

pressed if the animal is restrained by its carapace, and that fish tail flip responses that are evoked by repeated direct stimulation of the Mauthner cell decrease in a smoothly graded fashion (probably from progressive inhibition of motor neurons).

A third theme concerns the functional consequences of shared and specialized neural circuitry. An example is provided by the crayfish, in which it is now clear that the "motor giant" motor neurons are the private pathways of the giant axons (and are thus a specialized circuit) and that the "fast flexor" motor neurons are both the sole output of the non-giant system (specialized) and are also used by the giant system (shared). Mackie discusses evidence that a similar functional arrangement exists in the jellyfish *Aglantha*, in which the same motor neurons are activated by motor giants for escape and by another slow-conducting pathway. The locust, which provides another excellent example of circuit specialization, is discussed by Pearson and O'Shea. These authors compare motor interneurons in the jump circuitry (C and M neurons) and sensory interneurons in the movement detection system (LGMD and DCMD neurons) and suggest that, on the motor side, interneurons (through their specialized circuitry) generate single components of behavior and are only activated under specific conditions, whereas sensory systems extract a number of environmental features and can trigger a variety of state-dependent behaviors. Finally, in a highly instructive chapter Davis describes in detail the acoustic startle system of the rat. Remarkably, the time from stimulus onset to response in the limbs of the rat is only 6 to 8 milliseconds, indicating that only a few central synapses are involved. Davis and colleagues have established the primary neural circuit for the response and have shown that a number of different neurotransmitters can modulate acoustic startle at a variety of loci within the circuit. It is virtually certain that the motor neurons (as well as many interneurons) for the startle reflex are used for other behaviors as well; thus the magnitude of the startle response is subject to modulation by many other inputs, including stimuli immediately preceding the startle stimuli and previously learned responses.

The introductory chapter by Bullock and the concluding one by Bennett provide thought-provoking bookends for this volume. Both present important caveats concerning overgeneralization. For example, Bullock points out that not all rapid escape responses are startle responses, nor are they all mediated by

giant fibers. Moreover, not all startle responses lead to escape. Bennett emphasizes that the startle response might best be viewed as a trigger of many behaviors (the exact nature of which is based on prior experience) rather than as a command for a single behavior and cautions that fast systems may not be a cure-all for studying higher-order processes at a cellular level.

In conclusion, we return to the notion of general principles. In this volume have any emerged? In the strictest sense probably not, for our understanding of even these "simple" startle systems is still too limited. What is clear, however, is that anyone interested in the neural organization of behavior will find in the volume some superb examples in which to search for principles, general or otherwise.

THOMAS J. CAREW

*Departments of Psychology
and Biology, Yale University,
New Haven, Connecticut 06520*

Books Received

- The Destroying Angel.** Sex, Fitness and Food in the Legacy of Degeneracy Theory, Graham Crackers, Kellogg's Corn Flakes and American Health History. John Money. Prometheus, Buffalo, N.Y., 1985. 213 pp., \$19.95.
- Development, Organization, and Processing in Somatosensory Pathways.** Mark Rowe and William D. Willis, Jr., Eds. Liss, New York, 1985. xviii, 411 pp., illus. \$82. Neurology and Neurobiology, vol. 14. From a symposium, Sydney, Sept. 1983.
- Dictionary of Electrochemistry.** D. B. Hibbert and A. M. James. 2nd ed. Wiley-Interscience, New York, 1985. x, 308 pp., illus. \$34.95.
- Dictionary of Technology.** German English. Rudolf Walther, Ed. Elsevier, New York, 1985. viii, 1046 pp., \$134.50.
- Functions and Graphs.** A Precalculus Course. Raymond A. Barnett. McGraw-Hill, New York, 1985. xvi, 644 pp., illus., + appendixes. \$31.95.
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- Gossypol.** A Potential Contraceptive for Men. Sheldon J. Segal, Ed. Plenum, New York, 1985. xiv, 271 pp., illus. \$45. Reproductive Biology.
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Long-Term Bone Marrow Culture. Daniel G. Wright and Joel S. Greenberger, Eds. Liss, New York, 1985. xiv, 441 pp., illus. \$88. Kroc Foundation Series, vol. 18. From a symposium, Santa Ynez Valley, Calif., Sept. 1983.

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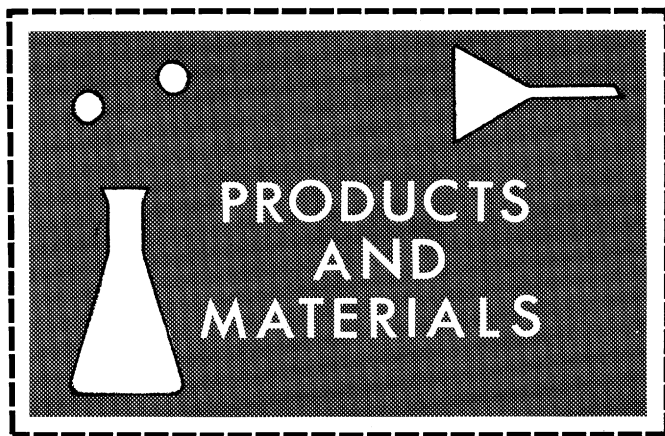
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Literature

Cold Storage features hospital and laboratory refrigeration equipment including refrigerators, freezers and temperature monitors, sensors, and alarms. Jewett Refrigerator. Circle 567.

Biotinylated Antibodies includes over 200 chemicals with a 13-atom spacer between biotin and the antibody to which it is conjugated. Jackson ImmunoResearch. Circle 568.

Spectrofluorometer details the design specifications and applications of the SPF-500C instrument. SLM Instruments. Circle 572.

Chemicals offers over 700 new products including high purity organic compounds and elements. Johnson Matthey/AESAR. Circle 580.

Rutherford Backscattering Surface Analyzer details this potent tool for study of solids and thin films. General Ionex. Circle 581.

HPLC Components describes equipment, columns, and accessories, including pumps, pulse dampers, valves, columns, fittings, filters, and more. Scientific Systems. Circle 582.

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Estuarine Biologist. Ph.D. 1981. Phytoplankton systematics, ecology, and physiology (10 years of experience). Broad experience; publications in aquatic and soil microbial nutrition, pesticide biochemistry. Innovative, articulate, good organization and communication skills. Seeks academic, government, or industrial position in Baltimore-Washington area. Box 136, SCIENCE. X

Molecular Biologist/Microbiologist. M.S. Experience in isolation of plasmid DNA, endonuclease restriction of DNA, agarose and polyacrylamide gel electrophoresis, protoplast fusion, tissue culture, and electron microscopy. Seeks R&D position to utilize multidisciplinary experience. Box 150, SCIENCE, or telephone: 319-263-4212. X

Plant Chemosystematist. Ph.D. 1985. M.S. in toxicology 1974. Skilled in GC-MS, HPLC, TLC, UV-Vis. Research interests in angiosperm phylogeny, drug/toxin molecular communities, and prediction of drug sources. Publications. Teaching experience. Seeking postdoctoral or permanent position in academia, industry, or government. Dr. Robert B. Jeppsen, 14 West 400 North, Orem, Utah 84057. X

Plant Pathologist. M.S. and Ph.D. in plant pathology/plant genetics, Wisconsin, 1984, with postdoctoral experience in plant molecular biology, seeks industry or government position that ultimately will lead to administration. Wants position where working knowledge of biotechnology or agricultural research can be implemented into making business or regulatory decisions. Excellent oral and written communication skills. Works well with people. Box 147, SCIENCE. X

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Applicants should airmail personal history and names of three referees. Applications, citing the above reference number, should be sent to: **The Head of the Personnel Department, International Livestock Centre for Africa, P.O. Box 5689, Addis Ababa, Ethiopia**, before 31 August 1985.

UNIVERSITY OF UTAH. As part of a cooperative program with the Department of Biology, the Department of Chemistry is inviting applications for a tenure-track **ASSISTANT PROFESSORSHIP** for individuals whose research interests are in the area of structure and function of biological macromolecules. The selected candidate is expected to demonstrate excellence and creativity in research and to play an active role in teaching. Preference will be given to individuals who apply modern chemical methods to the study of proteins or nucleic acids in areas which complement existing programs. Send résumé, including a description of research plans, and three letters of reference by 1 October 1985 to: **Professor C. D. Poulter, Department of Chemistry, University of Utah, Salt Lake City, Utah 84112. The University of Utah is an Equal Opportunity/Affirmative Action Employer.**

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ASSISTANT PROFESSOR—INSECT TOXICOLOGY. Tenure-track. Duties include: research (60 percent)—Developing a research program focusing on insect toxicology or insecticide biochemistry; teaching (40 percent). **Send for full position description.** Qualifications include a Ph.D. in insect toxicology, insecticide biochemistry, or related areas. Forward: (i) letter describing qualifications and interest in position, (ii) curriculum vitae, (iii) list of publications (include reprints), (iv) transcripts (post-secondary education), and (v) names and addresses of three to four referees to: **M. J. Tauber, Chair, Department of Entomology, Cornell University, Ithaca, N.Y. 14853.** Application deadline is 30 September 1985.

The Department of Neurosciences, McMaster University, invites applications for a position in the area of **NEUROENDOCRINOLOGY** at the **ASSISTANT PROFESSOR** level. Preference will be given to applicants with a strong background in analytical chemistry and previous research experience in the areas of indole metabolism or circadian rhythms. Candidates should have a Ph.D. degree, at least 2 years of postdoctoral experience and have a demonstrated ability to carry out high quality, independent research.

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Professor G. M. Brown, Chairman
Department of Neurosciences
McMaster University
1200 Main Street West
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Dr. Ferris Webster, Chairman
Associate Dean Search Committee, College of Marine Studies
UNIVERSITY OF DELAWARE, Lewes, DE 19958

The University of Delaware is an Equal Opportunity Employer which encourages applications from qualified minority groups and women.

CHEMIST

Sigma Chemical Company, a world producer and distributor of biochemicals and diagnostic reagents is seeking a PhD Biochemist or Clinical Chemist to add to its clinical research and development staff. The successful candidate will have a strong background in enzymology with expertise in diagnostic reagents development. A thorough understanding of various analytical techniques is required. Knowledge in the development of enzyme immunoassay procedures will be a plus. Excellent opportunity for chemist with a desire to assume supervisory responsibilities. Full company paid benefits. For consideration send resume to:

Personnel Manager
SIGMA CHEMICAL
COMPANY
3500 DeKalb
St. Louis, Missouri 63118

Equal Opportunity Employer, M/F

LASER SCIENCE AND ENGINEERING

The University of Iowa is committed to a significant expansion of its activities in the interdisciplinary field of Laser Science and Engineering. Current openings include the following:

1. Endowed Chair in Laser Physics

A leader with a strong international reputation in laser physics is sought. Representative areas of interest include (but are not limited to) the following: gaseous or solid state laser development; laser spectroscopy; and laser-plasma studies. Sizeable startup funds and an annual endowment will be available with this position.

2. Endowed Chair in Laser Chemistry

A leader with a strong international reputation in laser chemistry is sought. Representative areas of interest include (but are not limited to) the following: ultrafast spectroscopy; ultrasensitive chemical analysis; laser photochemistry and photophysics; and high resolution spectroscopy. Sizeable startup funds and an annual endowment will be available with this position.

3. Endowed Chair in Laser Engineering

A leader with a strong international reputation in laser engineering is sought. Representative areas of interest include (but are not limited to) the following: laser technology; ultrafast phenomena; laser applications in microelectronics; optical communications and computing systems; flow, heat transfer and combustion diagnostics; laser material processing; laser-based recognition systems; and biomedical laser applications. Sizeable startup funds and an annual endowment will be available with this position.

4. Tenure-Track Faculty Positions in Electrical and Computing Engineering

Individuals with high promise of obtaining an international reputation in laser aspects of electrical and computing engineering are sought at the Assistant Professor or higher level. Representative areas of interest include (but are not limited to) the following: laser technology; ultrafast phenomena; laser applications in microelectronics; optical communications and computing systems; and laser-based recognition systems. Applicants should also arrange for three letters of recommendation to be sent to the address given below.

5. Assistant Research Scientist Positions in the Iowa Laser Facility

Individuals with promise for high quality research are sought for these positions, which involve 50% research and 50% maintenance and development of equipment and assistance to facility users. Initial research involves laser development and spectroscopy of small molecules, but the development of independent research will be encouraged. Representative areas of interest include (but are not limited to) the following: laser development; laser spectroscopy; and photophysics and photochemistry. Applicants should also arrange for three letters of recommendation to be sent to the address given below.

Applications should be sent to the following addresses: **Positions 1-3, and 5:** Professor William C. Stwalley, Director, Iowa Laser Facility, University of Iowa, Iowa City, Iowa 52242-1294, (phone (319) 353-7081); **Position 4:** Professor John P. Robinson, Department of Electrical and Computing Engineering, University of Iowa, Iowa City, Iowa 52242, (phone (319) 353-3253)

and should clearly indicate for which positions the applicant wishes to be considered. Interdisciplinary appointments will definitely be considered. In selecting among qualified applicants, outstanding research quality is the most important criterion. Qualifications include teaching abilities at the graduate and undergraduate level (for 1.-4.), leadership abilities (for 1.-3.), evidence of success or potential for success in obtaining research funding, and commitment to interdisciplinary research. Applications from women and minorities are strongly encouraged. The University of Iowa is an equal opportunity/affirmative action employer.

POSITIONS OPEN

ASSISTANT PROFESSORS

The Department of Cancer Biology at the Harvard School of Public Health is seeking two assistant professors. One position will be in the Section of Radiobiology, where the candidate will conduct a research program in the area of mechanisms of radiation-induced mutagenesis in human cells, utilizing techniques of cellular and molecular biology. A background in the use of mammalian cell mutation assays and experience with molecular biological techniques are desirable. The second position will be in the Section of Virology, Immunology, and Molecular Biology. The successful candidate should have an understanding of protein/antigen characterization, familiarity with modern serologic immunoassays, experience with cell culture systems, and an interest in working with human tumor cells and/or tumor viruses.

Each candidate would be expected to develop a strong research program and assume teaching responsibilities in one or more graduate-level courses. Supervision of doctoral candidates will also be expected. A doctoral degree with at least 2 to 3 years of postdoctoral research experience is required, with demonstrated evidence of innovative research capability.

Interested candidates should send curriculum vitae with a complete bibliography, representative recent reprints, a description of research and teaching interests, and the names and addresses of three references to: **Lorraine Miller, Harvard School of Public Health, 665 Huntington Avenue, Boston, Mass. 02115.** Applications from women and minority candidates are particularly encouraged.

Two nontenure-track positions in **EXPERIMENTAL CHICK EMBRYOLOGY** related to human heart defects. Experience sought includes use of monoclonal antibodies to study myosin isoform expression, measurement of blood flow in embryos, HPLC determination of catecholamines, and study of receptor binding. Send curriculum vitae and bibliography to: **Dr. Dale E. Bockman, Department of Anatomy, Medical College of Georgia, Augusta, Georgia 30912.** Equal Opportunity Employer/Affirmative Action Program. J2961.

The Department of Meteorology at The Pennsylvania State University seeks applications and nominations for a **FACULTY POSITION IN THE THEORY AND APPLICATION OF REMOTE SENSING TO SATELLITE AND SURFACE-BASED OBSERVATIONS.** The department has excellent research facilities in both areas upon which new research programs can be built.

It is expected that an appointment as assistant or associate professor will be made. Candidates must hold a doctorate degree in the atmospheric, physical, earth, or engineering sciences. Candidates not currently associated with the atmospheric sciences should have a demonstrated interest in environmental remote sensing science.

The department administers academic programs leading to B.S., M.S., and Ph.D. degrees, a variety of research programs, and service programs that provide meteorological information to users throughout the Commonwealth. Faculty members are expected to be competent teachers who can stimulate students from the level of introductory service courses through graduate seminars. They are expected to develop their own research programs or collaborate with existing programs; the department seeks applicants who demonstrate a record of superior accomplishment and have the potential for continuing scholarly achievement.

The department makes both University-funded tenure-track and fixed-term appointments with rank and salary adjusted in accordance with the qualifications, experience, and reputation of successful candidates. An attractive benefit program is available.

The committee will begin reviewing applications and nominations on 1 August 1985 and will continue until a suitable candidate has been identified. Submit supporting information, such as curriculum vitae, reprints, and names of references, to:

**Dr. John A. Dutton, Head
Department of Meteorology
The Pennsylvania State University
503 Walker Building (Box S)
University Park, Pa. 16802**

*An Equal Opportunity/Affirmative
Action Employer*

POSITIONS OPEN

ASSISTANT PROFESSOR POSITIONS, DEPARTMENT OF PHYSIOLOGY, Duke University Medical Center—Tenure-track appointment (two) will be available to candidates with Ph.D. and/or M.D. who have postdoctoral experience and are strongly committed to a research program in the areas of molecular physiology and cellular biophysics. Preference will be given to candidates with interest in fundamental biological and regulatory processes as well as in the analysis of complex integrated systems. Please send curriculum vitae, statement of research plans, and the names of references to: **Physiology Search Committee, Duke University Medical Center, Box 3709-A, Durham, North Carolina 27710.**

*Duke University is an Equal Opportunity/
Affirmative Action Employer*

ENVIRONMENTAL PATHOLOGY/ TOXICOLOGY

Postdoctoral positions available in trace metal teratology, respiratory and inhalation toxicology, and aquatic toxicology (cytogenetics or teratogenesis) beginning July or September 1985 for those with a Ph.D., M.D., D.V.M., D.D.S. degree. Send curriculum vitae, two reference letters, reprints, and research interest statement to: **N. K. Mottet, M.D., Professor of Pathology and Environmental Health, SM-30, University of Washington, Seattle, Wash. 98195.** An Equal Opportunity/Affirmative Action Employer.

EVOLUTIONARY BIOLOGIST

The Department of Zoology of the University of Maryland seeks outstanding applicants for a tenure-track position of evolutionary biologist. Rank is open, and preference will be given to candidates who use modern methods to investigate evolutionary questions. Send curriculum vitae, statement of research interests, reprints, and at least three letters of recommendation to: **Evolutionary Biology Search Committee, Department of Zoology, University of Maryland, College Park, Md. 20742, by 30 September 1985.**

An Affirmative Action/Equal Opportunity Employer

The Department of Meteorology at The Pennsylvania State University seeks applications and nominations for a **FACULTY POSITION IN ATMOSPHERIC CHEMISTRY.** Particularly good research opportunities and facilities exist in the areas of atmospheric acidic deposition and biogeochemical cycles.

It is expected that an appointment as assistant or associate professor will be made. Candidates must hold a doctorate degree either in atmospheric chemistry or in physical chemistry and have a demonstrated interest in environmental studies.

The department administers academic programs leading to B.S., M.S., and Ph.D. degrees, a variety of research programs, and service programs that provide meteorological information to users throughout the Commonwealth. Faculty members are expected to be competent teachers who can stimulate students from the level of introductory service courses through graduate seminars. They are expected to develop their own research programs or collaborate with existing programs; the department seeks applicants who demonstrate a record of superior accomplishment and have the potential for continuing scholarly achievement.

The department makes both university-funded tenure-track and fixed-term appointments, with rank and salary adjusted in accordance with the qualifications, experience, and reputation of successful candidates. An attractive benefit program is available.

The committee will begin reviewing applications and nominations on 1 August 1985 and will continue until a suitable candidate is identified. Submit supporting information, such as curriculum vitae, reprints, and names of references, to:

**Dr. John A. Dutton, Head
Department of Meteorology
The Pennsylvania State University
503 Walker Building (Box S)
University Park, Pa. 16802**

*An Equal Opportunity/Affirmative
Action Employer*

POSITIONS OPEN

CANCER RESEARCH SCIENTIST

The London (Ontario) Regional Cancer Centre of The Ontario Cancer Treatment and Research Foundation invites applications for a scientist to establish a research program and to interact with a research group interested in genetics and cell biology of cancer cells. Ph.D. and postdoctoral training in molecular and somatic cell genetics preferred; applications from highly qualified individuals with other backgrounds and interests will also be considered. Appointment to appropriate departments within the University of Western Ontario will be sought. Send applications, including curriculum vitae, statements of research interests and future aims, and have three letters of reference sent to: **Dr. H. Bush, Director, London Regional Cancer Centre, 391 South Street, London, Ontario, Canada N6A 4G5.**

In accordance with Canadian immigration requirements, priority must be given to Canadian citizens or permanent residents of Canada.

DIRECTOR, NUCLEAR MEDICINE

The University of Kentucky Medical School invites applications and nominations for professor and director of Nuclear Medicine Division, Department of Radiation Medicine in a combined University-VAH program. We seek an individual with academic track faculty background to direct and provide leadership to a Medical School, Division of Nuclear Medicine, for teaching, research, clinical development, and care programs. To qualify for appointment, candidate should have recognized accomplishments in development studies, research, radionuclide studies, bibliography to support the application, desire to direct a Medical School department, teaching and administrative experience. VAH appointment experience desirable. M.D. degree and Board-certification desirable. Qualified Ph.D. scientists can apply with listed qualifications. Salary is based on academic rank and practice plan. Reply to: **Yosh Maruyama, M.D., Chairman, Search Committee, Department of Radiation Medicine, University of Kentucky Medical Center, Room C-15, 800 Rose Street, Lexington, Kentucky 40536.** The University of Kentucky is an Equal Opportunity Employer.

The University of Manitoba, Department of Earth Sciences, invites applications for a 2-year renewable term appointment in **CRYSTALLOGRAPHY/MINERALOGY.** The appointment is at the rank of **ASSISTANT PROFESSOR** and could begin as early as September 1985.

The department has 16 full-time faculty, and will be moving into a new building in summer 1985. The department is very well-equipped for research in the general area of crystallography/mineralogy, with a modern automated single-crystal diffractometer and supporting software, a modern automated powder diffractometer, an electron microprobe with both WDS and EDS capability, and a wet-chemical laboratory with two AA spectrophotometers, and an X-ray fluorescence spectrometer.

The candidate should have experience in crystal structure work, electron microprobe analysis, and the interpretation of mineral parageneses; a good general knowledge of mineralogy is considered essential. The successful candidate will be expected to pursue an independent research program, interact strongly with other members of the department, assist in maintaining the X-ray diffraction laboratories, and will be expected to carry a normal teaching load.

Both women and men are encouraged to apply. The University of Manitoba is an Equal Opportunity Employer, but in accordance with Canadian immigration requirements, for this position, priority will be given to Canadian citizens and permanent residents of Canada; however, others are also encouraged to apply.

Applications should include curriculum vitae and academic transcripts. Three letters of reference are required. The applicant should request that letters be sent directly to the department. Deadline for applications is 1 August 1985. All materials to be addressed to:

**Chairman, Search Committee
Department of Earth Sciences
University of Manitoba
Winnipeg, Manitoba, Canada R3T 2N2**

PROGRAM ADMINISTRATOR

Research Associateship and Fellowship Programs

The National Research Council seeks applicants with a minimum of 10 years' academic experience with at least 3 years in supervision of graduate or post-doctoral programs. The incumbent will assist in program planning and maintaining communications with fellows and participating laboratories as well as assist in the placement of IAEA fellows, writing reports and maintaining sound financial management of assigned programs.

Applicants should have a Ph.D. or equivalent in a Science or Engineering field associated with energy. In addition, demonstrated ability in financial management, supervision of staff, writing and organizational management is required.

For immediate consideration, please send resume and salary requirement to:

Dr. J. Chester McKee
National Research Council
JH 608
2101 Constitution Avenue, N.W.
Washington, DC 20418

An Equal Opportunity Employer

PROFESSOR AND CHAIRMAN DEPARTMENT OF MEDICAL MICROBIOLOGY AND INFECTIOUS DISEASES

The Faculty of Medicine, University of Alberta, invites applications for the position of professor and chairman, Department of Medical Microbiology and Infectious Diseases, the appointment to be effective 1 July 1986. The successful candidate will be expected to provide administrative direction and leadership to an actively developing department. In order to enhance undergraduate and graduate teaching as well as research, the current staff of eight faculty members in medical microbiology is being increased by cross appointments of ten faculty members in infectious diseases (Departments of Medicine and Pediatrics). Current research interests are directed towards microbial pathogenesis. The activities of the University of Alberta Hospitals Microbiology Division are also integrated into the department.

Applicants should have an active research program and be able to attract extramural support. The programs of the Alberta Heritage Foundation for Medical Research provide an ideal opportunity to develop innovative research areas. The appointment will be at the professorial rank with salary commensurate with qualifications and experience. Applicants should apply, enclosing curriculum vitae and the names of three referees, by 31 August 1985 to:

Dr. Douglas R. Wilson
Dean, Faculty of Medicine
2J2 Walter Mackenzie Health Sciences Centre
University of Alberta
Edmonton, Alberta, Canada
T6G 2R7

The University of Alberta is an Equal Opportunity Employer, but in accordance with Canadian immigration requirements, priority will be given to Canadian citizens and permanent residents of Canada.

Biochemist/ Cell Biologist



An equal opportunity employer

Pfizer Central Research has an excellent career opportunity for an innovative PhD Biochemist/Cell Biologist. As a key member of the Department of Immunology and Infectious Diseases, you will help plan and conduct research aimed at the discovery of novel anti-inflammatory agents. Entry position and level of responsibilities will be commensurate with experience.

You will join a multi-disciplinary research team working to assess and modify the activity of a variety of potential humoral mediators in *in vitro* and *in vivo* models of inflammatory disease. You must have a PhD in biochemistry, cell biology or immunology. Demonstrated expertise in analyzing the role of phlogistic mediators in acute and chronic inflammatory disease processes is essential. A working knowledge of the humoral and cellular aspects of inflammation, complement anaphylatoxins, protein purification and receptor/ligand interactions is highly desirable. Candidates with relevant supervisory or industrial experience are encouraged to apply.

This position offers an excellent opportunity for professional recognition and career growth. Publication of important findings will be encouraged. We also offer a competitive compensation, benefit and relocation package and an opportunity to live in an attractive shoreline community. For consideration, please send a current resume with a brief description of research interests in confidence to: Jerry K. Larson, PhD, Manager of Employment, Pfizer Central Research, Eastern Point Road, Groton, CT 06340.

Postdoctoral Scientist Gastrointestinal Pharmacology

SmithKline Beckman, a world leader in health care and technology is seeking a Postdoctoral Scientist to join an interdisciplinary research program in an environment designed to foster creative, innovative research and to promote personal and professional growth.

We consider postdoctoral studies to be of major importance in an individual's career and encourage publication of findings in leading journals and full interaction with the scientific community.

Our postdoctoral appointments are of 1 year duration and with mutual agreement renewable for a 2nd year.

The successful candidate will:

- investigate the role of protein kinase C in intestinal electrolyte transport.
- develop and assimilate models which characterize, biochemically and pharmacologically, the action of protein kinase C in the intestinal mucosa.
- work in collaboration with the Gastrointestinal group and other pharmacologic sections to correlate the biochemical and physiological consequences of drug modification of protein kinase C.
- publish work in scientific literature; attend national meetings to communicate the science.

Candidates are required to have:

- a Ph.D in Biochemistry, Pharmacology or Physiology with 0-2 years of postdoctoral research experience.
- experience with membrane techniques e.g. protein isolation, protein kinase biochemistry, SDS-PAGE and other state-of-the-art biochemical techniques.
- experience with intestinal mucosal transport biochemistry.
- excellent oral and written communication skills.

We offer an excellent salary, benefits and relocation package. For confidential consideration, send your C.V. and names of 3 references to Mr. Walter B. Flagg, Senior Employment Consultant, SmithKline Beckman Corporation, 1556 Spring Garden Street, Philadelphia, PA 19101. We are an equal opportunity employer, M/F/H/V.

SK&B

A SmithKline Beckman Company

POSITIONS OPEN

The University of Michigan, Ann Arbor, invites applications for an ASSISTANT, ASSOCIATE, OR FULL PROFESSORSHIP in the area of ORGANIC CHEMISTRY. This position will be with the Department of Chemistry and the Macromolecular Research Center. Applicants should have demonstrated capability of high quality research in the area of macromolecular synthetic chemistry and the potential for leadership in the area of macromolecular science generally. Some interest in the synthetic biopolymer area is desirable. The position is centered in the Chemistry Department. Submit a résumé, a brief summary of pre- and postdoctoral research, a list of publications, and a summary of research interests; also have three letters of recommendation forwarded to: Professor Arthur J. Ashe III, Chairman, Department of Chemistry, The University of Michigan, Ann Arbor, Michigan 48109. A nondiscriminatory, Affirmative Action Employer.

Applications are being received for ASSOCIATE CHIEF OF STAFF FOR RESEARCH in a 700-bed modern Veterans Administration hospital with close university affiliations and extensive basic science and clinical research programs. Candidate should be a physician who is an established investigator with academic status at the associate or professor level. The position requires a strong administrative capability and the ability to oversee large core and multicenter research programs. Salary is commensurate with experience. For further information, telephone: 213-824-3130, or send curriculum vitae to: Dr. William H. Bland, Chief, Nuclear Medicine Ultrasound Service (W115), West Los Angeles VA Medical Center, Wadsworth Hospital, Los Angeles, Calif. 90073. An Equal Opportunity/Affirmative Action Employer.

BIOCHEMISTRY/MOLECULAR BIOLOGY FACULTY POSITIONS

Assistant/Associate Professors—Two tenure-track positions are available in the Department of Biochemistry at the University of Mississippi Medical Center. Candidates with research interests in molecular and cellular biology are encouraged to apply. However, candidates will be considered in other areas. The department is well equipped and well funded, has a strong research program and a growing graduate program with ten full-time faculty members. Any interested person should send curriculum vitae and three letters of reference to: Dr. Albert Wahba, Chairman, Department of Biochemistry, The University of Mississippi Medical Center, Jackson, Mississippi 39216-4505. Equal Opportunity Employer, M/F/H/V.

CHAIRPERSON, Department of Pharmacology. The University of North Dakota (UND), School of Medicine, is conducting a search for a chairperson for its Department of Pharmacology. Applications are sought from individuals with a Ph.D., M.D., or M.D./Ph.D. and who have both a demonstrated scholarly productivity in an active research program and an acknowledged history of providing quality education to medical, graduate, and undergraduate students. Candidates must possess a background that demonstrates grantsmanship experience, leadership, administrative abilities, and communication skills with faculty and students. Interested persons should submit their curriculum vitae to: Dr. Edward C. Carlson, Professor and Chairman, Pharmacology Search Committee, Department of Anatomy, University of North Dakota School of Medicine, Grand Forks, North Dakota 58202. Deadline for receipt of applications is 15 September 1985. UND is an Equal Opportunity/Affirmative Action Employer.

ECOLOGICAL MODELER. Postdoctoral for scientist with demonstrated talent at simulation modeling of nutrient cycling in ecosystems. Research focus is process dynamics in the grazing ecosystem of the Serengeti region of East Africa. Goals will be to model soil processes, decomposition, mineralization, microbial biomass, and nutrient consumption and spatial concentration by large grazing mammals, and to couple that modeling with an existing primary productivity model [*Ecol. Modelling*, 23, 101-134, *et seq.*]. Field experience likely, so background involving validation under real conditions desirable. Position available immediately or as suitable to needs of best qualified applicant, consistent with overall research objectives. Send curriculum vitae, a statement of special competencies and interests, and have three letters of reference sent to: Professor S. J. McNaughton, Biological Research Laboratories, Syracuse University, 130 College Place, Syracuse, N.Y. 13210.

POSITIONS OPEN

CHAIRMAN DEPARTMENT OF PHYSIOLOGY

The University of Nevada, School of Medicine, announces the availability of the chair of the Department of Physiology. Basic science departments are located on the campus of the University of Nevada, Reno. The Department of Physiology focuses on excitable cell physiology with a long track record of successful research activity. Applicants must hold the M.D. or Ph.D. or equivalent degree and have research activities and expertise compatible with this research area. The School of Medicine seeks applicants who have a proven record in obtaining extramural funding and who have a strong commitment to teaching medical students and graduate students. All applicants are requested to send curriculum vitae, letter of application, and list of five references to: David P. Westfall, Ph.D., Physiology Search Committee Chairman, Department of Pharmacology, University of Nevada School of Medicine, Reno, Nev. 89557. The first round deadline for this advertisement is 1 September 1985; however, the position will remain open until filled.

UNIVERSITY OF FLORIDA FLORIDA STATE MUSEUM (FSM) DIRECTOR

Applications are invited for the directorship of one of the largest and most active university museums of natural history. The FSM emphasizes research and exhibits on the natural and cultural history of Florida and Latin America.

The FSM faculty consists of 24 salaried curators who also hold titular appointments in related teaching departments. Physically the museum is a modern structure central to the campus with one floor for each of its three departments: Natural Sciences, Anthropology, and Interpretations. The museum serves dual functions as the Florida State Museum, with permanent and traveling exhibits and a statewide membership program, and as a university museum, with strong research and educational missions.

The directorship is equivalent to the rank of dean within the University of Florida. Applicants should have appropriate experience and vision to plan the museum's long-range growth; to develop a statewide constituency and fund-raising campaign; to supervise the research and public education programs of the museum; and to maintain liaison with officers and lawmakers in state government.

The position opens as of January 1986. The salary is commensurate with qualifications and experience and competitive with that of other major museums. Applications naming three references should be postmarked no later than 31 October 1985 to: Dr. David Webb, Florida State Museum, Gainesville, Fla. 32611. The search will be conducted under Florida's "Government in the Sunshine" Law. The University of Florida is an Equal Opportunity/Affirmative Action Employer.

FISHERIES BIOLOGIST—Environmental engineering consulting firm has an immediate opening for an aquatic ecologist/fisheries biologist, M.S., with experience. This is an entry level position which requires knowledge of fin fisheries, impact assessment, and biometrics. Good oral and written communication skills mandatory, background in toxic substances and computer skills desirable. Please send résumé and salary requirements in confidence to: James M. O'Gorman, Personnel Director, LAWLER, MATUSKY & SKELLY ENGINEERS, One Blue Hill Plaza, Pearl River, New York 10965. Equal Opportunity/Affirmative Action Employer.

EXPERIMENTAL PATHOLOGIST. The Hepatitis Branch, Division of Viral Diseases, Centers for Disease Control (CDC), is seeking an individual with recognized expertise in the pathology of viral hepatitis. Candidate initiates and collaborates in basic and applied research directed toward a more complete understanding of pathomorphology and immunopathologic mechanisms of hepatitis A, hepatitis B, delta hepatitis and non-A, non-B hepatitis. Candidate must have proven expertise in the histopathologic interpretation of liver biopsies obtained from human and non-human primates and must have credentials in immunology and virology. M.D., Ph.D., or D.V.M. degree preferred. Salary range: \$31,619 to \$52,242, depending on experience and qualifications. Send curriculum vitae, brief summary of research experience and interests, and names of three current references to: William R. Hudson, Centers for Disease Control, Atlanta, Georgia 30333, or telephone: 404-329-3625. CDC is an Equal Opportunity Employer.

POSITIONS OPEN

DEAN FACULTY OF HEALTH SCIENCES

McMaster University invites applications or nominations for the position of dean, Faculty of Health Sciences. This appointment is to be effective 1 July 1986 or as negotiated. The term of appointment is for 5 years with the possibility of renewal for an additional 5 years.

The successful candidate will possess appropriate academic qualifications, demonstrated leadership ability, and a record of effective administrative experience. The Faculty of Health Sciences consists of the School of Medicine and Nursing and offers programmes in physiotherapy and occupational therapy.

Applications/nominations, accompanied by detailed curriculum vitae and names of three referees, should be forwarded to:

Dr. D. R. McCalla
Vice-President, Faculty of Health Sciences
McMaster University
1200 Main Street West
Hamilton, Ontario, Canada, L8N 3Z5

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



MCMMASTER
UNIVERSITY
HAMILTON,
ONTARIO,
CANADA

DIRECTOR OF IN VITRO FERTILIZATION LABORATORY

Assistant/Associate Professor
of Clinical Obstetrics/Gynecology (OB/GYN)

Ph.D. with postdoctoral training, experienced in in vitro fertilization to develop new program. Interested persons are invited to submit curriculum vitae by 15 September 1985 to:

J. W. Roddick, M.D., Chairman
Department of OB/GYN
Southern Illinois University (SIU)
School of Medicine
P.O. Box 3926
Springfield, Ill. 62708

SIU is an Affirmative Action Equal Opportunity Employer.

FACULTY POSITIONS IN BIOCHEMISTRY AND TOXICOLOGY

Two full-time faculty positions at the instructor level in the Physiology/Chemistry Department beginning September 1985. Responsibilities include teaching in either toxicology or biochemistry and assignments in a biochemistry/clinical laboratory. Minimum educational requirement is a master's degree in an appropriate field. Research is strongly encouraged. Curriculum vitae, three letters of reference, copies of transcripts, and a statement of research interests should be sent to:

Dr. Howard T. Silverstein
Chairman
Physiology/Chemistry Department
Palmer College of Chiropractic
1000 Brady Street
Davenport, Iowa 52803

Equal Opportunity/Affirmative Action Employer

IMMUNOCHEMIST/CELL BIOLOGIST

A non-profit biomedical research laboratory located in a small pediatric hospital in the upper Midwest is seeking a Ph.D. with 1 year of postdoctoral experience to investigate the human immune response to purified proteins of cytomegalovirus (CMV). Must have performed techniques in: (i) viral protein purification, for example, HPLC, gel electrophoresis; (ii) cellular biology, for example, proliferation, cytotoxicity, lymphokine assays; and (iii) immunochimistry. Duties will be to design and perform experiments, write grants, and train technicians. Previous experience in a CMV laboratory highly desirable. Salary is \$2270 per month.

Send résumés to:

Pat Brennan, Number 85-12
1910 West County Road B, Room 103
Roseville, Minn. 55113

THE UNIVERSITY OF CALGARY
ASSISTANT PROFESSOR
IN MOLECULAR BOTANY

The University of Calgary, Department of Biology, invites applications for a tenure-track position in molecular botany at the assistant professor level. While the successful candidate should be able to complement and cooperate with existing research programs in plant and cell biology and plant physiology, the main goal is to develop a strong, independent research program in the molecular biology of plants. Current areas of interest in the department are plant growth and development, and the molecular basis of the response of plants to stress, but the candidate is not restricted to these. Experience with the techniques of recombinant DNA and related technologies is essential.

Teaching duties will include lecturing in an introductory general botany course and in senior courses concerned with the biochemical/molecular aspects of higher plants.

A well equipped research laboratory is available. Other equipment is also available in plant physiological and molecular biological laboratories within the department.

The appointment will be open as of 1 December 1985, with a starting salary in the range of \$29,741 to \$34,489 (currently under review).

All qualified individuals are encouraged to apply, but preference will be given to Canadian citizens and permanent residents.

Applicants are requested to submit complete curriculum vitae, and to have three letters of academic reference forwarded by 30 September 1985 to:

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

Scientist PhD

Immunodiagnostics Research and Development

Becton Dickinson's Corporate Research Center, at Research Triangle Park, North Carolina, has an immediate opportunity for an experienced immunoassay scientist. We are seeking a dedicated and talented scientific professional to participate in the development of novel non-isotopic immunoassays.

The successful candidate will have a PhD in protein biochemistry with a strong background in enzymology, and at least 3 years postdoctoral experience in enzyme purification and analysis. A thorough understanding of enzyme-based immunoassays, excellent written/oral communication skills, and the ability to function as part of a diversified scientific team are required.

Becton Dickinson offers an excellent salary, a comprehensive benefits program which includes relocation assistance, and the opportunity to contribute to the dynamic health care field. Qualified candidates are asked to send curriculum vitae, in strict confidence, to: Mr. F. Richard Wilson, Human Resources Department, Becton Dickinson Research Center, P.O. Box 12016, Research Triangle Park, North Carolina 27709. An equal opportunity/affirmative action employer.

Caring for people is our business

BECTON
DICKINSON

PHARMACOLOGIST

The Department of Pharmacology has an opening for an Assistant Professor of Pharmacology. Candidates must have a doctorate degree with one or two years of postdoctoral training in Pharmacology and must have a strong capacity for independent research, which will have a high probability of attracting external financial support. Some teaching experience is desirable since the position requires participation in all teaching programs of the Department, including programs for medical, dental and graduate students. The University is located on a modern, 50-acre new campus in Newark and is in close proximity to a wide variety of living styles. Many opportunities are available in the geographic area for academic and scientific interactions. Send curriculum vitae including the names of three references to: **Dr. George A. Condouris, Professor and Chairman, Department of Pharmacology, NJ Medical School (UMDNJ), 100 Bergen Street, Newark, NJ 07103.** An Equal Opportunity/Affirmative Action Employer m/t/h/v.

University of Medicine
and Dentistry
of New Jersey

MECHANICAL OR AEROSPACE ENGINEER OR RESEARCH PHYSICIST

GM-13 \$37,359 to \$48,876 per annum

(depending on qualifications)

The Laboratory for Computational Physics is seeking a highly motivated individual to conduct theoretical and numerical investigations of reactive/nonreactive flow dynamics; synthesize the chemistry, physics, convective and diffusive transport processes; and model multidimensional structure of shocks and detonations, chemical kinetics of energetic materials, initiation, propagation and extinction of flames, and multiphase combustion processes.

Applicants must demonstrate experience in the application of computational fluid dynamics in the development of time-dependent/multidimensional compressible flows, flames/detonations, reactive flows, subsonic and supersonic gasdynamics. Knowledge of vectorization techniques for class six computers is highly desirable.

Interested applicants should submit a Personal Qualifications Statement (SF-171) or detailed resume prior to 30 July 1985, to:

NAVAL RESEARCH LABORATORY

Civilian Personnel Office
4555 Overlook Avenue, S.W.
Attention: 44-003:11.1 (S)
Washington, D.C. 20375-5000

AN EQUAL OPPORTUNITY EMPLOYER • U.S. CITIZENSHIP REQUIRED

MANAGER DRUG DISPOSITION

Help advance the state of the science in drug metabolism

Wyeth Laboratories is a leading developer and producer of prescription drugs, biologicals and infant nutritional products. We're deeply committed to advancing the science of medicine...having researched and developed hundreds of valuable drug products for the health and well-being of people throughout the world.

To meet our complex challenges, we seek a recognized expert in drug metabolism who is currently well-published and can lead a team of scientists in varied research projects within our Drug Disposition Section.

You will develop new methods for the isolation of drug metabolites and for the determination of drugs and metabolites in tissues and body fluids.

Will conduct studies in drug disposition/transformation, drugs/enzymes interaction and metabolically mediated mechanisms. We look to you to consult and interact with specialists in the field.

You must have a PhD in Biochemistry, Pharmacology or Chemistry backed by 10+ years experience in the area of drug metabolism that includes broad knowledge in pharmacokinetics, clinical pharmacology, enzyme kinetics, comparative species metabolism, as well as consistent and complex research problem solving.

Explore Wyeth's ideal research environment that offers state-of-the-art equipment, the best professionals in the field, and open lines of communication at all levels. We provide an excellent salary, extensive benefits and advancement opportunity. Please send curriculum vitae to: **Position #WD5028S, Manager of Recruitment, Wyeth Laboratories Inc., P.O. Box 8299, Philadelphia, PA 19101.** Equal Opportunity Employer, M/F/H/V responses encouraged.



RESEARCH MICROBIOLOGIST

Behind the successful, top quality products of the Miller Brewing Company, are the talents of scientists in our specialized research laboratory. A recent promotion has created your opportunity to develop and conduct independent research programs within the Microbiology Research Section. You will be applying advanced molecular genetic techniques to modification and analysis of brewing strains and beer fermentation processes.

We are seeking a Ph.D. with proven ability to conduct independent research in microbial genetics and molecular biology. The successful candidate will have current knowledge and demonstrated technical expertise in the areas of:

MICROBIOLOGY—including basic techniques for culture management.

GENETICS—including mutagenesis and selection; formal genetics of bacteria, yeast, or fungi; and genetic transformation of bacteria, yeast or fungi.

MOLECULAR BIOLOGY—including purification and sequencing of nucleic acids; cloning in phage or plasmid systems; and nucleic acid probe hybridization.

Creativity, independence, problem solving skills, innovation and flexibility are essential, as are excellent written and oral communicative skills.

We will provide you with specialized training for your brewing industry challenges and will reward your contributions most competitively. For more information, send your resume including salary history to: Christopher Wodarczyk, Dept. #9020-85, MILLER BREWING COMPANY, 3939 West Highland Blvd., Milwaukee, WI 53201.

Employing equally today...
promoting equally tomorrow.

**MILLER
BREWING
COMPANY**



POSITIONS OPEN

IMMUNOLOGIST—Faculty position. Tenure-track 12-month assistant professorship in medical microbiology (immunology). Ph.D. or M.D. 2 years of postdoctoral experience. Expect establishment of independent research program and participation in teaching medical and graduate students. Position available 1 January 1986. Submit letter outlining research and teaching interests, curriculum vitae, bibliography, and arrange for three reference letters to: **Dr. Dean D. Manning, Department of Medical Microbiology, University of Wisconsin Medical School, 1300 University Avenue, Madison, Wis. 53706.** The University of Wisconsin is an Equal Opportunity/Affirmative Action Employer.

The Department of Land, Air and Water Resources, **UNIVERSITY OF CALIFORNIA, DAVIS**, announces a position in the area of **METEOROLOGY**. Tenure-track (11 months plus 1 month paid vacation) position, 38 percent teaching and 62 percent research. Appointment will be at the assistant or associate professor level, depending on qualifications.

Qualifications: A Ph.D. in atmospheric science or a closely related discipline, specializing in numerical simulation or observational study of one or more of the following: orographically or thermally induced circulations, midlatitude mesoscale cloud dynamics, regional transport and transformation of pollutants, mesoscale features of midlatitude cyclones, mechanisms of the interactions of regional scale climate and agriculture. The appointee will take part with other faculty in teaching and advising in meteorology at the undergraduate and graduate level.

Applicants: Send a statement of teaching and research background and interests, curriculum vitae, official undergraduate and graduate transcripts, list and copies of publications and current manuscripts, summary or abstract of Ph.D. dissertation, and names and addresses of three referees to: **Dr. B. C. Weare, Meteorologist Search Committee, Department of Land, Air and Water Resources, Hoagland Hall, University of California, Davis, Calif. 95616**, no later than 30 September 1985. (Position available on or before 1 January 1986.)

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

MOLECULAR BIOLOGIST. Tenure-track position for an assistant or associate professor reopened. Ph.D. and postdoctoral experience required. Candidates must have a research interest in molecular biology with a botanical orientation. Development or continuation of a research program with external funding is expected. Teaching will include general biology, molecular biology, and botanical physiology. Submit curriculum vitae, three letters of recommendation, current reprints, and a statement of research interests to: **Dr. Jean Wooten, Box 5018, Department of Biological Sciences, University of Southern Mississippi, Hattiesburg, Miss. 39406-5018.** Closing date: 1 September 1985. An Affirmative Action/Equal Opportunity Employer.

NEUROSCIENTIST. The Division of Neurosurgery of New York Medical College announces its search for a research scientist (M.D. or Ph.D.) whose interests would allow collaborative efforts with clinicians interested in the following areas: head trauma, brain tumors, stroke/cerebrovascular disease, and pain. Applications are sought for individuals with at least a 2-year period of postdoctoral training in this area. The successful candidate will have a joint appointment in a basic science department and can expect financial support. Please send letters of application, curriculum vitae, and letters from three references to: **Dr. Jack Stern, Director of Research, Division of Neurosurgery, New York Medical College, Valhalla, New York 10595.**

PHYSIOLOGY. The Department of Physiology of the Ohio State University, College of Medicine, is seeking a physiologist with an established research program for a full-time associate or full professorship. A Ph.D. or equivalent and teaching experience are required. The successful candidate will be expected to teach medical, dental, and graduate courses, advise graduate students and participate in interdisciplinary research programs with other departments in the College of Medicine and University. Send letter of application, curriculum vitae, and the names of three references by 1 August 1985 to: **Dr. Jack Wood, Department of Physiology, The Ohio State University, 333 West 10 Avenue, Columbus, Ohio 43210.** An Equal Opportunity/Affirmative Action Employer.

POSITIONS OPEN

LAVAL UNIVERSITY MEDICAL CENTER MOLECULAR ENDOCRINOLOGY AND ONCOLOGY

Two Positions Available

Applications are invited for tenure-track position. Full-time research. Experience in molecular biology and genetic engineering. Interests in the fields of endocrinology and oncology preferred. Competitive salary according to experience. Positions opened immediately.

Please send application, curriculum vitae, and list of publications to:

Chairman
Department of Molecular Endocrinology
Le Centre Hospitalier de l'Université Laval
2705 Laurier Boulevard
Sainte-Foy, Quebec, Canada G1V 4G2
Telephone: 418-656-8253

NEUROENDOCRINOLOGIST DEPARTMENT OF PHYSIOLOGY QUEEN'S UNIVERSITY

A vacancy exists for an experienced neuroendocrinologist. The preferred applicant should have the Ph.D. and/or the M.D. degree, several years of teaching experience, and a record of independent research of high quality. The applicant will be expected to lead an active research program and to participate in undergraduate and graduate teaching. The facilities for research are outstanding and the appointment is a regular one under tenure regulations. The appointment will be made at a level appropriate to the candidate's qualifications. *Applications are encouraged from candidates of either sex.* Applicants should submit curriculum vitae, a brief statement of their research interests and objectives, selected reprints, and the names of three referees from whom a confidential assessment of research and teaching abilities may be obtained to: **Dr. V. C. Abrahams, Department of Physiology, Queen's University, Kingston, Ontario, Canada K7L 3N6.**

NEUROSCIENCE RESEARCH POSITIONS available for postdoctoral scientist interested in adult and/or child psychopathology at a Research Psychiatric Institute affiliated with New York University, Department of Psychiatry. Tenure-track and academic appointment available for individual with established competence. Generous benefits; New York State position in Rockland suburb of New York City. Send curriculum vitae to: **Search Committee, NATHAN S. KLINE INSTITUTE FOR PSYCHIATRIC RESEARCH, Orangeburg, N.Y. 10962.** An Equal Opportunity Employer, M/F.

PATHOLOGIST

The University of New Mexico and the Veterans Administration Medical Center, Albuquerque, invite applications for a pathologist to serve as director of Surgical Pathology at the VA Medical Center and assistant professor of pathology. Applicants should be certified by the American Board of Pathology and be interested in high-quality patient care, immunopathology, electron microscopy, teaching, and clinical investigation. Salary and rank based upon experience. Send curriculum vitae and three references by 15 August 1985 to: **Cecilia M. Fenoglio-Preiser, M.D., Professor, Department of Pathology, School of Medicine, The University of New Mexico, Albuquerque, N.M. 87131.** Affirmative Action/Equal Opportunity Employer.

POSTDOCTORAL POSITION available 1 September 1985 for analysis of genes of the chicken major histocompatibility complex (MHC). Background in immunology, genetics, and/or biochemistry required. Send curriculum vitae and names of three references to: **Dr. Carol M. Warner, Department of Biochemistry, Iowa State University, Ames, Iowa 50011.**

POSTDOCTORAL POSITION available immediately to study the structure and electron transfer mechanism of cytochrome oxidase, cytochrome c, and the cytochrome bc₁ complex. A variety of techniques will be used, including site-specific modification and cross-linking, fluorescence energy transfer, and NMR. Send curriculum vitae and names of three references to: **Dr. Frank Millett, Department of Chemistry, University of Arkansas, Fayetteville, Ark. 72701.** Equal Opportunity Employer.

Research Scientists

CIBA-GEIGY, a recognized world leader in the ethical pharmaceutical industry, has two vacancies in its Neurosciences Cardiovascular Research Group in Summit, NJ. We seek applicants with at least 2 years' postdoctoral experience and expertise in technologies relevant to Molecular Pharmacological approaches to drug development, with particular emphasis on radioligand binding.

Peptide Research

You will have experience in the area of peptide neuromodulatory agents and will help establish a presence in the molecular biology area (monoclonal antibodies, etc.).

Amino Acid Research

Your qualifications should include experience and interest in the area of amino acid neuromodulatory agents, with particular reference to excitatory amino acids, such as glutamate.

A proven ability to initiate and conduct goal-oriented research within a team framework and a strong publication record is essential. CIBA-GEIGY is committed to excellence in science and encourages publication as a continuing contribution to the individual's career growth within the context of ongoing drug discovery programs.

We offer an excellent salary and benefits package, relocation assistance and the resources and commitment of a multibillion dollar, multinational leader in ongoing research. Our location is in a convenient suburban area within one hour of New York City. Interested candidates should forward a resume, including salary history and requirements, in confidence to: Manager of Technical Staffing, The Pharmaceuticals Division, CIBA-GEIGY Corporation, Dept. S749, 556 Morris Avenue, Summit, NJ 07901. An Equal Opportunity Employer m/f/h/v.

Progress Through Innovation

CIBA-GEIGY

DEPUTY DIRECTOR ASSOCIATED WESTERN UNIVERSITIES, INC.

Applications and nominations are invited for the position of Deputy Director, Associated Western Universities, Inc. (AWU). AWU is a non-profit organization serving as liaison among 36 member universities and 26 Department of Energy (DOE) research facilities; the organization is engaged in the support of basic research funded by DOE. AWU has an annual budget of \$1.5 million and over the past 20 years has provided over 3,000 appointments to faculty, post-graduates, graduates and undergraduates in energy-related research programs.

Applicants should possess proven administrative and management skills, excellent communicative capability, an earned doctorate, a strong record of research in engineering or physical sciences, and experience in academic setting, or equivalent education/experience. Additionally, experience in, or extensive interaction with, one or more government agencies is desirable.

Initially the Deputy Director will assist the Executive Director in all phases of the position, including contract negotiation, review of applications for research participation at labs, and development of interaction among member universities, research laboratories and DOE. This is a 12-month position with a salary range to \$50,000 depending on qualifications and experience. The Deputy Director will be considered as a prime candidate for advancement to Executive Director in June 1987, when the Executive Director retires.

Qualified candidates should send their resumes by September 30, 1985, to:

Dr. Leland M. Shannon, Chairman
AWU Board of Directors
Associated Western Universities, Inc.
142 East 200 South, Suite 200
Salt Lake City, UT 84111

AWU is an equal opportunity, affirmative action employer; ethnic minorities and women are expressly invited to apply.

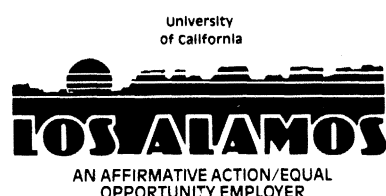
POSTDOCTORAL ASSOCIATE IN BIOINORGANIC CHEMISTRY

The Los Alamos National Laboratory has a position available immediately in the Stable Isotope and Structural Chemistry Group (INC-4) for an individual interested in the characterization of redox active metalloproteins involved in energy transduction. Specific systems under consideration are the Rieske iron/sulfur protein and the cytochrome c_{12a_3} from "Thermus thermophilus" of J. Biol. Chem. 1984.

An individual is being sought who has an interest in bioinorganic chemistry with a strong background in either biophysical techniques or recombinant DNA methods. Group INC-4 maintains active, multidisciplinary programs in physical, inorganic, bioinorganic, and bioorganic chemistry. Collaborative efforts involving the more biological aspects of metalloproteins are available with researchers in the Life Sciences Division. The successful candidate will also have opportunity to interact with other researchers in a variety of disciplines. United States citizenship is preferred. Our starting salary range is \$27,900 to \$29,376 per annum. Interested candidates should write to: James A. Fee, Division of Isotope and Nuclear Chemistry (INC-4), Mail Stop C345, Los Alamos National Laboratory, Los Alamos, New Mexico 87545, or call Dr. Fee at (505) 667-5324.

To formally apply, please send your resume, bibliography, three letters of reference and graduate and undergraduate transcripts to:

Carol M. Rich
Personnel Administration
Division 85-DL
Los Alamos National Laboratory
Los Alamos, NM 87545



POSITIONS OPEN

PROFESSORIAL POSITION NMR SPECTROSCOPIST

The Division of Biochemistry, Department of Human Biological Chemistry and Genetics, University of Texas Medical Branch, Galveston, Texas, invites applications for appointment to a 12-month, tenure-track position at the professorial rank. The successful candidate for this position should have an earned doctorate in the basic sciences and an outstanding record of publications and accomplishments in NMR spectroscopy.

Equipment available for this position includes a JEOL GX270WB spectrometer and ready access to a recently designed analytical facility which will house the NMR spectrometer, GC/MS spectrometers, an x-ray diffractometer, extensive HPLC capabilities and related analytical equipment.

The successful candidate will be expected to interact with faculty who use a 0.6-tesla NMR whole body imaging instrument and to play a role in the development of extensive in vivo NMR spectroscopic and imaging capabilities on this campus. The position is available immediately. Letters of application must include curriculum vitae and three references. Applications must be received by 1 November 1985 and should be addressed to:

Dr. Creed W. Abell
Director, Division of Biochemistry
Department of Human Biological
Chemistry and Genetics
The University of Texas Medical Branch
Galveston, Tex. 77550

An Equal Opportunity/Affirmative Action Employer

PHYSICAL BIOCHEMISTS/MEMBRANE AND CELL BIOLOGISTS

The Thrombosis/Hematology Research Program of the Oklahoma Medical Research Foundation is seeking highly qualified M.D.'s and Ph.D.'s to participate in research related to the interactions of the serum complement, coagulation and fibrinolytic systems on membrane surfaces. Prior training and experience in protein chemistry, membrane biology, and/or the application of physical methods (for example, in vivo fluorescence spectroscopy) to cell biology desired. Suitable candidates will be expected to conduct full-time laboratory research in close interaction with the Thrombosis/Hematology Research Program. Funded positions available at all levels (postdoctoral and more senior positions) depending on experience. Mail curriculum vitae and description of research interests to: Peter J. Sims, M.D., Ph.D., Associate Member, Oklahoma Medical Research Foundation, 825 Northeast 13 Street, Oklahoma City, Oklahoma 73104. *An Equal Opportunity/Affirmative Action Employer.*

POSTDOCTORAL AND ASSISTANT PROFESSOR POSITIONS available immediately for project in computer-aided neuroanatomy and visual system modeling of primate visual system at New York University Medical Center.

Candidates must have experience in neuroanatomical techniques, 2DG, autoradiography, and so forth. Physiological recording, visual system studies, or computer experience also desirable. As of placement of this ad, these positions are unfilled. Send résumés to: Professor Eric Schwartz, Brain Research Laboratory, New York University Medical Center, New York, N.Y. 10016.

An Affirmative Action/Equal Opportunity Employer, M/F

POSTDOCTORAL POSITION available immediately to study role of stromal cells and extracellular matrix in hormonal control of mammary gland growth. Background in endocrinology and biochemistry with experience in cell culture, histologic and steroid autoradiographic techniques is desired. Send curriculum vitae and three letters of reference to:

Dr. S. Z. Haslam
Department of Anatomy
Michigan State University
East Lansing, Mich. 48824-1101
Telephone: 517-353-4618

POSTDOCTORAL RESEARCH ASSOCIATE in plant biochemistry/physiology, pathology. Study toxins from fungal plant pathogens. Emphasis on host components and processes that determine resistance or susceptibility in host plants. Salary: \$15,000 minimum, plus good benefits. Apply by 6 September with résumé and references to: Dr. J. M. Daly, Department of Agricultural Biochemistry, University of Nebraska-Lincoln, Lincoln, Nebraska 68583-0718. Telephone: 402-472-2937. *Affirmative Action/Equal Opportunity Employer.*

POSITIONS OPEN

POSTDOCTORAL

Position available for research in the molecular and cell biology of extracellular matrix components. Background in biochemistry or recombinant DNA preferred. Send letter of application, résumé, and names of three references to: Dr. Jeanne C. Myers, Connective Tissue Research Institute, University of Pennsylvania, 3624 Market Street, Philadelphia, Pa. 19104. *An Affirmative Action/Equal Opportunity Employer.*

POSTDOCTORAL POSITIONS HOWARD HUGHES MEDICAL INSTITUTE/PHILADELPHIA

Fully funded postdoctoral positions in molecular biology and molecular genetics are now available at the Howard Hughes Medical Institute of the University of Pennsylvania. Active research projects include: transcriptional and translational control of eukaryotic gene expression, mechanisms of cellular transformation and gene amplification, molecular mechanisms of chromatin inactivation, and the application of molecular genetics to studies of inherited disease.

For information, please contact:

Dr. Steve Lieberhaber, Coordinator
Howard Hughes Medical Institute
Department of Human Genetics
Medical Laboratories Building/G3
University of Pennsylvania School of Medicine
Philadelphia, Pa. 19104

POSTDOCTORAL POSITIONS IN ECOLOGICAL MICROBIAL GENETICS. Survival, fate, and genetic stability of recombinant bacteria in terrestrial and insect ecosystems. Experience in molecular biology and microbial ecology and/or in insect microbiology essential. Appointments for 2 years; \$21,000 starting. Send curriculum vitae and three references by 1 September to: John Armstrong (Insects), U.S. Environmental Protection Agency, 200 Southwest 35 Street, Corvallis, Ore. 97333, or G. Stotzky (Terrestrial), Biology, New York University, New York, N.Y. 10003.

POSTDOCTORAL/RESEARCH ASSOCIATE POSITION(S) available to study enzymes involved in acetone-butanol-isopropanol formation in clostridia and to study molecular mechanisms concerning onset, cessation, and degeneration of ABI fermentation. Knowledge of bacterial physiology and enzymology necessary. Experience in enzyme purification and characterization or in molecular biology desirable. Send résumé and two letters of recommendation to: Dr. J. S. Chen, Department of Anaerobic Microbiology, Virginia Polytechnic Institute and State University, Blacksburg, Va. 24061.

RESEARCH ASSOCIATE (POSTDOCTORAL), ROCKEFELLER UNIVERSITY. Position available for research in area of membrane receptor biochemistry related to chemotherapy. Required: strong background in modern protein isolation and analytical electrophoretic techniques. Send résumé and references to: Box 197, Rockefeller University, 1230 York Avenue, New York, N.Y. 10021. *An Equal Opportunity Employer.*

SENIOR TOXICOLOGIST

Exxon Corporation's Research and Environmental Health Division has an opening for a senior toxicologist. As a member of an interdisciplinary team of health professionals, this individual will provide toxicological consultation and guidance to petroleum and petrochemical operations. The assignment includes oversight of testing and research activities to support operational hazard assessments.

The successful candidate should have a Ph.D. in toxicology or related discipline and have 3 to 5 years of industrial experience. Exceptional writing, organizational, and presentation skills are essential since the individual will interface with senior management, industry trade association representatives, and regulatory authorities.

Exxon Corporation offers an excellent working environment, salary commensurate with skills and experience, and excellent benefits. Please direct your résumé to: Exxon Corporation, Employee Relations Coordinator, P.O. Box 235, East Millstone, N.J. 08873. Exxon is an Equal Opportunity Employer, M/F/H.

EXXON CORPORATION

Post-Doctoral Research Associate

— Organic Synthesis

Sandoz, Inc. is responsible for pharmaceutical products that improve the quality of life. Our developments are the result of research conducted by professionals who specialize in many different fields.

Currently we are seeking an individual for one year post-doctoral position. This individual will participate in the conceptualization and execution of synthesis of new chemical entities of biological interest in the current areas of involvement at the Sandoz Research Institute. The successful candidate should have a Ph.D. or equivalent experience in organic synthesis and spectroscopic techniques.

Positions at Sandoz offer personal satisfaction, professional opportunity/challenge, competitive salaries and excellent benefits package. Our campus-like facilities are conveniently located in northern New Jersey.

For prompt consideration, please forward your resume in confidence to:

Personnel Manager
Sandoz Research Institute
SANDOZ, INC.
Dept. 403-119
Route 10
East Hanover, N.J. 07936

An Equal Opportunity Employer M/F



NATIONAL INSTITUTES OF HEALTH STAFF FELLOWSHIP Molecular Genetics/Biology

The Clinical Investigations Section of the National Institute of Dental Research is seeking an individual experienced in cell transformation, somatic cell hybrids, transforming genes and/or tumor promotion to participate in ongoing studies of exocrine gland function. The candidate should have 1-2 years post-doctoral experience and an interest in the development and use of epithelial cell lines in questions of a) membrane transport processes (e.g. Biochem. J. 227: 239, 1985) or b) regulation of N-protein glycosylation (eg. BBRC 126: 123, 1985). The initial appointment is for a starting salary range of \$24,000-\$30,000, depending on background and experience. The position is available October, 1985. Send curriculum vitae and three letters of reference to D. Bruce J. Baum, Clinical Investigations Section, National Institute of Dental Research, National Institutes of Health, Building 10, Room 1S217A, Bethesda, MD. 20205.

NIH is an Equal Opportunity Employer.

DIRECTOR

LOS ALAMOS NATIONAL SCIENTIFIC LABORATORY
UNIVERSITY OF CALIFORNIA
LOS ALAMOS, NEW MEXICO

The President and The Regents of the University of California invite nominations and applications for the position of director of the Los Alamos National Scientific Laboratory of the University of California at Los Alamos, New Mexico. The appointment will be effective 1 October 1985.

The Laboratory was established in 1943 and is located 35 miles northwest of Santa Fe at an elevation of 7300 feet. It is one of three University of California laboratories devoted to medium energy and other experimental physics, theoretical sciences, chemistry, including nuclear chemistry, materials sciences, medical physics, thermonuclear energy, and research related to energy and national defense programs, operated under contract with the U.S. Department of Energy.

The director is responsible for the management of the laboratory and reports to the president of the university. Within university policy, the director exercises broad delegated powers in the overall administration of the laboratory, which employs approximately 7000 full-time staff members and operates on an annual budget of approximately \$650 million. The director is responsible for overall management of research programs, both classified and unclassified, negotiation of funding support through a major contract between the University of California and the Department of Energy, and disbursement of Department of Energy funds in compliance with the University of California and Department of Energy regulations. Candidates should have demonstrated administrative experience in the conduct of the affairs of substantial organizations and should have an extensive scientific and technical record.

Applications, accompanied by current résumés, and nominations may be addressed to:

The President
714 University Hall—LASNL
University of California
Berkeley, California 94720

and should be received no later than 2 August 1985 to be given full consideration

An Equal Opportunity/Affirmative Action Employer

DIRECTOR, IDAHO AGRICULTURAL EXPERIMENT STATION AND ASSOCIATE DEAN, COLLEGE OF AGRICULTURE

University of Idaho, Moscow

The University of Idaho is seeking an accomplished scientist and administrator to serve as director of the Idaho Agricultural Experiment Station and associate dean of the College of Agriculture. Agricultural research at the university is conducted at the home station in Moscow and at seven research and extension centers throughout the state. The diversity of Idaho agriculture is reflected in the research programs being conducted by the College of Agriculture.

Responsibilities: The director of the Idaho Agricultural Experiment Station has major responsibilities to:

- Serve as the chief administrative officer of the Idaho Agricultural Experiment Station.
- Evaluate research productivity of the agricultural college's departments.
- Optimize allocation of resources to research.
- Aid research faculty in competing for funds.
- Maintain a working relationship with agricultural commodity groups, industry representatives, the public, and government officials.
- Prepare and present budgets and reports of the experiment station.
- Develop sources of extramural funding and foster interdisciplinary research.
- Coordinate and provide leadership for all research in the college.

The director reports to the dean of the College of Agriculture. Qualifications: A Ph.D. in the agricultural sciences or a closely related field is required. Demonstrated research experience and excellence is essential. Thorough understanding of the land-grant agricultural experiment station system and demonstrated administrative experience are required. The candidate must have a proven ability to communicate and coordinate with diverse groups, such as faculty, industry personnel, and government officials. A broad experience or knowledge across several agricultural discipline areas is desirable.

Salary: The salary is competitive and will be related to qualifications and experience.

Application procedure: Applications, a complete résumé, and five letters of recommendation must be postmarked by 30 September 1985. Send applications to: **Dr. Donald C. Thill, Chairman, Search Committee, Department of Plant, Soil and Entomological Sciences, University of Idaho, Moscow, Idaho 83843.**

The University of Idaho is an Equal Opportunity Institution

POSITIONS OPEN

POSTDOCTORAL POSITIONS available immediately to study the endocrine regulation and biosynthesis of sex pheromones and lipid metabolism in insects. Background in enzymology, lipid biochemistry, or insect physiology desirable. Please send résumé and three references to: **Dr. Gary Blomquist, Biochemistry, University of Nevada, Reno, Nev. 89557**, by 15 August or until positions are filled. *Affirmative Action/Equal Opportunity Employer.*

POSTDOCTORAL POSITION IN BIOCHEMICAL TOXICOLOGY

Position available 1 October for study of pulmonary toxicology of oxidants in aged animals. Requires expertise in chemistry, biochemistry, and mammalian toxicology. Starting salary: \$17,500. Reply with curriculum vitae and three references to: **Dr. Mark R. Montgomery, Research Service (151), VA Hospital, 13000 North 30 Street, Tampa, Fla. 33612.**

An Equal Opportunity Employer

POSTDOCTORAL POSITION. One position will be available 1 September 1985 to study molecular aspects of Shiga-like toxin production by *Escherichia coli*. The project will use gene cloning, DNA sequencing, and other molecular methods to study regulation of toxin production and mode of action of the toxin. Background in microbial genetics, molecular biology, or biochemistry preferred; knowledge of bacterial pathogenesis helpful. Submit curriculum vitae and names of three references to: **Dr. Alison D. O'Brien, Department of Microbiology, c/o Personnel Division, Uniformed Services University of the Health Sciences, 4301 Jones Bridge Road, Bethesda, Md. 20814-4799.** Curriculum vitae will not be returned. *Equal Opportunity/Affirmative Action Employer.*

POSTDOCTORAL RESEARCH ASSOCIATE to study structure of proteins that interact with nucleic acids. X-ray crystallographer or protein biochemist desired. Send curriculum vitae with names of at least two references to: **Professor David L. Ollis, Department of Biochemistry, Molecular Biology and Cell Biology, Northwestern University, Evanston, Illinois 60201.** *An Affirmative Action/Equal Opportunity Employer.*

POSITIONS OPEN

POSTDOCTORAL POSITION IN DEVELOPMENTAL NEUROBIOLOGY, UNIVERSITY OF CALIFORNIA, SAN FRANCISCO. Available for electrophysiological studies of motoneuron membrane properties and development of synaptic contacts in spinal cord of rat embryos. Candidates with experience using intracellular electrophysiological techniques are preferred. Send curriculum vitae, statement of research interests, and names and telephone numbers of three references to: **Dr. Lea Ziskind-Conhaim, Department of Physiology S-762, University of California, San Francisco, Calif. 94143.** Telephone: 415-666-4201.

POSTDOCTORAL POSITION in molecular biology in New York City area available 1 September to study the recognition of sequences at the poly(A) site in a cell extract system. Projects will include the construction of various poly(A) site-containing SP6 clones and the processing of their synthetic RNA products; fractionation of a nuclear extract to characterize factors which recognize the poly(A) site and the characterization of regulated poly(A) sites. Experience in protein purification, cell fractionation, and basic molecular biology would be helpful. Send curriculum vitae and names of three references to: **Dr. Ronald P. Hart, Department of Zoology & Physiology, Rutgers University, Newark, New Jersey 07102.** *Rutgers University is an Equal Opportunity/Affirmative Action Employer.*

POSTDOCTORAL POSITIONS (two) are available immediately to study the biochemistry of allergic and inflammatory reactions. Candidates should have backgrounds in protein biochemistry/purification and enzymology. For one position, familiarity with the kallikrein-kinin system is desirable. A basic knowledge of immunology is also desirable for both positions. Send curriculum vitae, containing names of three references, and a statement of research interests to: **Dr. David Proud, Johns Hopkins University School of Medicine at Good Samaritan Hospital, 5601 Loch Raven Boulevard, Baltimore, Md. 21239.** *An Equal Opportunity Employer.*

POSITIONS OPEN

BOSTON AREA POSTDOCTORAL POSITION

Two-year, well-paid, postdoctorate for person with experience in molecular biology/cell culture/embryology/endocrinology. Interests of this laboratory center on differentiation and hormone regulation of gene expression and cell division in the frog liver system. Available starting 1 September 1985. Send curriculum vitae and three letters of recommendation to:

**Dr. Larry Wangh
Department of Biology
Brandeis University
Waltham, Mass. 02254**

RESEARCH ASSOCIATE POSITIONS available to study the molecular basis of hormone regulation, specifically the role of covalent phosphorylation in the control of glycogen metabolism by insulin, glucagon and catecholamines. Projects include: (i) enzymological study of protein kinases and glycogen synthase, (ii) chemical comparison of the liver and muscle isozymes of glycogen synthase, and (iii) cloning of cDNA's encoding glycogen synthase and other regulatory proteins. We seek enthusiastic and committed individuals to join ongoing projects. Please contact and have two letters of recommendation sent to: **Dr. Peter J. Roach, Department of Biochemistry, 635 Barnhill Drive, Indianapolis, Ind. 46223.** Telephone: 317-264-2931. *Indiana University is an Equal Opportunity Employer, M/F.*

RESEARCH ASSOCIATE

Postdoctoral research position for the study of the biosynthesis of the chlorophyll-protein complexes of photosynthetic membranes.

Applications will be accepted until 15 August 1985, or until a satisfactory candidate is selected. Address curriculum vitae and three letters of reference to: **Professor C. A. Rebeiz, University of Illinois, Laboratory of Plant Pigment Biochemistry and Photobiology, 1103 West Dorner Drive, Urbana, Ill. 61801.**

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

Plant Cell Biologist

United AgriSeeds, Inc. has an opening for a Ph.D.-level biologist who has experience in plant cell, tissue, or organ culture and training in plant biochemistry, genetics, or breeding. The successful candidate will initiate and conduct a research program in corn cell biology. Publication of research results will be encouraged.

United AgriSeeds conducts a multidisciplinary crop improvement program where interaction among plant cell biologists and whole plant breeders is essential.

United AgriSeeds has a commitment to apply state-of-the-art knowledge in plant cell biology to crop improvement. We also have the established whole plant breeding and marketing divisions required to transfer these improvements to the marketplace.

To apply, send curriculum vitae, three letters of reference, and college transcripts to: Manager, Research Administration, United AgriSeeds, Inc., P.O. Box 4011, Champaign, IL 61820.



An Equal Opportunity Employer

Information Scientist/ Literature Searcher

The Agricultural Research Division of American Cyanamid Company seeks a qualified applicant to join us immediately as an Information Scientist/Literature Searcher. Job responsibilities will include selection, indexing and recovery of published and unpublished R&D information related to current laboratory and field work as well as company products. Also includes preparation of comprehensive literature research reports and use of computerized data bases.

Candidates must possess an M.S. in agronomy, entomology, horticulture, weed science, plant physiology or pathology. Laboratory experience is desirable.

We offer competitive compensation, comprehensive benefits and a professional, growth oriented environment. Please forward your resume, with salary requirements, in confidence to: Judith C. Leondar, Manager, Technical Information Services



American Cyanamid Company

Agricultural Research Division
P.O. Box 400
Princeton, NJ 08540
Equal Opportunity Employer m/f/h
No Agencies Please

Allelix^{INC}

HEAD OF PLANT BIOLOGY

Allelix—a major established Canadian biotechnology company—is seeking an accomplished scientific manager to direct multi-disciplinary research and development programs for its agricultural programs.

This position involves overall responsibility for planning, leading and managing up to 40 scientists applying new techniques in biotechnology to varietal development and crop improvement.

We are seeking a scientific manager whose innovative impact on crop development is demonstrated by a record of accomplishment in scientific research management and product development.

Allelix has a broad base in all major biotechnology disciplines and is well financed by three large Canadian organizations. Research and development is conducted at modern, well-equipped laboratories near Toronto and in a 100-acre field station.

Interested candidates are invited to send resumes, quoting file number PB002, to:

Dr. D. C. Burke
Vice-President & Scientific Director
Allelix Inc.
6850 Goreway Drive
Mississauga, Ontario
Canada
L4V 1P1

IMMUNOASSAY R&D

HYGEIA SCIENCES, located in suburban Boston, is a rapidly expanding biotechnology company currently producing immunodiagnostic kits for the physician's office and home setting and marketed in partnership with major health care companies. We are presently seeking outstanding individuals to participate in a number of ongoing projects.

- **Infectious Disease Assay:**

To lead a research group in developing enzyme immunoassays for the diagnosis of infectious disease agents. Applicants should possess a solid background in microbiology with hands-on experience in protein purification/modification and ELISA methodology.

- **Immunoassay Systems Development:**

Candidates should have extensive experience in the development of rapid ELISA methods including a variety of enzyme-substrate systems. Familiarity with monoclonal antibodies in the assay of both large and small molecules is desirable.

- **Technology Transfer**

Key individual to investigate problems associated with commercialization of immunodiagnostic assays for reproductive hormones and infectious disease testing. Experience with ELISA methodology is required including protein purification/modification. Qualified applicants will possess a Ph.D. with postdoctoral training or M.S. with 3 to 5 years of relevant industrial experience.

- **Tissue Culture Scale-Up:**

To lead research group in the in vitro production and purification of monoclonal antibodies. Must have experience in all aspects of producing monoclonal antibodies in culture, including assays to monitor production, methods to optimize production, and procedures for purification. The applicant will be actively working at the bench as well as directing/training others in the group.

In addition to the above positions, there are opportunities available at a variety of levels in our growing R&D department. HYGEIA offers a comprehensive benefits package including tuition reimbursement. Please send résumé and salary history to: Nancy Silvis, 330 Nevada Street, Newton, Mass. 02160.

Plant Cell Biologist

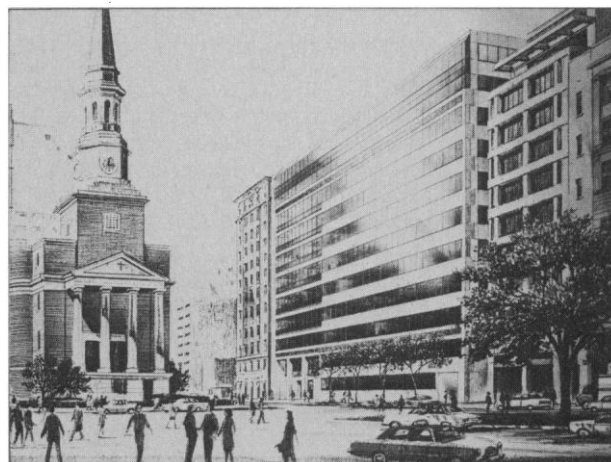
Stauffer Chemical Company has an opening in our Biological Research Group located in Richmond, California. The candidate will collaborate with Plant Molecular Biologists on the development of transformation systems in plants.

Candidate must possess a PhD or equivalent in some area of plant cell biology and preferably 2 years postdoctoral training. Specific experience in plant cell transformation and plant tissue culture is desirable.

Stauffer Chemical Company offers a competitive salary and fringe benefits package in addition to an attractive San Francisco Bay area location. Qualified applicants are invited to send resumes to: K.D. MacLaren, Stauffer Chemical Company, 1200 S. 47th St., Richmond, CA 94804. Stauffer Chemical Company is an equal opportunity employer m/f.



American Association for the Advancement of Science



New Headquarters, Effective August 1, 1985

New Address

1333 H Street N.W.
Washington, D.C. 20005
202-326-6400

**DIRECTOR
ENVIRONMENTAL MONITORING SYSTEMS
LABORATORY
LAS VEGAS, NEVADA—\$61,295 to \$66,232**

Challenging opportunity with the U.S. Environmental Protection Agency (EPA) to serve as director at the Environmental Monitoring Systems Laboratory, with responsibility for planning, programming, policy implementation, and management control of technical and administrative activities.

This individual provides scientific leadership to environmental monitoring programs and directs and supervises a staff of multidisciplinary scientific professionals.

A bachelor's or higher degree in the physical sciences and three or more years of professional experience are required. The ideal candidate will have strong research credentials in the sciences, for example, geophysical chemistry, physics, or analytical chemistry, a solid publishing record, and substantial professional experience at a supervisory or leadership level that demonstrates the ability to perform in a senior executive position. The ideal candidate will also be an able communicator with staff, the public, and the press.

Mandatory job elements:

- 1) Demonstrated leadership in a research activity related to environmental problems, including a strong publishing record.
- 2) Demonstrated ability to communicate clearly and effectively both orally and in writing, and to establish/maintain an effective working relationship with the national research community.
- 3) Experience in managing a large organization with a professional and multidisciplinary workforce, including familiarity with equal employment opportunity practices.
- 4) Experience in planning, organizing, directing, and managing financial activities of a research program.

Submit completed SF-171 (Personal Qualifications Statement) to: Edna Morse PM-224, Environmental Protection Agency, 401 M Street, S.W., Washington, D.C. 20460; telephone: 202-282-3311.

Applications must be postmarked by 31 July 1985.

EPA is an Equal Opportunity Employer

The Department of Animal Science, The University of Alberta, is seeking applicants for two full-time ASSISTANT/ASSOCIATE PROFESSORS OF POULTRY SCIENCE.

- 1) **Poultry nutrition or production.** Major emphases will be research relevant to the Alberta poultry industry and extension of these and other results to the industry. The position is a 5-year term with possible renewal.
- 2) **A basic area of poultry science** (for example, biotechnology, molecular genetics, biochemistry, physiology). The position is a tenure-track position.

Candidates should have a Ph.D. in an appropriate discipline. Evidence of research ability and the ability to communicate effectively, both orally and written, is required.

Excellent farm and laboratory facilities and support staff are available. Both positions are expected to develop a relevant research program within their area of expertise, seek research funds, and supervise graduate students.

Teaching in undergraduate and graduate courses will be required. Courses taught will normally be in poultry and/or area of expertise.

Base salary range for assistant professor is \$30,316 and for associate professor is \$38,170. *The University of Alberta is an Equal Opportunity Employer but, in accordance with Canadian Immigration requirements, this advertisement is directed to Canadian citizens and permanent residents.* The closing date for applications is 30 September 1985. Applications should include curriculum vitae and three letters of reference. Applications should be sent to: **Dr. R. T. Hardin, Chairman, Department of Animal Science, 3-10 Ag-For Building, The University of Alberta, Edmonton, Alberta, Canada T6G 2P5.**

POSITIONS OPEN

TWO POSTDOCTORAL POSITIONS are available immediately for a Ph.D. biochemist and a molecular biologist to participate in studies of gene regulation by steroid receptors. Projects include the purification and characterization of human estrogen and progesterone receptors, cloning of the corresponding genes and preparation of monoclonal antibodies. Experience with steroid receptors, protein purification and analysis, monoclonal antibody production, and/or recombinant DNA techniques is desired. Salary is negotiable. Send curriculum vitae and three letters of reference to: **Dr. Geoffrey L. Greene, The University of Chicago, Ben May Laboratory for Cancer Research, 5841 South Maryland, Chicago, Illinois 60637.**

POSTDOCTORAL POSITION

Position open January 1986. To study the global control of gene expression in *Salmonella typhimurium* including oxygen-regulated and starvation-regulated stimulons. Experience in microbial genetics, recombinant DNA, or two-dimensional gel electrophoresis preferred. Salary range: \$17,000 to \$19,000, commensurate with experience. Please send curriculum vitae and names of three references to: **Dr. John W. Foster, Department of Microbiology, Marshall University School of Medicine, Huntington, West Virginia 25704.**

POSTDOCTORAL POSITION to study molecular and cellular aspects of tissue repair. Projects include areas of molecular biology, cell biology, and protein chemistry. Areas of interest are use of molecular probes to study tissue regeneration in vivo, molecular characterization of cell types involved in repair, molecular regulatory mechanisms of cell movement and replication. Applicants should send curriculum vitae and names, addresses, and telephone numbers of three references to: **Dr. Gary Grotendorst, Division of Rheumatology and Immunology, Medical University of South Carolina, 171 Ashley Avenue, Charleston, S.C. 29425.**

POSTDOCTORAL POSITION in cancer biology available immediately to study the role of signal transduction mediated by phospholipids, cyclic AMP, and protein kinases in oncogenic transformation.

Experience in enzymology, biochemistry, or tumor biology is desirable. Send curriculum vitae and names of three references to:

**Dr. Arthur H. Lockwood
Korman Pavilion
Albert Einstein Medical Center
York and Tabor Roads
Philadelphia, Pa. 19141**

Brown University is seeking a **RADIOBIOLOGIST** to join the Department of Radiation Medicine at the rank of assistant professor. Research area preferably relating to normal tissue and tumor radiobiology at the cellular and sub-cellular level, including molecular or biochemical aspects of cellular damage and repair. Candidates should also have experience in teaching. Candidate should have a doctoral degree with some postdoctoral experience. Salary: \$25,000 to \$35,000, plus usual university-type prerequisites. *Brown University is an Equal Opportunity/Affirmative Action Employer.* Send applications by 1 October 1985 to: **John Leith, Ph.D., Chairman, Search Committee, Department of Radiation Medicine, Rhode Island Hospital, 593 Eddy Street, Providence, R.I. 02902.**

SPEECH SCIENTIST, Ph.D./Assistant/Associate Professor. Seeking experienced clinician/investigator capable of coordinating interdisciplinary program involving investigation of pathophysiology of speech and swallowing disorders secondary to head injury and other causes. Major parallel effort dealing with rehabilitation of these patients using various methods, including biofeedback. Joint appointment and funding by University of Texas Medical Branch (UTMB) and private rehabilitation facility adjacent to medical center campus. Requires clinical supervisory skills in speech pathology, writing, and speaking ability and training in research and grant application submission. Prefer an individual who is currently (or has recently been) a funded PI in this field. Salary and fringe benefits are negotiable on the basis of training and experience. *UTMB is an Equal Opportunity/Affirmative Action Employer, M/F/H.* For: **Department of Otolaryngology, University of Texas Medical Branch, Galveston, Texas 77550-2778.**

SCIENTIST

The Upjohn Company has an opening for a Scientist in its new and expanding Biotechnology Research Program with a Ph.D degree in chemistry, biochemistry or a closely related field who has 2 years or more experience in oligonucleotide synthesis as a tool for conducting basic investigations into structure-activity relationships of proteins. While it is expected that the successful candidate will supervise an oligonucleotide synthesis laboratory as part of his/her duties, he/she will have hands-on experience with protein mutagenesis to determine the effect of structure on protein function and/or experience in the design of novel proteins with improved properties.

The Upjohn headquarters are located in Kalamazoo, Michigan, which is a mid-sized Southwestern community offering an excellent mix of cultural/recreational opportunities including lakes, nearby colleges, and a four-season climate. The Upjohn Company offers an excellent salary, benefits and relocation plan.

For confidential consideration, please call from outside Michigan toll free 1-800-253-8600, extension 3-6767; or inside Michigan collect 616-323-6767 to request a specialized employment application be sent to you immediately. Please refer to Ad Number 17345-B when calling.

Upjohn

A century of caring

An Equal Opportunity Employer M/F

BIOTECHNOLOGY RESEARCH MANAGER

IGT, a company committed to advanced energy R&D, has an immediate opportunity for an experienced professional to direct our biotechnology research team.

This leadership position will direct a variety of projects including the bioconversion of biomass and wastes to methane. The selected applicant will have a Ph.D. in Microbiology, Biotechnology or Bioengineering and a minimum of 10 years industrial/academic experience in biotechnology research with an emphasis on anaerobic digestion. Proven performance in the development and management of research programs is required. Diversified experience in biotechnology is preferred.

To find out more about our competitive salaries, excellent benefits and long-term potential, send a resume with salary history to: Personnel Department 1.

IGT **INSTITUTE OF
GAS TECHNOLOGY**
3424 S. State Street
Chicago, IL 60616

An Equal Opportunity Employer M/F

HOFFMANN-LA ROCHE

Protein Chemist Senior Scientist

The Biological Research Products section of Quality Control is looking for a creative, assertive, self-directed individual with a PhD degree in Biochemistry or related science with 0-2 years experience to develop analytical methods for the characterization of protein and peptide drug substances prepared by recombinant DNA technology.

The candidate should have experience in HPLC and other chromatographic methods as applied to proteins. Hands-on knowledge of amino acid analysis, tryptic mapping, immunoassay and Western blotting as well as knowledge of DNA restriction mapping and hybridization analysis is highly desirable. Good oral and written communication skills are essential.

This is an outstanding opportunity to become part of an established biotechnology area in a large, well-respected pharmaceutical company and to help develop policy for the control of recombinant biological products.

ONLY THOSE RESPONSES INCLUDING PRESENT SALARY WILL BE ACKNOWLEDGED. Please send resume to: Position FB, c/o Mrs. Eleanor M. Malone



**HOFFMANN-
LA ROCHE INC.**
Nutley, NJ 07110

*Products that matter
from people who care*

An equal opportunity employer

HOFFMANN-LA ROCHE

Cell Biologist/Immunologist Senior Scientist

Hoffmann-LaRoche, an established leader in the pharmaceutical and healthcare industry, has an excellent career opportunity for a PhD Cell Biologist/Immunologist within the Roche Research Center. The Department of Molecular Genetics seeks a Senior Scientist who will be responsible for a basic and applied research program in cell biology with emphasis on the use of monoclonal antibodies and hybridoma technology to study the function of proteins and receptors.

The successful candidate will join a Department conducting research on lymphokines, growth factors, oncogenes, prokaryotic and eukaryotic gene expression and other areas with relevance to the development of human and animal pharmaceuticals. Qualifications in-

clude a PhD in Cell Biology, Immunology, Biochemistry or Pharmacology and postdoctoral training with relevant experience. Demonstrated expertise with hybridoma technology is essential, and a working knowledge of protein biochemistry and receptor ligand interactions is desirable.

The Roche Research Center is located in a suburban setting 10 miles from New York City. Roche offers a very competitive compensation package and a research environment that encourages scientific growth. Interested individuals should send a curriculum vitae indicating past, current, and future research interests to: Position RC, c/o Mrs. Eleanor M. Malone, Professional Employment and Staffing Specialist



**HOFFMANN-
LA ROCHE INC.**
Nutley, NJ 07110

*Products that matter
from people who care*

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POSITIONS OPEN

POSTDOCTORAL RESEARCH POSITION available in 1985. Ph.D. in biochemistry to participate in an ongoing project concerning advanced glycosylation end products on proteins and their role in aging. This position offers a competitive salary and is renewable after 1 year. Qualified individuals should be knowledgeable in biochemical procedures, including radioimmunoassay and tissue culture. Submit your curriculum vitae and three references to: **Anthony Cerami, Ph.D., Laboratory of Medical Biochemistry, The Rockefeller University, 1230 York Avenue, New York, N.Y. 10021.**

RESEARCH ASSOCIATE: Research to study the control of gene expression of DNA tumor viruses and eukaryotic cells. The approaches include procedures like tissue culture, site directed mutagenesis, DNA sequencing, mutant virus construction, RNA and DNA hybridization, protein analysis, immunoprecipitation, ultracentrifugation, spectrophotometry, and high-voltage electrophoresis. Requires Ph.D. degree in biochemistry or microbiology. Also requires 1 year of actual job experience or 1 year of experience as a research assistant (in recombinant DNA). Experience to include: DNA sequencing, RNA fingerprinting, protein purification, recombinant DNA technology, M13 cloning, immunological techniques in vitro protein synthesis, and gene transfer experimentation. Hours: 8 a.m. to 5 p.m., 40 hours per week at \$20,000 per year salary. This job is a university position. Please send résumé to: **ILLINOIS JOB SERVICE, 910 South Michigan Avenue—Third Floor, Chicago, Illinois 60605; attention: Joan Sykustus.** Reference number 4597-T. An employer paid ad.

SENIOR APPLICATIONS PROGRAMMER. Faculty position available at the University of Virginia in Charlottesville, Virginia, for a senior applications programmer responsible for development of VAX/VMS research and clinical applications in academic cardiology. No experience in medicine or cardiology required, but an M.S. in computer science, electrical engineering, or related field and 2 years of VAX experience are highly desirable. Salary negotiable. Reply to: **George A. Beller, M.D., Head, Division of Cardiology, University of Virginia School of Medicine, Box 158, Charlottesville, Va. 22908. Telephone: 804-924-2134.** *The University of Virginia is an Equal Opportunity/Affirmative Action Employer.*

FELLOWSHIPS

TERRY FOX POSTDOCTORAL FELLOWSHIP IN CANCER RESEARCH

M.D. or Ph.D. sought to join a research group studying tumor cell biology, progression, and metastasis. Specific projects include: immunological aspects of tumor growth and spread; human monoclonal antibody development; neurobiology; and tumor and normal cell differentiation. This position is supported by a Terry Fox Training Centre Establishment Grant. Applicants should send curriculum vitae, letter describing research background and interests, and names and addresses of three references to: **Dr. H. Bush, Director, London Regional Cancer Centre, 391 South Street, London, Ontario, Canada N6A 4G5.**

In accordance with Canadian immigration requirements, priority must be given to Canadian citizens and permanent residents of Canada.

POSTDOCTORAL FELLOWSHIP. Available September 1985 to work on anaerobic energy generation in parasitic helminths and mitochondrial biogenesis. Background in biochemistry, molecular biology, or immunology desirable. Send curriculum vitae and names of two references to: **Dr. Richard Komunleki, Department of Biology, University of Toledo, Toledo, Ohio 43606. Telephone: 419-537-2124.**

POSTDOCTORAL FELLOWSHIP in the area of molecular analysis of specific cellular interactions. Study of the role of endogenous cell surface lectin in the attachment of lymphocytes to endothelial cells during lymphocyte recirculation. Recent Ph.D. with experience in membrane biochemistry desired. Position begins 1 September. Funding is available for at least 1 year at competitive salary. Send curriculum vitae, description of experience, and names of three references to: **Dr. S. D. Rosen, Department of Anatomy, University of California, San Francisco, Calif. 94143.**

FELLOWSHIPS

FELLOWSHIPS

Research Training in the Immunobiology and Cell Biology of Cancer

Pre- and postdoctoral fellowships, supported by a National Cancer Institute Training Grant, are currently available. The training program, established more than 10 years ago, operates within the Departments of Pathology, Biochemistry and Molecular Biology, and Comparative and Experimental Pathology. Comprehensive research training is available in the following areas:

Antigenic properties of metastatic tumor cell variants [Kimura, Klein]; molecular mechanisms of platelet activation by tumor cells [Kao]; plasma membrane dynamics [Roberts]; complement function and tumor cell killing [Esser]; transport of cell-specific toxins [Donovan]; lymphocyte-mediated tumor cell killing [Smith]; pathogenesis of herpes viruses [Hutt-Fletcher]; Human B cell neoplasia [Braylan]; retroviruses and cell differentiation [Moscovici]; functional subclasses of lymphoid and non-lymphoid cells [Peck]; molecular genetics of immune responsiveness in mice [Wakeland]; macrophage activation for tumor-cell killing [Russell]; monocyte function in tumor growth regulation [Normann]; and interferon and interleukin production and function [Johnson].

Research experiences are enriched by advanced graduate courses and seminars within the programs of the J. Hillis Miller Health Center.

Send curriculum vitae with letter of inquiry to: **Paul A. Klein, Ph.D.**

**NCI Training Grant Coordinator
Department of Pathology
College of Medicine
University of Florida
Gainesville, Florida 32610**

KING'S COLLEGE CAMBRIDGE, ENGLAND

Research Fellowships in Biological Information Processing

Applications are invited for research fellowships in the College's Research Centre. Successful candidates will take part in a project on the theoretical and computational problems of complex biological systems, from the cellular level to higher nervous function. Candidates should have a background in biological and cognitive sciences or in mathematics and computer science.

Men and women candidates of any university are eligible. The fellowships will commence on 1 October 1986; the normal tenure is 4 years. Stipends range from about £6,700 to about £12,500 a year, depending on age and experience, and an unmarried fellow is provided with accommodation in college if he or she wishes. Applications for non-stipendiary fellowships will also be considered.

Applications will need to be made by 1 October 1985. Write at once for further details, and information on how to apply, to: **The Convenor, The Research Centre, King's College, Cambridge, England CB2 1ST.**

POSTDOCTORAL FELLOWSHIP IN ENDOCRINOLOGY AND METABOLISM. Academically oriented, 2- to 3-year program for M.D. or Ph.D. in diabetes, gut hormones, pituitary, lipids or osteoporosis. Collaborative arrangements with programs in molecular biology, cell biology, biochemistry, and physiology. Candidate must be U.S. citizen or holder of immigrant visa. Contact: **Dr. J. George, N-1111 Doan Hall, University Hospital, Columbus, Ohio 43210; telephone: 614-421-8730.** *An Equal Opportunity Employer.*

POSTDOCTORAL FELLOWSHIP available after 1 September in the University of Illinois Reproductive Physiology Program. Candidates who are U.S. citizens and have completed the M.D., Ph.D., or D.V.M. degree may apply. The fellowship will be awarded on a competitive basis to a qualified candidate demonstrating commitment to a career in reproductive physiology. Support at the NIH scale is available for at least 2 years. Closing date for receiving applications is 15 August 1985. Send curriculum vitae, summary of research experience and interests, and addresses of three references to: **Dr. O. D. Sherwood, University of Illinois, Department of Physiology and Biophysics, Room 524 Burrill Hall, 407 South Goodwin Avenue, Urbana, Ill. 61801.**

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

FELLOWSHIPS

POSTDOCTORAL RESEARCH FELLOWSHIP IN IMMUNOLOGY. Two-year fellowship in membrane receptor structure, function, and genetics, emphasizing the receptors of lymphocytes, macrophages, and neutrophils involved in regulation of host defense and autoimmunity. For further information, send curriculum vitae to: **Dr. Gordon D. Ross, Division of Rheumatology and Immunology, 932 F.L.O.B. 231H, University of North Carolina, Chapel Hill, N.C. 27514.** Position available fall 1985.

TRAINEESHIPS

POSTDOCTORAL TRAINEESHIPS IN PARASITOLOGY/VECTOR BIOLOGY available in: biochemistry and pharmacology of parasitic helminths (Dr. Saz); genetics; cytogenetics and speciation of *Aedes* mosquitoes (Dr. Rai). Appointments start between 1 July and 1 October 1985. Candidates must be U.S. citizens or permanent residents. Send letter, résumé, and names of three references to: **Dr. Paul P. Weinstein, Department of Biology, University of Notre Dame, Notre Dame, Ind. 46556.**

JOINT PROPOSALS

UNITED STATES-SPAIN JOINT COMMITTEE FOR SCIENCE AND TECHNOLOGY

The Joint Committee announces the opening of a submission period for joint proposals in applied science by American and Spanish scientists. The closing date will be 31 October 1985. Further information can be obtained from the *Federal Register*, vol. 50, No. 119, page 25642, of 20 June 1985. American candidates requiring additional information may contact: **Dr. Jack Blanchard, The Department of State, OES/SCT, Washington, D.C. 20520; telephone: 202-632-3632.** Spanish candidates seeking additional information may contact: **Sra. Maria Luisa Suarez-Inclan, The Secretariat, Paseo del Prado 28, 5a planta, Madrid, Spain 28014; telephone: 011 (34) 1 467 59 18.**

TRAINING PROGRAM

POSTDOCTORAL TRAINING PROGRAM IN REPRODUCTIVE ENDOCRINOLOGY

NIH-supported, interdepartmental training program for those wishing to obtain experience in application of biochemical techniques to the study of reproductive hormones and diseases. Special areas of faculty interest include mechanisms of action of peptide hormones, receptor biochemistry, structure-function studies on glycoprotein hormones, hormonal regulation of human endometrium, effects of prolactin and related topics. Candidates with doctoral degrees (M.D., Ph.D., D.V.M.) and a strong preparation in biochemistry preferred. Applicants (U.S. citizen or permanent residents only) should submit résumé, graduate transcript, and three letters of recommendation to: **Dr. L. E. Reichert, Director, Training Program in Reproductive Endocrinology, Department of Biochemistry, Albany Medical College, Albany, New York 12208.**

An Equal Opportunity/Affirmative Action Employer

MARKETPLACE

FOR SALE—Philips 300 Electron Microscope, S/N 263821, 10 years old, working condition. Submit bid to Univ. of Nebr. Medical Center, Purchasing Dept., 42nd & Dewey Ave., Omaha, NE 68105. Reference Bid #S-179 due 4:30PM, August 2, 1985.

For sale: 237 slightly used animal cages, approximately 12x14x7", polycarbonate bottom with wire top, feeding pan and watering device. Sale, about 30% of the original, @ \$25. Send replies to

BOX 143, SCIENCE

X-ray Crystallography Protein Chemistry Protein Modelling

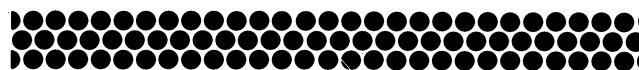
Cold Spring Harbor Laboratory is committed to a major new thrust in the study of protein structure. We are seeking to appoint either junior or senior staff members with expertise in the areas of X-ray crystallography of proteins (2 positions), protein chemistry (1 position) and protein modelling (1 position). The successful candidates will have demonstrated creativity and productivity in one of these areas. Applicants with interests in the areas of DNA-protein interactions, oncogenes, hormone receptors, growth factors or protein kinases will be especially welcomed. Interested persons should send curriculum vitae, statement of future research plans and names of referees to:

Dr R.J. Roberts
Cold Spring Harbor Laboratory
P.O. Box 100
Cold Spring Harbor, NY 11724



Cold Spring Harbor Laboratory

An equal opportunity employer



The European Molecular Biology Laboratory, an international research organization situated in Heidelberg, Federal Republic of Germany, is seeking a

GROUP LEADER IN BIOCOMPUTING

with an interest in genetic sequence data, their interpretation, and their relationship to structure. The successful candidate will develop a programme of research compatible with other groups in the Biocomputing Programme, and will work in close association with the Laboratory's Nucleotide Sequence Data Library.

Examples of suitable research interests include:

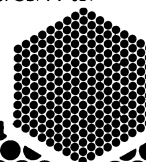
- Investigation of sequence-encoded signals using pattern recognition, statistical, or linguistic methods
- Genetic applications of alignment, comparison, and search algorithms
- Genome organization
- Secondary structure prediction
- Molecular evolution.

Applicants should have a doctorate or equivalent degree in molecular biology or biophysics, and significant experience in the application of computing techniques to molecular biological problems.

Remuneration will include a competitive salary as well as certain allowances (such as children's, family, and non-resident allowances), depending on personal circumstances. A contract of up to 3 years' duration will be offered to the successful candidate, which can be renewed, depending on circumstances at the time of review.

Please write briefly for an application form, quoting reference no. 85/19 to:

EMBL,
Personnel Section,
Postfach 10.2209,
D-6900 Heidelberg.



EMBL



NATIONAL INSTITUTES OF HEALTH PUBLIC HEALTH SERVICE DEPARTMENT OF HEALTH AND HUMAN SERVICES

OPENING DATE: July 1, 1985

CLOSING DATE: July 31, 1985

(All applications must be postmarked by closing date)

The National Institutes of Health invites nominations and applications for the position of Director, Division of Research Grants (DRG).

The Director, DRG, directs an organization that provides staff support to the Office of the Director, NIH, in the formulation of grant and award policies and procedures; provides central receipt of all PHS applications for research and research training support and makes initial referral to PHS components; assigns NIH applications to supporting Institutes/Divisions and to DRG initial review groups; provides scientific review of NIH Research Grants, National Research Service Awards, and research career development applications; collects, stores, retrieves, analyzes and evaluates management and program data needed to administer extramural programs; reviews and analyzes the character and direction of research and training supported through NIH grants and the resources necessary for such support. The Division's staff includes over 430 employees with a direct budget of 19.8 million dollars, plus responsibility for Chariman's Grants in excess of 6 million dollars.

This is a Civil Service position in the Senior Executive Service (SES), with an authorized salary range from \$61,296 to \$68,700 per annum depending on qualifications. Candidates may be eligible for Physicians Comparability Allowance up to \$10,000 per year. Alternatively, candidates may be eligible for appointment in the Commissioned Corps of the U.S. Public Health Service.

The mandatory professional/technical qualifications require that candidates meet the minimum educational requirements for Medical Officer, GS-602, or Health Science Administrator, GS-601, as defined by the U.S. Office of Personnel Management Handbook X-118—Qualifications Standards for positions under the General Schedule, which is available in Federal Personnel Offices and Federal Job Information Centers. Candidates must also possess familiarity with Federal Grant and award programs, understanding

of the biomedical research community, and skill in negotiating sensitive issues in a scientific environment.

The mandatory managerial/executive qualifications require that candidates have demonstrated competence in the following areas: assuring that key agency and organizational goals are considered in making program decisions; representing the organization in negotiations with other organizations, and establishing working relationships with other program areas and relevant external groups; establishing program goals and the organizational structure and processes required; obtaining and allocating the necessary financial and material resources; developing a work environment that ensures that people are appropriately employed, effectively and efficiently utilized, and dealt with in a fair and equitable manner; and, establishing procedures for the periodic evaluation of programs, and making necessary adjustments to assure that appropriate results are being achieved.

Candidates who meet the mandatory qualifications will be further evaluated by the Search Committee on the following factors: training and education, and honors and awards. Additional information may be obtained from Mrs. Helen S. Stafford, (301) 496-4197.

Applications (Personal Qualifications Statement, SF-171) are to be sent to Helen C. Stafford, Executive Secretary, Search Committee for Director, DRG, National Institutes of Health, Building 1, Room 19, Bethesda, Maryland 20205. A current curriculum vitae and bibliography must accompany all applications. Applications of women and/or minority group members are especially solicited.

ALL QUALIFIED CANDIDATES WILL RECEIVE CONSIDERATION WITHOUT REGARD TO RACE, RELIGION, COLOR, SEX, AGE, NATIONAL ORIGIN, LAWFUL POLITICAL AFFILIATION, MARITAL STATUS, UNION MEMBERSHIP, OR ANY NONDISQUALIFYING PHYSICAL OR MENTAL HANDICAP.



Sartorius Model 1712 MP8
Special 25th Anniversary
Silver Edition

Sartorius puts new weighing technology out front.

Now one finger controls all balance functions. New Sartorius Series 1700 and 1800 electronic analytical balances put the benefits of the most advanced weighing technology in the world at your fingertips—literally. Four new balances follow the weigh of the future introduced by our innovative Model 1712: complete one-finger up-front operation, no mechanical controls, and solid-state electronic reliability and versatility. Now analytical weighing becomes simpler, faster, and more accurate than ever before.

Advanced microprocessor technology assures consistent, reliable operation—along with speed, versatility, and programmability—while keeping costs significantly low.

Working efficiency is greatly improved with time-saving features like 0.2 second weighing update, unique AutoCheck for verification of all

functions, automatic zero-tracking, and electronic stabilizing filters to compensate for environmental disturbances.

Fast automatic calibration is controlled from the touch-sensitive front panel, not by mechanical knobs or levers on the side of the balance. And instant full-range taring is just as easy and fast.

Easy-to-read display gives clear, visible readings, even in bright light or from an angle. Stability indicator, "g",

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