology. Salaries will be very competitive. Send inquiries to: **Dr. Daniel Johnston, Selection of Neurophysiology, Department of Neurology, Baylor College of Medicine, Houston, Texas 77030. Baylor is an Equal Opportunity/Affirmative Action Employer.**

POSTDOCTORAL POSITION to study the selection and breeding of the heterosporous fern *Azolla*. *Azolla* is being selected for a number of characteristics (nutrient use efficiency, temperature optimums, sporulation induction) that will enhance nitrogen fixation in paddy rice culture.

Send letters of inquiry and curriculum vitae to: **Dr. D. W. Rains, Plant Growth Laboratory, University of California, Davis Calif. 95616.**

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

POSTDOCTORAL POSITION available for a person with training in biochemistry, cell biology, or molecular biology. Position is for the study of the role of mammary epithelial cellular endomembranes in the synthesis, postsynthetic modification, and secretion of the constituents of milk. Applicants with experience in electron microscopy and/or in vitro translation are particularly welcomed. Please submit curriculum vitae and three letters of recommendation to: **Dr. T. W. Keenan, Mammary Biology Laboratory, Department of Animal Sciences, Purdue University, West Lafayette, Ind. 47907.**

Purdue University is an Equal Opportunity/Affirmative Action Employer.

POSTDOCTORAL POSITION available immediately. Involves studies on effects of insulin and diabetes on glycogen metabolism in perfused rat livers and hearts. Preference would be given to an individual holding a Ph.D. in biochemistry or related discipline with training in the techniques of basic enzymology (enzyme purification, column chromatography, isoelectric focusing, P.A.G.E., and so forth). The stipend available will be in accord with current NIH postdoctoral fellowship rates. Please apply to: **Dr. Thomas B. Miller, Jr., Department of Biochemistry, UNIVERSITY OF MASSACHUSETTS MEDICAL SCHOOL, 55 Lake Avenue North, Worcester, Mass. 01605. An Affirmative Action/Equal Opportunity Employer.**

POSITIONS OPEN

POSTDOCTORAL RESEARCH ASSOCIATE. Position available now for recent Ph.D. in organic chemistry. Research work offers challenge in ultramicro synthesis of new compounds. Involved are the synthesis of most major classes of organic compounds labeled with short-lived isotopes: carbon-11, nitrogen-13, oxygen-15, iodine-123, and fluorine-18 of biological and medical interest. Appointee will join a large established multidisciplinary basic science program in radiopharmaceutical chemistry. Experience with isotopes would be helpful but not a requirement. Applicants should send résumé and transcripts and request that three letters of recommendation be forwarded to: **Dr. J. Hudis, Chairman, Department of Chemistry, Brookhaven National Laboratory, Associated Universities, Inc., Upton, Long Island, N.Y. 11973. An Equal Opportunity Employer, M/F.**

POSTDOCTORAL RESEARCH ASSOCIATE—. Available immediately in area of computer studies of protein structure and folding. Applicant will also assist in developing real-time molecular graphics. Salary negotiable, depending on qualifications. Send curriculum vitae and names of three references to: **Dr. George Rose, Department of Biological Chemistry, The Milton S. Eshelby Medical Center, The Pennsylvania State University, Hershey, Pa. 17033. The University is an Equal Opportunity/Affirmative Action Employer.**

POSTDOCTORAL RESEARCH ASSOCIATE—. Metabolic studies on methylated protein turnover; in vitro translation and methylation of proteins; background in culturing and manipulation of yeast and other microorganisms, protein purification, isoelectric focusing, two-dimensional electrophoresis, preparation and characterization of antibodies; isolation of RNA and in vitro translation. Required: Ph.D. in biochemistry and 2 to 3 years of research experience including protein purification; \$11,000 yearly. Apply to: **Box 220, SCIENCE.**

POSTDOCTORAL RESEARCH ASSOCIATE IN NEUROENDOCRINOLOGY

One-year position available September 1980 for Ph.D. interested in metabolic mapping of CNS pathways involved in prolactin release. Experience in radioimmunoassay, neuroanatomy, autoradiography, and cryostat sectioning desired. Salary: \$12,000 to \$14,000 depending on experience. Send curriculum vitae and two references to: **Dr. Anna-Lisa Barofsky, Department of Physiology and Biophysics, Howard University College of Medicine, 520 W Street, NW, Washington, D.C. 20059.**

POSTDOCTORAL RESEARCH ASSOCIATE. Position available immediately to study SV40 systems of persistent infection. Research involves modern techniques of nucleic acid biochemistry. Appointment for up to 3 years. Send curriculum vitae and two letters of recommendation to: **Dr. Leonard C. Norkin, Department of Microbiology, University of Massachusetts, Amherst, Mass. 01003.**

Postdoctoral Research Associate

Position available immediately to investigate the role of collagen and elastin in arteriosclerosis and thrombosis. Experience in analytical protein chemistry including collagen typing is essential. Funding provided via NIH training grant.

For further information contact
Dr. C. Richard Minick
Professor of Pathology

**CORNELL UNIVERSITY
MEDICAL COLLEGE**

1300 York Avenue, New York, N.Y. 10021
Equal Opportunity Employer, M/F/H

POSTDOCTORAL RESEARCH POSITION

Applications are invited for a molecular biologist to investigate genetic control of aerobic and anaerobic branches of metabolic pathways in bacteria. Experience with microbial genetics and DNA technology is highly desirable. The appointment will be for 1 to 3 years with a starting date of 1 July 1981, or by arrangement. Salary will be commensurate with experience. Applications to and further details from: **E. C. C. Lin, Department of Microbiology and Molecular Genetics, Harvard Medical School, 25 Shattuck Street, Boston, Mass. 02115.**

RESEARCH SCIENTIST Immunology

We are a leader in the manufacture of ethical pharmaceuticals with an outstanding career opportunity immediately available for a person with a PhD or equivalent in immunology and 0 to 3 years experience in immunology/pharmacology. Exposure to immunochemistry, microbiology and serology helpful in this position where the qualified applicant will direct and supervise research assistants and be responsible for the development and implementation of test systems designed to detect compounds with immunopharmacological properties.

We are a Johnson & Johnson Company and have just moved into a splendid new facility conveniently located in a beautiful country setting just outside Philadelphia, Pa., providing a work environment without peer in our industry. A salary in line with your experience and ability, an outstanding benefits package, and continued career growth are also offered. For immediate consideration forward your resume, including salary history and requirements, to Ms. Joan Grasso.

McNEIL PHARMACEUTICAL

Spring House, Pa. 19477

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

RESEARCH ASSOCIATE Immunochemistry

RUSH-PRESBYTERIAN-ST. LUKE'S, a well-known, well-respected medical center located in Chicago, currently is looking for a Ph.D. in immunochemistry to participate in studies of humoral immunity in cancer patients. Some experience in cell mediated immunity desirable. Candidate should be interested in developing an independent program of study concerned with immunochemical aspects of human tumor immunity.

Salary will range between \$14,000 to \$18,000, depending on experience; available immediately. Any interested candidates are invited to contact: Dr. Donald P. Braun, or Dr. Jules E. Harris, Immunology Laboratory, Section of Medical Oncology, Department of Medicine, at:

RUSH-PRESBYTERIAN-ST. LUKE'S MEDICAL CENTER



1753 West Congress Parkway
Chicago, Illinois 60612
Telephone: 312-942-8395

Affirmative Action/Equal Opportunity Employer

Pharmacology Group Leader

As a world leader in the field of Nuclear Medicine, New England Nuclear is currently expanding its facilities in North Billerica, MA. This growth combined with our new product development and increased research and production efforts has created a new opportunity for an experienced research oriented professional.

Responsibilities for this position include the supervision of our pharmacology group which is responsible for developing, conducting, evaluating, and reporting research studies on biokinetics, metabolism, and toxicology of radiopharmaceuticals as measured in various animal models and in-vitro systems. Duties also include responsibility for a complete small animal factory.

Requirements for this position include a PhD in pharmacology, biochemistry or a related area, plus demonstrated research experience in animal physiology, biochemistry, pharmacology, and/or toxicology. Familiarity with those procedures required for compliance with current and proposed federal regulations is desirable. The ideal candidate will be well organized yet flexible enough to respond to the sometimes rapidly changing priorities of industrial research. Prior experience with EDP helpful.

New England Nuclear offers secure, challenging, and rewarding employment for enthusiastic and best qualified candidates.

Interested applicants should submit resume and salary history to Ms. Erin Moore, New England Nuclear, 601 Treble Cove Road, N. Billerica, MA 01862.



New England Nuclear

... A BETTER WORLD

An Equal Opportunity Employer

PHYSICAL OR INORGANIC CHEMIST

An immediate opening in the Chemistry Division of the Research Department of the Naval Weapons Center, China Lake, California to work in the field of

OPTICAL AND ELECTRONIC MATERIALS

This position offers the opportunity to work in a challenging research environment combined with community living in a small town environment. Salary to \$36,865.

Applicants with a PhD degree and a strong background in the theoretical and experimental aspects of selecting, synthesizing, and characterizing high-temperature stable materials with selected properties are encouraged to apply. This position is for the Head of the Optical and Electronic Materials Branch; experience or interest in technical management is desirable.

For information or to submit resumes write to:

NAVAL WEAPONS CENTER

Code 092-038-5

China Lake, CA 93555

Applications accepted until 17 October

An Equal Opportunity Employer



POSITIONS OPEN

POSTDOCTORAL RESEARCH ASSOCIATES—

Two positions available immediately (or later): membrane studies of (i) biogenesis and (ii) the cell surface. (i) Use of bacteriophage PM2 to determine control of formation of new membranes. Multi-disciplinary approach involves genetics (viral mutants, site-specific mutagenesis, cloning), morphology (EM), biochemistry (protein, lipid analysis, membrane isolation), and physical chemistry (protein-lipid interaction). Experience with bacteriophage and biochemistry desirable but interest and ambition are more important. (ii) Purified glycolipids and glycoproteins are being incorporated into macroscopic spherical membranes of defined lipid composition to demonstrate adhesion-specific molecules and signals for contact sensation. Changes in structure are monitored with fluorescent probes in correlation with functional changes in membrane conductance. Interest in cellular adhesion, contact sensation, conformation of cell surface molecules, biophysics. Minimum qualification for both positions is Ph.D. in the above related fields. Salary for this postdoctoral training is \$12,000 to \$13,500 per year. Applicants should send curriculum vitae and names of three references to: **Dr. Gregory J. Brewer, Department of Medical Microbiology and Immunology, P.O. Box 3926, Springfield, Ill. 62708.** Application deadline: 1 November 1980. *Southern Illinois University is an Equal Opportunity/Affirmative Action Employer.*

POSTDOCTORAL RESEARCH ASSOCIATE in membrane biochemistry or biophysics to study photopigments in halobacteria. Project involves the characterization and isolation of primary light driven ion pump and secondary energy transducing mechanisms involved in ion and amino acid transport. Experience in BLM, electrophysiology, membrane function, or spectroscopic techniques as applied to membrane structure. Salary range: \$13,500 to \$19,000. Send résumé and three letters of recommendation to: **R. E. MacDonald, Section of Biochemistry, Wing Hall, Cornell University, Ithaca, New York 14850.**

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POSTGRADUATE RESEARCH BIOCHEMISTS

To study in vivo kinetics of lipid metabolism in rats. Ph.D. in biochemistry or related area. Background in animal metabolism and surgery and experience in using tracer methods for in vivo kinetic studies are necessary. Position available 1 March 1981. Promised funding through February 1982. Salary \$14,500 to \$15,000, depending on qualifications. Application deadline: 31 December 1980. Write: **M. A. Williams, Department of Nutritional Sciences, University of California, Berkeley, Calif. 94720.** *The University of California is an Affirmative Action Employer.*

DISTINGUISHED PROFESSOR OF BIOLOGY

The opportunity arises of appointing a biologist to a named chair at the University of Rochester in the Department of Biology. It is desirable that the individual have outstanding achievement in one of the areas well represented in the department, including cellular biology, developmental biology, population biology, and molecular genetics. An appointment is anticipated 1 July 1981.

Interested persons are invited to write to: **Richard D. O'Brien, Provost, University of Rochester, Rochester, New York 14627.**

Applicants should include extensive curriculum vitae and names of several appropriate individuals who have agreed to provide a letter of reference if asked. The application should be received by 30 October 1980.

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PROJECT OFFICER— RADIOACTIVE WASTE MANAGEMENT

The National Academy of Sciences, located in Washington, D.C., is seeking qualified candidates to assist in planning, arranging, conducting, and documenting activities of its Committee on Radioactive Waste Management. Candidates should have master's degree or equivalent in work experience; Ph.D. in nuclear science or engineering desirable. A minimum of 4 years of experience is required in radioactive waste management or related field, demonstrated oral and written communication skills. Salary negotiable. Excellent fringe benefits. Please submit résumé and desired salary level to: **Dr. Peter B. Myers, JH826, National Academy of Sciences, 2101 Constitution Avenue, NW, Washington, D.C. 20418.** *An Equal Opportunity Employer.*

POSITIONS OPEN

POSTDOCTORAL POSITION IN CELLULAR

TOXICOLOGY immediately available for 1 to 3 years to study cellular mechanisms of toxicity and metabolism of toxic agents and to evaluate potential in vitro toxicity screening of toxicants with primary cell cultures. The candidate will work on a recently funded EPA grant which will investigate the applicability and sensitivity of in vitro techniques to predict the ability of chemicals to injure the liver, kidneys, and heart. Knowledge in one or more of the following areas is required: pharmacology/toxicology, drug metabolism, tissue culture, and/or research experience with the tissue mentioned. Send résumé and three letters of reference to: **Dr. Daniel Acosta, Department of Pharmacology, College of Pharmacy, University of Texas, Austin, Texas 78712.**

POSTDOCTORAL RESEARCH ASSOCIATE. Seek recent Ph.D. in cell physiology or related discipline. Project involves the development of new approaches to probing biochemistry and physiology in vivo using tracers labeled with positron emitting radionuclides. Experience in animal modeling would be useful. The position is wholly basic research, with close interaction with scientists in a multi-disciplinary program in neuroscience, mapping of cellular structures, and enzyme systems, quantitation of receptor affinity and kinetics in vivo. Other research on isolated organ systems, heart, blood flow, transport mechanisms, will also be carried out.

Applicants should send résumé and transcripts, and request that three letters of recommendation be sent to: **Dr. Alfred P. Wolf, Department of Chemistry, Brookhaven National Laboratory, Associated Universities, Inc., Upton, Long Island, N.Y. 11973.** *An Equal Opportunity Employer, M/F.*

University of Wyoming, **PROFESSOR** in the **INSTITUTE OF ENERGY AND ENVIRONMENT.** Responsibilities include acting as a scientific and technical adviser for the University's fossil fuel research program related to synthetic fuels. A joint appointment between an appropriate academic unit and the Institute can be arranged. A doctoral degree in engineering or physical science plus 5 years of relevant research experience is required; teaching experience is desirable. Salary negotiable. Send letter of application, including curriculum vitae and three letters of reference, to: **Search Committee, Institute of Energy and Environment, Merica Hall, University of Wyoming, University Station Box 3965, Laramie, Wyoming 82071.** *Equal Opportunity/Affirmative Action Employer.*

A **RESEARCH ASSOCIATESHIP** is available immediately for developmental and experimental work in biological applications of 1-MeV electron microscopy. Major projects currently in progress include the activation and evaluation of a recently completed helium-cooled cryostage for the direct observation of frozen hydrated specimens and completion of a novel electronic imaging system. A Ph.D. degree is required and background in physics, biophysics, and/or biology is preferred. Specialized experience is expected in electron microscopy, cell biology, cryogenics, electronics, and minicomputer interfacing. Appointment is for 1 year with possibility of renewal. Salary commensurate with experience. Qualified applicants with good references should send curriculum vitae and arrange for three letters of recommendation to be sent to: **Professor M. Fotino, Laboratory for High-Voltage Electron Microscopy, Department of Molecular, Cellular and Developmental Biology, University of Colorado, Boulder, Colorado 80309.** *An Equal Opportunity/Affirmative Action Employer.*

RESEARCH ASSOCIATE

Immediate opening for individual at postdoctoral level of experience to conduct studies in both radiobiology and viral oncology. Experience with cell culture and with murine leukemia viruses desirable. Send curriculum vitae and names of three references to: **Dr. Richard Steeves, Radiation Oncology, K4/B100, University of Wisconsin Hospital, 600 Highland Avenue, Madison, Wisconsin 53792.** *An Equal Opportunity Employer.*

RESEARCH SCIENTIST. Available immediately. Successful candidate will be capable of conducting vigorous independent research on baculovirus genetics and gene expression at the molecular level. Salary commensurate with qualifications and experience. Send curriculum vitae and names of three references to: **Dr. Max D. Summers, Department of Entomology, Texas A&M University, College Station, Texas 77843.** *Equal Opportunity/Affirmative Action Employer.*

POSITIONS OPEN

SEARCH FOR EXTRASOLAR PLANETS. An anticipated grant includes funds for a **RESEARCH ASSOCIATE** who would participate in a search for low-mass companions of solar-type stars using a recently constructed radial velocity spectrometer with Fabry-Perot wavelength calibration. Duties of the position will include telescopic observations, their reductions and interpretation, and a continuous improving of the instrument to minimize the errors of radial velocities. The candidate must have a doctorate and experience with advanced instrumentation and astrophysical observations. Please send résumé and the names of three referees to: **Dr. K. Serkowski, Lunar and Planetary Laboratory, University of Arizona, Tucson, Arizona 85721.** Telephone: 602-795-9304. *An Equal Opportunity/Affirmative Action Title IX/Section 504 Employer.*

RESEARCH ASSOCIATE

Endocrine research laboratory requires research associate with Ph.D. and a broad background in biochemistry, pharmacology, or endocrinology and a demonstrable capacity for independent research. Present studies involve the cellular control mechanisms in thyroid physiology and function. Experience in cyclic nucleotide or prostaglandin research desirable. Send résumé to: **Dr. Gerald Burke, Division of Endocrinology, Cook County Hospital, 1825 West Harrison Street, Chicago, Ill. 60612.**

RESEARCH ASSOCIATE. Physiological ecology—aquaculture. Position to begin 1 November 1980, possible yearly renewal. Measuring tolerances, growth, and survival to various oxygen tension, and temperature levels in genetic groups of the cultured prawn *M. rosenbergii*. Qualifications: M.S. minimum and experience in crustacean respirometry and physiology using nitrogen stripping columns. Send résumé to: **Dr. Spencer Malecha, Anuenue Fisheries Research Center, Area 4, Sand Island, Honolulu, Hawaii 96819.** Telephone: 808-948-8286. Closing date: 24 October 1980.

SOLAR TERRESTRIAL DATA. The National Geophysical and Solar-Terrestrial Data Center (NGSDC) of Department of Commerce (DOC)/National Oceanic and Atmospheric Administration (NOAA) in Boulder, Colorado, is seeking a **CHIEF** of its Solar-Terrestrial Physics Division (supervisory physicist, GS-15; salary range: \$40,832 to \$47,500 per annum; Competitive Service). Within the overall mission of NSGDC to collect, process, archive, and provide scientific data and data products to users, STPD provides services in solar-terrestrial physics and serves as World Data Center-A in this area. As division chief, the incumbent will be responsible for managing the division of 21 scientists, technicians, and clerks. A major element of this position is representing NOAA and the United States at various national and international organizations in these fields. Position requires education and/or experience in supervision, solar-terrestrial physics, scientific data handling practices, broad knowledge of ADP as well as knowledge of national and international government and nongovernment organizations in this field. For further information concerning this vacancy, a copy of the vacancy announcement and/or application procedures, telephone: **Nancy W. Thornton at 303-497-3920** or write her at: **DOC, NOAA/NTIA, Personnel Services Division, 325 Broadway, Boulder, Colo. 80303.** The closing date for the receipt of applications for this vacancy is 24 October 1980. *An Equal Opportunity Employer, M/F.*

VERTEBRATE PHYSIOLOGIST

A faculty position is available with the possibility of a starting date as early as January 1981. The successful candidate will teach courses in physiology and develop a vigorous research program of his/her own interest. Rank and salary are open. Send curriculum vitae, copies of relevant publications, and names of three references to: **Dr. Hiroshi Mizukami, Department of Biological Sciences, Wayne State University, Detroit, Michigan 48202.** *An Equal Opportunity/Affirmative Action Employer.*

VIROLOGIST—Assistant Professor. Strong commitment for teaching—specialty in virology and proficiency in microbial genetics. Duties include participation in lecture courses and laboratory instruction to medical students. Applicants expected to initiate independent research. Salary: \$21,600 annually; start January 1981. Send résumé and three letters of reference to: **Chairman, Microbiology Department, Ponce Medical School, P.O. Box 7004, Ponce, Puerto Rico 00731.** *Equal Opportunity Employer.*

Ph.D Toxicologist

Career opportunity with rapidly growing ethical pharmaceutical firm located in the Midwest. Responsibilities include designing, implementing, and monitoring preclinical acute, subacute and chronic toxicity studies; evaluating data; preparing study reports; interacting on project teams. Will also assist in preparation of INDs and NDAs and supervise general toxicology section.

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NATIONAL SCIENCE FOUNDATION

The National Science Foundation, Division of Materials Research, is seeking qualified candidates for a permanent or rotational (1- to 2-year) assignment as **PROGRAM DIRECTOR** for the Ceramics Program, Metallurgy, Polymers and Ceramics Section. The position is exempted from the competitive civil service and is equivalent to GS-14/15 (\$34,713/\$50,112.50 per annum). Candidates should have 6 to 8 years of experience beyond the Ph.D. in ceramics science or engineering, materials science or engineering, or related disciplines, and have substantial research experience. Those interested should send a current résumé by 15 November 1980 to: **National Science Foundation, Personnel Administration Branch, 1800 G Street, NW, Washington, D.C. 20550. Attention: E. Paul Broglio.** For further information, telephone: 202-357-7841. *The National Science Foundation is an Equal Opportunity Employer.*

PUBLIC MEETING

DIET AND CANCER PUBLIC MEETING. A committee of the National Academy of Sciences (NAS) is beginning a study of what is known about various dietary constituents and the possible links to cancer cause and prevention. A public meeting will be held 6 November in the NAS Auditorium, 2100 C Street, NW, Washington, D.C., to hear comments on where the committee might focus its efforts. Those who wish to attend, submit material, or make oral presentations should contact: **Dr. Sushma Palmer, telephone: 202-389-6906.**

SYMPOSIUM

Gangliosides in Neurological and Neuromuscular Function, Development and Repair
17 and 18 November 1980, Columbia Presbyterian Medical Center, New York, N.Y.
Sponsored by the Departments of Psychiatry and Neurology, Columbia University, College of Physicians and Surgeons. Supported by Fidia Research Laboratories, Abano Terme, Italy. For information: **Bio/Basics International, 260 Madison Avenue, New York, N.Y. 10016; telephone: 212-949-0710.**

WORKSHOP

ATTENTION: MOLECULAR BIOLOGISTS, CHEMISTS, AND BIOPHYSICISTS WORKSHOP ON "MOLECULAR" ELECTRONIC DEVICES 23 and 24 March 1981

Contributions are solicited from active workers who are concerned with events at the "molecular" or moiety level in any area of physical science. The workshop will explore the possibilities of developing switches at the molecular level for ultimately controlling and modifying signals. The variety of signals might include electrons, protons, phonons, solitons, excitons, and photons.

Extended abstracts are due 1 December 1980. For further information those interested in actively participating in this workshop should contact

Dr. Forrest L. Carter
Chemistry Division, Code 6170
Naval Research Laboratory
Washington, D.C. 20375
Telephone: 202-767-2100

COURSE

SHORT COURSE ON LASER MICROBEAM IRRADIATION

26 to 30 January 1981. **Laser Microbeam Program (LAMP), Department of Developmental and Cell Biology, University of California, Irvine, Calif. 92715.** Contact: **M. W. Berns** at above address or telephone: 714-833-6291. Tuition fee: \$250.

A minicourse will be given at the NIH-sponsored Biotechnology Resource Facility. The course will consist of lectures and laboratory exercises on the operation and construction of a laser microbeam as well as the application of laser microsurgery in cell biology and developmental biology. Students will gain hands-on experience in laser operation, tissue culture, microirradiation of cell organelles, and embryonic systems.

FELLOWSHIPS

POSTDOCTORAL FELLOWSHIP IN NEUROSCIENCE available January 1981 for Ph.D. with biochemical or chemical background. U.S. citizenship required. Research areas in neuropeptides, including opioid peptides; \$13,000 first year, \$14,500 second year. Additional benefits include health insurance and travel expenses. Send résumé and references to: **Dr. Jean Rossier, Physiologie Nerveuse, Centre National de la Recherche Scientifique, 91190, Gif-sur-Yvette, France.**

POSTDOCTORAL FELLOWSHIP IN IMMUNOBIOLOGY. Postdoctoral fellowships in cancer immunobiology are available at Sloan-Kettering Institute for Cancer Research. Fellows will be trained in cellular immunology, development and interaction of lymphoid cells, molecular immunology, clinical immunology and cancer, human and mouse immunogenetics, tumor immunology, cell surface immunochimistry, and immunogenetics. Training methods include individualized research with qualified mentor training in clinical laboratory analysis, lectures, courses, seminars, discussions, rounds, clinics, and conferences. Individual research program will be offered either in New York City or at Walker Laboratory, Rye, N.Y. Only U.S. citizens or foreign nationals with permanent resident or immigrant visas will be considered. Send inquiry with brief résumé to: **Dr. Y. S. Choi, Immunobiology Training Program Director, Sloan-Kettering Institute for Cancer Research, 145 Boston Post Road, Rye, N.Y. 10580. An Equal Opportunity/Affirmative Action Employer.**

NIH RESEARCH TRAINING FELLOWSHIP available July 1981, for an M.D. or Ph.D. interested in biochemistry of blood coagulation factors and their interaction with monocyte cell surfaces. Experience with tissue culture or membrane biochemical procedures helpful. Contact: **Samuel Rapaport, M.D., Hematology/Oncology Division, University of California, San Diego, University Hospital (T-006), 225 West Dickinson Street, San Diego, California 92103. The University of California is an Equal Opportunity/Affirmative Action Employer.**

FELLOWSHIPS

POSTDOCTORAL FELLOWSHIP IN IMMUNOCYTOCHEMISTRY

Work will involve study of hormone receptors, neural plasticity, neuronal specificity, neuroendocrine precursors, monoclonal antibodies. Inquiries and curriculum vitae to: **Ludwig Sternberger, Fellowship Committee, Center for Brain Research, Box 605, University of Rochester School of Medicine, Rochester, N.Y. 14642.**

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For further information, interested persons should contact: **Dr. P. Goadby, School of Pharmacy, telephone: Sunderland 76191,** and application forms and detailed particulars may be obtained from: **Personnel Officer, Sunderland Polytechnic, Langham Tower, Ryhope Road, Sunderland, SR2 7EE, Tyne and Wear, England.**

NEUROCHEMISTRY

POSTDOCTORAL FELLOWSHIPS for Ph.D.'s and M.D.'s are immediately available at the Missouri Institute of Psychiatry (MIP), St. Louis, Missouri. Special research emphases are available in these areas: structure, metabolism, and function of the complex carbohydrates; protein methylation; protein phosphorylation; neuroactive peptides and receptor function; lipoprotein metabolism in morphine and alcoholic rats; cell and tissue culture methodology; membrane assembly and function; isolation and characterization of subcellular structures; and neurochemistry of aging. Opportunities for clinical research projects are available. MIP is a St. Louis segment of the University of Missouri-Columbia, School of Medicine, with faculty members holding academic appointments in the Department of Biochemistry. For further information, applicants should telephone: 314-644-8844 or 314-644-8789, or send a résumé and brief description of their objectives as a postdoctoral fellow to:

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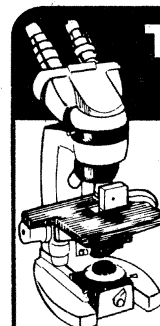
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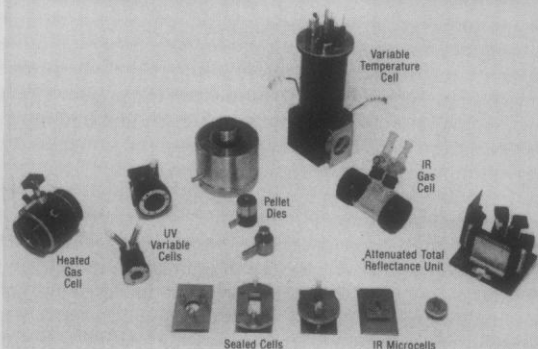
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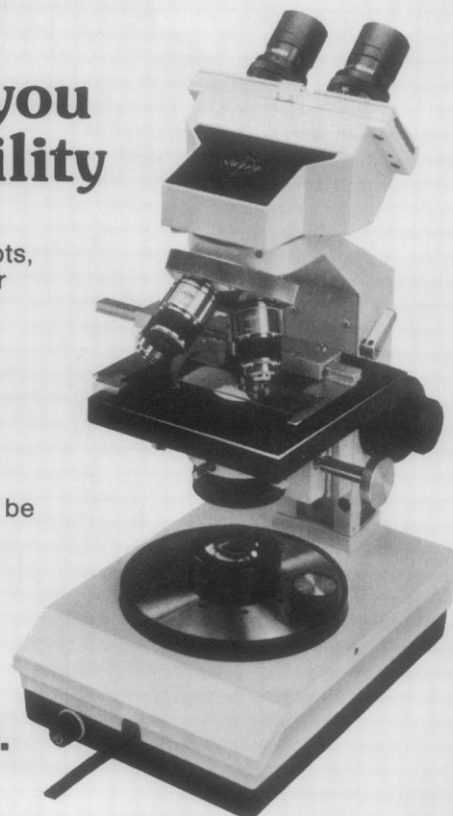
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All papers submitted are considered for publication. The author's membership or lack of membership in the AAAS is not a factor in selection. Papers are accepted with the understanding that they have not been published, submitted, or accepted for publication elsewhere. Authors will usually be notified of acceptance, rejection, or need for revision in 4 to 6 weeks (Reports) or 6 to 10 weeks (Articles).

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Organize your material carefully, putting the news of your finding or a statement of the problem first, supporting details and arguments second. Make sure that the significance of your work will be apparent to readers outside your field, even if you feel you are explaining too much to your colleagues. Present each step in terms of the purpose it serves in supporting your finding or solving the problem. Avoid chronological steps, for the purpose of the steps may not be clear to the reader until he finishes reading the paper.

Provide enough details of method and equipment so that another worker can repeat your work, but omit minute and comprehensive details which are generally known or which can be covered by citation of another paper. Use metric units of measure. If measurements were made in English units, give metric equivalents.

Avoid specialized laboratory jargon and abbreviations, but use technical terms as necessary, defining those likely to be known only in your field. Readers will skip a paper they do not understand. They should not be expected to consult a technical dictionary.

Choose the active voice more often than you choose the passive, for the passive

voice usually requires more words and often obscures the agent of action. Use first person, not third; do not use first person plural when singular is appropriate. Use a good general style manual, not a specialty style manual. The University of Chicago style manual, the style manual of the American Institute of Physics, and the *Style Manual for Biological Journals*, among others, are appropriate.

Manuscripts

Prepare your manuscript in the form used by *Science*. Use bond paper for the first copy. Submit two duplicates. Double-space title, abstracts, text, signature, address, references (including the lines of a single reference), figure legends, and tables (including titles, column headings, body, and footnotes). Do not use single spacing anywhere. Put the name of the first author and the page number in the upper right-hand corner of every page.

Paging. Use a separate page for the title; number it page 1. Begin each major section—text, references and notes, and figure legends—on a new sheet. Put each table on a separate sheet. Place figure legends and tables after the references.

Title. Begin the title with a word useful in indexing and information retrieval (not "Effect" or "New").

References and Notes. Number all references to the literature, footnotes, and acknowledgments in a single sequence in the order in which they are cited in the text. Gather all acknowledgments into a single citation, and keep them short ("I thank," not "I wish to thank"). Cite all references and notes but do not cite them in titles or abstracts. Cite several under one number when feasible. Use *Bibliographic Guide for Editors & Authors* with the few suggested revisions in *International List of Periodical Title Word Abbreviations* for abbreviations of journal names. If the journal is not listed there, provide the full name. Use the following forms:

Journal: H. Smith, *Am. J. Physiol.* **98**, 279 (1931).
Book: F. Dacheille and R. Roy, *Modern Very High Pressure Techniques* (Butterworth, London, 1961), pp. 163-180.
Chapter: F. Dacheille and R. Roy, in *Reactivity of Solids*, J. H. de Boer, Ed. (Elsevier, Amsterdam, 1960), p. 502.

Illustrations. Submit three copies of each diagram, graph, map, or photograph. Cite all illustrations in the text and provide a brief legend, to be set in type, for each. Do not combine line drawings and photographs in one illustration. Do not incorporate the legend in the figure itself. Use India ink and heavy white paper or blue-lined coordinate paper for line drawings and graphs. Use heavier lines for curves than

you use for axes. Place labels parallel to the axes, using initial capital and lower-case letters; put units of measurement in parentheses after the label—for example, Length (m). Plan your figures for the smallest possible printed size consistent with clarity.

Photographs should have a glossy finish, with sharp contrast between black and white areas. Indicate magnification with a scale line on the photograph.

Tables. Type each table on a separate sheet, number it with an Arabic numeral, give it a title, and cite it in the text. Double-space throughout. Give each column a heading. Indicate units of measure in parentheses in the heading for each column. Do not change the unit of measure within a column. Do not use vertical rules. Do not use horizontal rules other than those in the heading and at the bottom. A column containing data readily calculated from data given in other columns can usually be omitted; if such a column provides essential data, the columns containing the other data can usually be omitted.

Plan your table for small size. A one-column table may be up to 42 characters wide. Count characters by counting the widest entry in each table column (whether in the body or the heading) and allow three characters for spaces between table columns. A two-column table may be 90 characters wide.

Equations and formulas. Use quadruple spacing around all equations and formulas that are to be set off from the text. Most should be set off. Start them at the left margin. Use the solidus for simple fractions, adding the necessary parentheses. But if braces and brackets are required, use built-up fractions. Identify handwritten symbols in the margin, and give the meaning of all symbols and variables in the text immediately after the equation.

Articles

Articles, both solicited and unsolicited, may range in length from 2000 to 5000 words (up to 20 manuscript pages). Write them clearly in reasonably nontechnical language. Provide a title of one or two lines of up to 26 characters per line and an objective summary of 50 to 100 words indicating the scope and main finding.

Do not break words at the ends of lines. Write a brief author note, giving your position and address. Do not include acknowledgments. Place title, subtitle, and author note on page 1. Begin the text on page 2.

Insert subheads at appropriate places in the text to mark your main ideas. The set of subheads should show that your ideas are presented in a logical order. Keep subheads short—up to 35 characters and spaces.

Do not submit more than one illustration (table or figure) for each four manuscript pages unless you have planned carefully for grouping. With such planning many illustrations can be accommodated in the article. Consult the editorial office for help in planning.

Reports

Short reports of new research results may vary in length from one to seven double-spaced manuscript pages of text, including the bibliography. Long papers are subject to delays in reviewing and editorial consideration. Short papers receive preferred treatment. Limit illustrative material (both tables and figures) to two items, occupying a total area of no more than half of a published page (30 square inches). A research report should have news value for the scientific community or be of unusual interest to the specialist or of broad interest because of its interdisciplinary nature. It should contain solid research results or reliable theoretical calculations. Speculation should be limited and is permissible only when accompanied by solid work.

Title. Begin the title with an important word (preferably a noun) that identifies your subject. The title may be a conventional one (composed primarily of nouns and adjectives), a sentence (containing a verb), or a structure with a colon (Jupiter: Its Captured Satellites). Limit it to two lines of complete words of no more than 55 characters per line (spaces between words count as one character each). Do not use abbreviations. Type the title in the middle of page 1.

Abstract. Provide an abstract of 45 to 55 words on page 2. The abstract should amplify the title but should not repeat it or phrases in it. Qualifying words for terms

used in the title may be used. Tell the results of the work, but not in terms such as “_____ was found,” “is described,” or “is presented.”

Text. Begin the text on page 3. Put the news first. Do not refer to unpublished work or discuss your plans for further work. If your paper is a short report of work covered in a longer paper to be published in a specialty journal, you may refer to this paper if it has been accepted. Name the journal. If the manuscript has not been accepted, refer to it as “in preparation.” Do not use subheads.

Signature. List the authors on the last page of the text and give a simple mailing address.

Received dates. Each report will be dated the day an acceptable version is received in the editorial office.

Letters

The Letters section provides a forum for discussion of matters of general interest to scientists. Letters are judged only on clarity of expression and interest. Keep them short and to the point; the preferred length is 250 words. The editors frequently shorten letters.

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Letters concerning technical papers in *Science* are published as Technical Comments at the end of the Reports section. They may add information or point out deficiencies. Reviews are obtained before acceptance.

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The selection of books to be reviewed is made by the editors with the help of advisers in the various specialties; arrangements are then made with reviewers. A sheet of instructions accompanies each book when it is sent to the reviewer.

Cover Photographs

Particularly good photographs that are suitable for use on the cover are desired.