

going on in many laboratories around the world and is duly reported in the book. Detectors based on laser interferometry are now racing against the older Weber type of resonant cylinders weighing several tons. As R. W. P. Drever says, a little self-encouragingly perhaps, the outlook for both is "very promising indeed." The long-simmering controversy over the correct gravitational radiation quadrupole formula is a notorious example of how people's feelings sometimes get mixed up with their science. J. Ehlers and M. Walker here present a most fair and balanced account of the present state of the debate. They conclude that all that is missing is "one coherent treatment which combines the strengths of the various approaches and avoids their weaknesses," and their report is in fact such a treatment in outline already.

One of my own favorites is a brief but most enlightening paper in which E. Witten discusses the positivity of global gravitational energy in general relativity and its extension to Kaluza-Klein theory—with some surprising implications. R. Penrose's quasi-local definition of energy, momentum, and angular momentum was elaborated on by P. Tod in one of the workshops. Reporting on this, E. T. Newman writes: "It appears to me that the most interesting and potentially most important [of recent theoretical developments] is the introduction of spinors into the classical theory of gravity. . . . [In the case of Witten's positivity-of-energy proof and Penrose's quasi-local definitions], in spite of much effort, there has been no means of giving them a tensorial reformulation. There is thus the hint that perhaps a deeper structure underlies classical general relativity." Here Newman is referring to Penrose's well-known contention, and GR 10 may be a milestone on the road to its general appreciation.

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Books Received

- About Science.** Barry Barnes. Blackwell, New York, 1985. xii, 163 pp. \$24.95; paper, \$8.95.
- Accretion Power in Astrophysics.** J. Frank, A. R. King, and D. J. Raine. Cambridge University Press, New York, 1985. x, 273 pp., illus. \$59.50. Cambridge Astrophysics Series.
- Acid Earth.** The Global Threat of Acid Pollution. John McCormick. Jon Tinker, Ed. Earthscan, Washington, D.C., 1985. 190 pp., illus. Paper, \$6.25.
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Handbook of High-Speed Machining Technology. Robert I. King, Ed. Chapman and Hall, New York, 1985. viii, 471 pp., illus. \$44.50. Chapman and Hall Advanced Industrial Technology Series.

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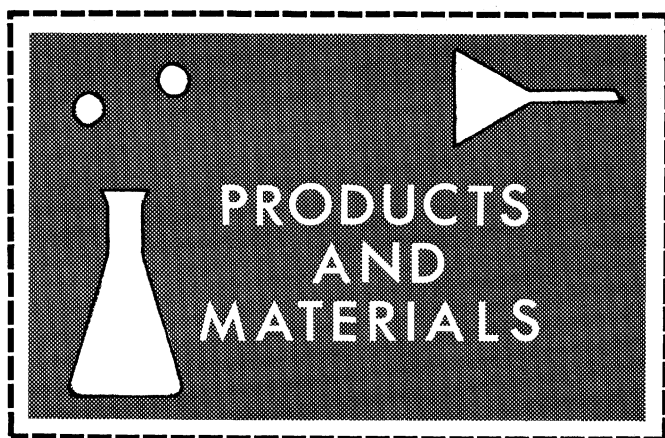
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Models of the Atmosphere and Ionosphere. K. Rawer *et al.*, Eds. Published for the Committee on Space Research by Pergamon, New York, 1985. viii, 234 pp., illus. Paper, \$49.50. Advances in Space Research, vol. 5, no. 7. From a workshop, Graz, Austria, June 1984.

(Continued on page 1299)



Electrophoresis Software

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Literature

Laboratory Apparatus catalogs a complete line of equipment and materials for scientists including more than 21,000 listings. Thomas Scientific. Circle 605.

Console and Bench Horizontal Hoods describes a line of apparatus for biological researchers. Lunaire Environmental. Circle 611.

Laboratory Chemicals is designed as a reference manual. It lists chemicals alphabetically and includes many physical properties, purity specifications, structural and molecular formulas, and much more. Chemicals are also listed by functional group and there are specialized lists for selected applications. Eastman Kodak. Circle 612.

Data Analysis and Graphic Display System is devoted to DataProbe, a time series analysis and graphics software package to manage gigabytes of data about thousands of variables for several groups of analysts simultaneously. BBN Laboratories. Circle 613.

Separation of Macroimmunoglobulin and Complement from Serum is treated extensively in an applications note about Zetachrom chromatography disks and cartridges. AMF Laboratory Products. Circle 614.

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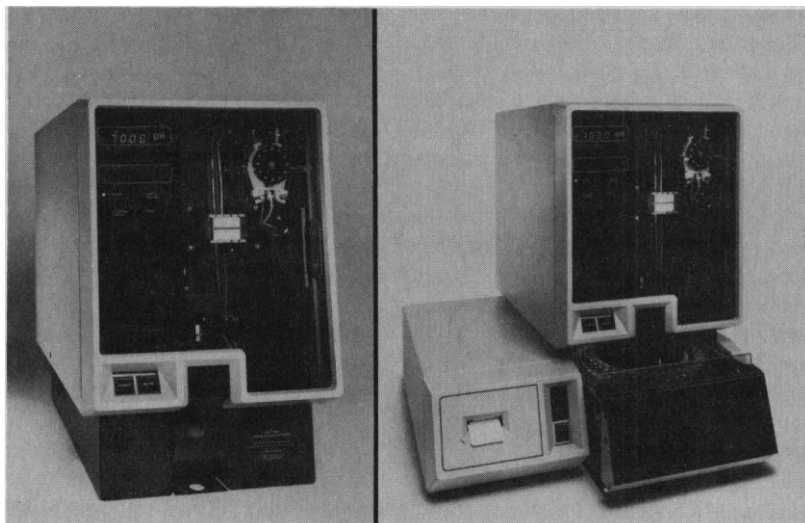
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BOOKS RECEIVED

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Modern Chemical Technology and Emission Control. M. B. Hocking. Springer-Verlag, New York, 1985. xvi, 460 pp., illus. \$38.50.

Perspectives in Particles and Fields. Maurice Lévy et al., Eds. Plenum, New York, 1985. x, 598 pp., illus. \$95. NATO ASI Series B, vol. 126. From an institute, Cargèse, France, July 1983.

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Willis R. Whitney, General Electric, and the Origins of U.S. Industrial Research. George Wise. Columbia University Press, New York, 1985. xii, 375 pp., illus. \$29.

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Immunologist. Ph.D. Senior scientist with extensive background in areas of hybridoma/monoclonal antibody development for use in cancer therapy and imaging, lymphokines, and cell mediated cytotoxicity. Expert tissue culturist, with superior communication, writing, and supervisory skills. Excellent publications and references. Seeking responsible position in industry or academic laboratory. Box 268, SCIENCE. 12/13, 20; 1/3

Neurotoxicologist. Ph.D. 11 years of experience in state-of-the-art retinal and CNS bioassay techniques (in vitro and in vivo): electrophysiology, laser biophysics, and bioenergetics. Strong R&D program management background. Seeking responsible position in preclinical testing with pharmaceutical/biotech organization. San Francisco Bay area only. Box 261, SCIENCE. X

Pharmacologist. Ph.D. 1980. Seeks industrial post. Experienced in adrenergic mechanisms, biochemistry of adenylate cyclase, radioligand binding, and presynaptic receptors. Versed in classical in vitro techniques, mathematics, and statistics. Box 262, SCIENCE. X

Technician, Neurobiology. Recent B.S. in zoology seeks research position in Chicago area. Highly motivated toward field with undergraduate neuro experience. Will consider other locations. Box 269, SCIENCE. 12/13, 20; 1/3

POSITIONS OPEN

ANIMAL BEHAVIORIST

A postdoctoral position will be available for an animal behaviorist or behavioral neurobiologist in January 1986 for a research investigator at Downstate Medical Center in Brooklyn, New York. The starting salary is \$21,000. The position is for 1 year, with possibility for renewal. The research involves the development and application of methods for the study of behavior and learning in invertebrates. For further information, or apply to: **Department of Biochemistry, Box 88, State University of New York, SUNY-Downstate Medical Center, 450 Clarkson Avenue, Brooklyn, N.Y. 11203. Equal Opportunity/Affirmative Action Employer.** DMC Number 814.

SUNY-Downstate Medical Center.

APPLIED AQUATIC ECOLOGIST: A tenure-track position is anticipated at the assistant professor level, effective August 1986. Individuals with expertise in ecotoxicology are encouraged to apply. The person is expected to develop an active research program combining basic and applied ecology, and to teach limnology and one or more other courses such as ecotoxicology and invertebrate zoology. Ph.D. is required; postdoctoral experience is desirable. The Department has a strong emphasis in basic and applied ecology. Miami's Ecology Research Center located nearby is an excellent field research and teaching facility. The department will soon occupy a new, well-equipped building. Application deadline is 3 February 1986. Send résumé, three letters of recommendation, and transcripts of all academic work to: **R. G. Sherman, Zoology Department, Miami University, Oxford, Ohio 45056. Equal Opportunity/Affirmative Action Employer.**

ASSISTANT PROFESSOR tenure-track position in neuromuscular area of human motor control. Applicants should have Ph.D. Postdoctoral experience and an interest in physical therapy is an advantage. Successful candidate expected to fulfill teaching responsibilities in undergraduate and graduate courses and establish an independent research program that merits extramural support. Send letters of application, curriculum vitae, brief description of research goals, and names of three references by 1 February 1986 to:

Dr. G. W. Bell: Chair of Search Committee
University of Illinois at Urbana-Champaign
216 Freer Hall
906 South Goodwin Avenue
Urbana, Ill. 61801
Telephone: 217-333-7699

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

POSITIONS OPEN

ANATOMIST (Ph.D., D.O. or M.D.) to work independently and collaboratively with other research faculty. Research 80 percent, teaching 20 percent. Multiyear contracts available. Salary commensurate with academic rank, training, and grant track record. Please send résumé, curriculum vitae with publications list, and past and present grant support information to: **SEARCH COMMITTEE, Dr. Arnold L. Nagler, Associate Dean, Preclinical Medical Education, New York College of Osteopathic Medicine, Old Westbury, New York 11568.**

APPLICATIONS PROGRAMMER

The Laboratory of Ornithology has developed a new position to direct all computer operations for bird population research including automated data entry, database management, data analysis, and graphics using IBM mainframes and IBM PC's. Candidates should have a bachelor's degree with 2 to 3 years of relevant experience including programming, database management, and statistics.

Please submit cover letter and résumé by 3 January 1986 to: **Cynthia Smithbower, Department 468-S, Staffing Services, CORNELL UNIVERSITY, 160 Day Hall, Ithaca, New York 14853-2801.**

CORNELL UNIVERSITY

*An Affirmative Action/
Equal Opportunity Employer*

ASSISTANT/ASSOCIATE PROFESSORS. Two tenure-track positions beginning in August 1986. Half-time research and half-time teaching (two courses per semester). **Human psychophysiology:** Research program in psychophysiology, employing human subjects, preferably with an emphasis on cognition and/or emotion. **Sensory physiology:** Research program in sensory physiology and behavior. Postdoctoral experience required.

Please send a letter of interest, curriculum vitae, and arrange for three letters of recommendation to be sent to: **Dr. James D. Rose, Department of Psychology, University of Wyoming, Laramie, Wyoming 82071.** Application deadline is 15 January 1986.

ASSISTANT PROFESSORS OF BIOCHEMISTRY

The Department of Biochemistry at the University of Rochester School of Medicine and Dentistry invites applications for several tenure-track faculty positions at the level of assistant professor. Candidates must have postdoctoral experience and an established record of research productivity. All research areas will be considered including protein structure and function. Applicants should send curriculum vitae, a statement of research interests, and names of three references to:

**Dr. Fred Sherman
Chairman of Biochemistry
University of Rochester
School of Medicine and Dentistry
601 Elmwood Avenue, Box 607
Rochester, New York 14642**

The University of Rochester is an Affirmative Action/Equal Opportunity Educational Institution, M/F.

ASSISTANT PROFESSOR OF PHYSIOLOGY GROWTH/DIFFERENTIATION FACTOR RESEARCH

The Department of Physiology at the Johns Hopkins University School of Medicine seeks outstanding candidates for a position at the level of **assistant professor** in the field of mammalian **growth and differentiation factors**. Research interest in the mechanisms of action of such factors at the cell surface and intracellularly, or the cellular and developmental control of their synthesis, is preferred. The successful applicant can expect to interact extensively with membrane and developmental biologists in this department and to participate in undergraduate and graduate teaching.

Applications should include curriculum vitae, list of publications, and statement of research plans. Completed applications and letters of recommendations, solicited by the applicant, should be received no later than 1 February 1986 to:

**Dr. John W. Littlefield
Director, Department of Physiology
Johns Hopkins University School of Medicine
725 North Wolfe Street
Baltimore, Maryland 21205**

An Equal Opportunity/Affirmative Action Employer. Applications from all qualified candidates will be welcomed, and applications from minorities and women are encouraged.

POSITIONS OPEN

ANIMAL BEHAVIORIST CORNELL UNIVERSITY

The Section of Neurobiology and Behavior at Cornell University seeks to fill a tenure-track assistant professorship in the area of animal behavior. Preference will be given to candidates whose work incorporates a strong evolutionary perspective. Examples include (but are not restricted to), co-evolutionary analyses of animal and/or plant animal interactions, modelling and evaluating models of social evolution, and mechanistic studies of adaptive behavior.

Qualified applicants should send their curriculum vitae, a statement of past teaching and research experience, reprints and preprints of recent research, a statement of future research plans, and names of three persons who have been requested by the candidate to send letters of recommendation to: **Animal Behavior Search Committee, Section of Neurobiology and Behavior, W363 Seeley Mudd Hall, Cornell University, Ithaca, New York 14853.** Review of candidates will begin 1 February 1986.

Cornell University is an Equal Opportunity/Affirmative Action Employer.

BROWN UNIVERSITY ASSISTANT PROFESSOR BIOMEDICAL ENGINEERING

The Division of Biology and Medicine is seeking a biomedical engineer, for a tenure-track position with a research interest in tissue-material interactions. Candidates must have a Ph.D. in engineering or polymer science with experience in biomedical engineering, or an M.D., D.V.M. or Ph.D. in biomedical science with a quantitative background and a minimum of 2 years of postdoctoral experience in biomedical engineering. The successful candidate will teach a course in biomaterials, and participate in teaching physiology and artificial organ courses, and in student advising. Ability to develop an independent research program and to obtain external support must be demonstrated. This position will begin on or about 1 July 1986.

Send curriculum vitae, a brief description of research plans, and have three letters of recommendation forwarded no later than 1 February 1986 to: **Dr. Leon Goldstein, Division of Biology and Medicine, Box G, Brown University, Providence, Rhode Island 02912.** We encourage applications from women and minority candidates. *Brown University is an Equal Opportunity Affirmative Action Employer.*

ASSISTANT PROFESSORS OF PHYSIOLOGY WEST VIRGINIA UNIVERSITY SCHOOL OF MEDICINE

Two tenure-track positions available 1 July 1986. Candidates must have postdoctoral research experience and be able to develop a strong independent research program. Cardiovascular and endocrine areas preferred. Responsibilities include teaching of graduate, medical, and other health sciences students. *Women and minorities are encouraged to apply.* Deadline for receipt of all application materials is 31 January 1986. Send curriculum vitae, brief description of research interests, and three letters of reference to: **Dr. George A. Hedge, Professor and Chairman, Department of Physiology, West Virginia University Medical Center, Morgantown, W.Va. 26506.**

West Virginia University is an Equal Opportunity/Affirmative Action Employer.

MOLECULAR BIOLOGIST (Ph.D. or M.D.) with strong background in **NEUROLOGY, NEUROPHARMACOLOGY, OR NEUROPHYSIOLOGY** with other research faculty. Research 80 percent; teaching 20 percent. Multiyear contracts available. Salary commensurate with academic rank, training, and grant track record. Please send résumé, curriculum vitae and publications list, and past and present grant support information to: **SEARCH COMMITTEE, Dr. Arnold L. Nagler, Associate Dean, Preclinical Medical Education, New York College of Osteopathic Medicine, Old Westbury, N.Y. 11568.**

NEUROPHARMACOLOGIST (Ph.D., D.O. or M.D.) with training in **PHYSIOLOGY AND/OR BIOCHEMISTRY** to work independently and collaboratively with other research faculty. Research 80 percent; teaching 20 percent. Multiyear contracts available. Salary commensurate with academic rank, training, and grant track record. Please send résumé, curriculum vitae with publications list, and past and present grant support information to: **SEARCH COMMITTEE, Dr. Arnold L. Nagler, Associate Dean, Preclinical Medical Education, New York College of Osteopathic Medicine, Old Westbury, N.Y. 11568.**

POSITIONS OPEN

AQUATIC BIOLOGISTS/CHEMISTS FOR ACID DEPOSITION FIELD SURVEYS

LOCKHEED ENGINEERING AND MANAGEMENT SERVICES CO (EMSCO) is recruiting personnel for temporary employment to support aquatic field surveys during the winter and spring of 1986. The Lockheed-EMSCO Acid Deposition Project Office has been involved in three phases of the National Surface Water Survey, including the Eastern and Western Lakes Surveys and the National Stream Survey. Presently, Lockheed is preparing to continue sampling streams in the eastern U.S. and initiating Phase II of the Eastern Lake Survey. Sampling will begin in February 1986 and continue until May 1986. Study areas will be from Arkansas to Florida to Maine. Lockheed will require approximately 40 field personnel to sample streams and lakes under extreme climatic conditions. Approximately ten laboratory analysts will be required to process and analyze water samples in field laboratories.

Requirements:

- B.S. degree in aquatic biology or chemistry
- Excellent physical health
- Willing to travel for an extended period
- Enjoy working under extreme climatic conditions

Interested individuals should forward a cover letter, résumé, and official transcript to:

**Mr. Stephen L. Pierett
c/o Lockheed-EMSCO
P.O. Box 15027
Las Vegas, Nev. 89114**

Please submit these documents by 3 January 1986.

Lockheed is an Equal Opportunity Employer M/F/V/H.

HARVARD MEDICAL SCHOOL DEPARTMENT OF GENETICS

The Department of Genetics of the Harvard Medical School is seeking applicants for the position of **ASSISTANT OR ASSOCIATE PROFESSOR**. Candidates should hold the Ph.D., M.D., or equivalent degree and should have sufficient research experience to demonstrate both significant accomplishment and strong promise. The successful candidate will have available considerable resources to develop a research program addressing problems in contemporary genetics (as broadly defined). The candidate will also be expected to participate in the educational programs of the department. Letters of application including curriculum vitae, bibliography, a brief statement (less than 500 words) indicating research interests, and the names of three references should be sent to: **Professor Philip Leder, Chairman, Department of Genetics, Harvard Medical School, 25 Shattuck Street, Boston, Massachusetts 02115.**

Harvard University is an Equal Opportunity/Affirmative Action Employer. Qualified women and minority group members are encouraged to apply.

ASSISTANT PROFESSORS—BIOLOGY. The College of Liberal Arts at Drew has two tenure-track positions available in biology for September 1986. They include: **BOTANY** (the botanical component in Introductory Biology, a Plant Form and Function course, and courses in Terrestrial Ecology and the area of growth and development); and **DEVELOPMENTAL BIOLOGY** (courses for majors in developmental biology, vertebrate anatomy, and in related areas, for example, endocrinology, human sexuality). The appointees must have completed the Ph.D. degree. Effective undergraduate teaching is emphasized, and teaching experience is preferred. Research involvement is encouraged. Experience in computer/instrumentation interfacing, electron microscopy, or radiobiology is desirable. Applicants should submit curriculum vitae and names and addresses of three references by 31 January 1986 to: **L. W. Pollock (botany) or H. C. Rohrs (developmental biology), Chairman, Search Committee, Biology Department, Drew University, Madison, New Jersey 07940.**

An Affirmative Action/Equal Opportunity Employer.

BIOCHEMIST (MOLECULAR) (Ph.D., D.O. or M.D.) with possible training in **NEUROBIOLOGY OR NEUROPHARMACOLOGY OR NEUROPHYSIOLOGY** to work independently and collaboratively with other research faculty. Research 80 percent; teaching 20 percent. Multiyear contracts available. Salary commensurate with academic rank, training, and grant track record. Please send résumé, curriculum vitae with publications list, and past and present grant support information to: **SEARCH COMMITTEE, Dr. Arnold L. Nagler, Associate Dean, Preclinical Medical Education, New York College of Osteopathic Medicine, Old Westbury, N.Y. 11568.**

POSITIONS OPEN

ASSISTANT/ASSOCIATE PROFESSOR—MAMMALIAN POPULATION ECOLOGY AND MANAGEMENT. Salary: \$30,748 to \$42,416, depending on experience. Nine months, tenure track, starts 24 August 1986. Require Ph.D. emphasizing ecology and mammalian population management, and university/college teaching experience. Preferred: experience with managed mammal populations and professional experience with wildlife agency. Duties: teaching, undergraduate and graduate advising, research, and public service in wildlife biology, analysis, dynamics, and management of mammalian populations. Send curriculum vitae, statement of interests and experience, transcripts, and list of three referees whom you have asked for letters to: **Biology, Fisheries, and Wildlife, University of Alaska—Fairbanks, Fred Dean, Chair, Search Committee, 211 Irving Building, Fairbanks, Alaska 99775-1780. Telephone: 907-474-7671.** Application postmark deadline is 31 January 1986. *University of Alaska is an Equal Opportunity/Affirmative Action Employer and Educational Institution.*

DEPARTMENT OF BIOLOGY WEST VIRGINIA UNIVERSITY

Applications are invited for three tenure-track positions at the **ASSISTANT PROFESSOR** level. Depending upon funding, one position might be filled at the associate professor level. We are searching for: (i) a stream ecologist interested in modelling and aspects of streams other than fishes; (ii) a plant ecologist with a strong background in population genetics; (iii) a cellular/molecular biologist with teaching competence in human or comparative animal physiology. Candidates for all positions should have teaching experience at the undergraduate level and demonstrated research capabilities, preferably postdoctoral experience with publications, and will be expected to initiate vigorous research programs meriting financial support by appropriate off-campus agencies. Successful candidates will be expected to teach courses at the undergraduate and the graduate levels. Applications should be received by 1 February to ensure consideration and must include curriculum vitae, copies of publications, names and addresses of at least three references, and a one- to two-page statement of research plans. Send applications to: **Dr. Roy Clarkson, Department of Biology, P.O. Box 6057, West Virginia University, Morgantown, W.Va. 26506.** *West Virginia University is an Affirmative Action/Equal Opportunity Employer.*

BIOCHEMISTRY FACULTY POSITIONS MEHARRY MEDICAL COLLEGE

The Department of Biochemistry will have several positions to fill at the **assistant or associate professor** level during the 1986 to 1987 academic year. Preference will be given to applicants with expertise in the following areas: (i) molecular biology/molecular genetics of eukaryotic or prokaryotic systems; (ii) membrane biochemistry or molecular biology of transmembrane signalling; (iii) regulatory aspects of cellular and/or metabolic biochemistry; and (iv) physical biochemistry and/or enzymology. Exceptional candidates in other areas of biochemistry will also be considered. Successful applicants will be expected to develop and/or maintain funded research programs of high quality and to participate in the graduate and professional school teaching responsibilities of the Department of Biochemistry. Appointment at the **associate professor** level will be predicated on (i) demonstration of exceptional research skills and creativity, with continued progressive application of these skills; (ii) strong teaching skills evidenced by appreciable command of the subject, creative presentation skills and ability to motivate graduate and professional (medical and dental) students; and (iii) demonstrated interest in and involvement with university/public service. Applicants should send curriculum vitae, names of four individuals who may be contacted for reference, and a summary of research interests or on-going projects to: **Ifeanyi J. Arinze, Ph.D., Chairman, Department of Biochemistry, Meharry Medical College, Nashville, Tenn. 37208.** *Meharry Medical College is an Equal Opportunity/Affirmative Action Employer.*

BIOCHEMICAL PHARMACOLOGIST—Position available for research associate/assistant research scientist with Ph.D. in pharmacology, biochemistry, or molecular biology to investigate the role of free radical formation in antineoplastic drug action; analytical (HPLC, ESR, GC-MS) and cell culture experience required; knowledge of membrane biochemistry and recombinant DNA technology helpful. Send curriculum vitae to: **Dr. J. Doroshow, Department of Medical Oncology, City of Hope Medical Center, 1500 East Duarte Road, Duarte, Calif. 91010.**

POSITIONS OPEN

FORDHAM UNIVERSITY. The Department of Biological Sciences invites applications for two tenure-track (**ASSISTANT PROFESSOR**) positions effective September 1986, one in the area of **MOLECULAR BIOLOGY**, preferably plant molecular biology, and one in either **FRESH WATER BOTANY** (ecology or physiology) or **TERRESTRIAL PLANT-INSECT RELATIONSHIPS** (functional biology or coevolution). The successful applicants will be expected to teach, serve as mentors, and conduct research. Opportunities for research are also available at Fordham's Louis Calder Conservation and Ecology Study Center (25 miles north of the campus) and at the New York Botanical Garden adjacent to the campus. By 15 January, candidates should submit curriculum vitae, names and telephone numbers of three references, and representative publications to:

**Dr. Howard Rothstein, Chairman
Department of Biological Sciences
Fordham University
Bronx, N.Y. 10458**

Fordham University is an Equal Opportunity/Affirmative Action Employer.

ASSISTANT PROFESSOR

CELLULAR AND MOLECULAR PHARMACOLOGY—Applications are invited for a tenure-track position as **assistant professor**. We seek candidates with outstanding research accomplishments in molecular or cellular biology, neurobiology, or biophysics as broadly related to pharmacology. Candidates should have a Ph.D. or equivalent degree and two or more years of postdoctoral research experience, as well as a commitment to the development of an excellent research program and an interest in teaching medical and graduate students. Submit curriculum vitae, a concise statement of research plans, and the names of three references by 17 January 1986 to: **Faculty Search Committee, Department of Pharmacology, University of Medicine and Dentistry of New Jersey—Rutgers Medical School, P.O. Box 101, Piscataway, N.J. 08854.** *An Equal Opportunity/Affirmative Action Employer, M/F/H/V.*

ASSISTANT RESEARCH—ANATOMIST. Required: A cell physiologist with research experience in mammalian ciliary activity and expertise in tissue culture, light-microscope imaging methods, scanning electron microscopy, computer programming and analysis, handling of data-acquisition systems, high-speed cinematography, and computer image-processing (frame-by-frame analysis) of high-speed film. Two years of minimum experience after Ph.D. in biology and proven ability to conduct research independently. Will be required to train graduate and medical students. Salary to \$32,500. Send curriculum vitae, and names of three references to: **Dr. E. R. Dirksen, Department of Anatomy, University of California, Los Angeles, School of Medicine, University of California, Los Angeles, Calif. 90024.**

ASSOCIATE PROFESSOR, PHARMACOLOGY: The Department of Pharmacology at Tulane University School of Medicine invites applications for a tenure-track position at the associate professor level. Applicants should have 4 to 5 years of postdoctoral training, hold the Ph.D. and/or M.D. degree(s), and exhibit potential for developing an independent research program in cellular or endocrine pharmacology. Send curriculum vitae, list of publications, statement of research interests, and the names of three references to: **James W. Fisher, Ph.D., Professor and Chairman, Department of Pharmacology, Tulane Medical School, 1430 Tulane Avenue, New Orleans, La. 70112.** Applications should be received by 1 January 1986. *Tulane University is an Equal Opportunity/Affirmative Action Employer.*

CELL BIOLOGIST

A tenure-track faculty position at the **assistant or associate professor** level is open in the Department of Pediatrics, Division of Hematology/Oncology, University of Southern California at the Children's Hospital of Los Angeles. The possibility of a joint appointment in the basic science department exists. The candidate should have a Ph.D. and have developed a program of basic research in an area related to phagocytes.

Please send curriculum vitae, representative publications, a statement of research interest, and the names of three references to: **Thomas D. Coates, M.D., Children's Hospital of Los Angeles, Box 54700, Los Angeles, Calif. 90054-0700.**

Children's Hospital of Los Angeles and the University of Southern California are Equal Opportunity/Affirmative Action Employers.

SCIENTIST

Manager, Clinical Data Assurance and Safety Analysis

We have an immediate need for a **Manager, Clinical Data Assurance and Safety Analysis** in the Safety Coordination Department of Worldwide Clinical Research and Development, to conduct quality assurance audits and provide scientific expertise concerning the safety profile of products in development Worldwide. This position is located in our new \$200 million Research & Development complex located near Valley Forge, PA.

Candidates must have a Ph.D. in a Biomedical Science with at least four years of postdoctoral experience and be familiar with the conduct of clinical studies, also must have computer experience preferably with clinical data applications. Knowledge of national and international regulatory requirements and knowledge of French, German or Italian are desirable.

We offer an excellent compensation and benefits program with the opportunity for personal and professional growth.

For confidential consideration, interested qualified candidates should send resume, including salary expectations to: **M. O'Neill, SmithKline Beckman Corporation, 1576 Spring Garden Street, Philadelphia, PA 19101.** We are an Equal Opportunity Employer, M/F/H/V.

SK&B
A SmithKline Beckman Company

LOUISIANA STATE UNIVERSITY MEDICAL CENTER DEAN OF THE SCHOOL OF MEDICINE IN SHREVEPORT

The Louisiana State University (LSU) Medical Center is seeking applications and nominations for the position of dean of the School of Medicine, in Shreveport. The former dean, Dr. Perry G. Rigby, became chancellor of LSU Medical Center effective 1 September 1985. The dean is the chief administrative officer of the School of Medicine and is responsible to the chancellor of the LSU Medical Center for the administration of all educational, research, and clinical programs conducted by the School of Medicine in Shreveport.

The school enrolls approximately 400 medical students, 290 house officers, 30 graduate students, and conducts continuing medical education programs. Clinical service programs are conducted at Louisiana State University Hospital, Shreveport Veterans Administration Medical Center, E. A. Conway Memorial Hospital in Monroe, Louisiana, and several affiliated institutions.

Louisiana State University is the major state institution of higher learning with seven campuses and 55,000 students. The School of Medicine in Shreveport is one of six professional schools in the LSU Medical Center which includes the schools of: Medicine in New Orleans, Dentistry, Nursing, Allied Health Professions, and Graduate Studies.

Applicants should have a M.D. or Ph.D. degree and considerable academic administrative experience. Applications and nominations should include curriculum vitae, the names of three references, and should be submitted by 1 February 1986 to:

**Horace E. Thompson, M.D., Chairman
Dean Search Committee (Box 600)
LSU School of Medicine in Shreveport
P.O. Box 33932
Shreveport, La. 71130**

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

POSITIONS OPEN

Montana State University seeks **ASSOCIATE DIRECTOR OF AGRICULTURAL EXPERIMENT STATION** to evaluate, plan, develop, and coordinate research efforts of 13 on-campus and eight off-campus units. Associate director reports to the Experiment Station Director and is responsible for liaison with regional and national agricultural organizations, and for long-range planning and goal setting.

REQUIRED QUALIFICATIONS: Earned doctorate in an agricultural science or related field; established research record and evidence of managerial skills.

DESIRED QUALIFICATIONS: Familiarity with current and emerging agricultural research technology; commitment to land grant mission and knowledge of systems analysis.

SALARY: Negotiable at about \$50,000 to \$55,000 and related to qualifications and experience.

CLOSING DATE: 31 January 1986 or until the position is filled.

APPLICATION: Send letter of application, résumé or curriculum vitae, and the names, addresses, and telephone number of five references to:

Associate Director Search Committee
202 Linfield Hall
Montana State University
Bozeman, Mont. 59717-0002
Telephone: 406-994-3681

Montana State University is an Equal Opportunity/Affirmative Action Employer and encourages applications from female, minority and disabled persons.

RESEARCH/PRODUCTION OF BIOLOGICS

Meloy Laboratories, Inc., a biotechnology supply company with emphasis on R&D in applied areas of cell biology, immunology, and molecular biology, is now accepting applications for GMP biologic manager and research associate:

GMP BIOLOGICS MANAGER—Candidates must possess a M.S. or Ph.D. degree in immunology, microbiology, or biochemistry and have experience in GMP operations with good supervisory skills. This individual will be responsible for the coordination, implementation, and development of procedures and documents complying with GMP's.

RESEARCH ASSISTANT-ASSOCIATE—Candidates should have experience with purification and fragmentation of antibodies. A B.S./M.S. in chemistry/biochemistry and 1 to 2 years of experience is required. Duties will include protein purification (ion exchange, gel filtration, and affinity chromatography) and characterization analysis of proteins (HPLC gel electrophoresis). Immunochemical expertise is preferred (immunoassay, radio labeling).

Applicants should submit curriculum vitae and three professional references to:

Meloy Laboratories, Inc.
6715 Electronic Dr.
Springfield, Va. 22151
Attn: Personnel

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

BIOGEOCHEMIST OR GEOMICROBIOLOGIST. Colorado School of Mines, Department of Chemistry and Geochemistry, invites applicants for a tenure-track position; rank and salary dependent on qualifications. The applicant should have a Ph.D. in microbiology, biochemistry, or geochemistry, with research interests in microbiology or biochemistry as related to geochemical systems. The successful candidate must have a commitment to excellence in teaching and will be expected to develop a successful and productive graduate research program. Teaching duties will be in undergraduate biochemistry and advanced courses in specialty. The person occupying this position should be able to work cooperatively in building an interdisciplinary graduate research program combining chemistry, geochemistry, and environmental science. Send résumé, statement of professional goals, transcripts, a proposal for starter grant funding, and at least three letters of reference by 1 February 1986 to: **George H. Kennedy, Head, Department of Chemistry and Geochemistry, Colorado School of Mines, Golden, Colo. 80401.** An Equal Opportunity/Affirmative Action Employer.

The National Hellenic Research Foundation invites applications for the position of **DIRECTOR** of the Institute of Organic Chemistry. The applicants must be internationally acknowledged in the field of organic and pharmaceutical chemistry and organic synthesis, including pharmaceutical synthesis and spectroscopy. Applications should be sent to: **M. J. Athanassopoulou, National Hellenic Research Foundation, Vassileos Konstantinou 48, Athens 116 35, Greece.** Deadline is 31 January 1986.

POSITIONS OPEN

TENURE-TRACK POSITION FOR ATOMIC PHYSICS EXPERIMENTALIST KANSAS STATE UNIVERSITY (KSU)

The Department of Physics at Kansas State University plans to add one experimentalist in atomic physics. We anticipate that this tenure-track position will be filled at the assistant professor level in the fall of 1986. However, exceptionally qualified candidates might be considered at the associate professor level. Currently, we have atomic physics research in such areas as ion-atom scattering, ion-molecule scattering, identification and lifetimes of exotic multiply-charged molecular species, and atomic spectroscopy of highly-charged ions. Atomic physics experimentalists with expertise in these or complementary areas are encouraged to apply. The candidate is expected to conduct significant research and to teach undergraduate and graduate courses.

The department's J. R. Macdonald Laboratory for atomic and molecular physics research is presently being upgraded by the addition of new laboratory space, a superconducting LINAC booster accelerator, and a cryogenic electron beam ion source (CRYEBIS).

Letters of application, including curriculum vitae and three letters of recommendation, must be received by: **Professor Chander Bhalla, Head, Department of Physics, Kansas State University, Manhattan, Kansas 66506, by 10 January 1986.** KSU is an Equal Opportunity/Affirmative Action Employer.

BIOPHYSICIST, ASSISTANT PROFESSOR. Full-time, tenure-track appointment (9-month). Appointee is expected to teach graduate and undergraduate students, and to develop an active research program, supported by extramural funds. Research subfield open, but should complement interests of existing faculty. Qualifications: Ph.D. and at least 2 years of postdoctoral research experience in biophysics, biophysical chemistry, or related field. Letter of interest, curriculum vitae, names, addresses, and telephone numbers of three professional references, and a two- or three-page statement of research plans should be sent by 1 March 1986 to:

Dr. Kensal E. van Holde
Chairman, Search Committee
Department of Biochemistry and Biophysics
Oregon State University
Corvallis, Oregon 97331

Oregon State University is an Affirmative Action/Equal Opportunity Employer and complies with section 504 of the Rehabilitation Act of 1973.

CELL BIOLOGY

The Department of Biological Sciences of Stanford University seeks applicants for a tenure-track position at the **assistant professor** level in the area of eukaryotic cell biology. Suitable areas include receptors and signal transduction mechanisms, intracellular protein trafficking, and the cytoskeleton. Candidates must have an outstanding research record and will be expected to establish an innovative research program. Teaching responsibilities will include undergraduate and graduate courses in cell biology. *Applications from women and minorities are encouraged.* Send curriculum vitae, a statement of research accomplishments and anticipated research directions, and the names of three references to: **Chairperson, Cell Biology Search Committee, Department of Biological Sciences, Stanford University, Stanford, California 94305.** Applications should be received by 15 January 1986. *Stanford University is an Equal Opportunity Employer.*

SURFACE OR MATERIALS CHEMIST. Colorado School of Mines, Department of Chemistry and Geochemistry, invites applicants for a tenure-track position; rank and salary dependent on qualifications. The applicant should have a Ph.D. with a background in the chemistry of polymers, ceramics, or other materials. Research interests should be in the chemistry of solid surfaces using the techniques of modern surface analysis. The successful candidates must have a commitment to excellence in teaching and will be expected to develop a successful and productive graduate research program. Teaching duties will be in undergraduate physical chemistry and advanced courses in specialty. The person occupying this position will also work cooperatively with a new materials science and engineering program involving departments of chemistry and geochemistry, metallurgy, and physics. Send résumé, statement of professional goals, transcripts, a proposal for starter grant funding, and at least three letters of reference by 1 February 1986 to: **George H. Kennedy, Head, Department of Chemistry and Geochemistry, Colorado School of Mines, Golden, Colo. 80401.** An Equal Opportunity/Affirmative Action Employer.

POSITIONS OPEN

EMINENT SCHOLAR CHAIR IN FOREST BIOTECHNOLOGY

The School of Forest Resources, University of Georgia, Athens, Georgia, announces the creation of an endowed chair in forest biotechnology. The candidate must have attained exceptional prominence and peer recognition for scholarly contributions and ongoing quality research programs in the broad field of cellular and molecular biology. The ultimate goal of this program is to develop advanced genetic technology for increasing the productivity of forest tree species. The University of Georgia is strongly committed to a program of excellence in biotechnology research through interdisciplinary cooperation, including industry involvement. **Type of Appointment:** Professorial rank. Continuing, 12-month appointment. Salary commensurate with experience and capability. **Nomination Deadline:** Nominations of qualified applicants or requests for additional information should be addressed to: **The Dean, School of Forest Resources, University of Georgia, Athens, Georgia 30602, on or before 1 February 1986.**

CHAIRPERSON. The Department of Biology, Loyola University of Chicago, is seeking an individual to assume the chair. The department consists of 22 faculty members and 7 laboratory instructors representing a broad range of interests in biological science and enrolls approximately 1000 undergraduates and 25 M.S. graduate students. In addition to general departmental administration, the chair will have responsibility for continuing development of academic programs, teaching and research in an area of specialization, promoting ongoing faculty research, and fostering interactions with related science and medical departments.

Qualifications should include a distinguished record of research and teaching, administrative experience, and ability to interact effectively with both faculty and students. Appointment will be at the rank of professor with consideration given to highly qualified individuals at the associate professor level. Salary is negotiable. Send curriculum vitae and names of at least four references by 1 February 1986 to: **Dr. Jill Reich, Chairperson of Search Committee, Department of Biology, Loyola University of Chicago, 6525 North Sheridan Road, Chicago, Illinois 60626.**

Loyola University of Chicago is an Affirmative Action/Equal Opportunity Employer.

SEARCH RE-OPENED CHAIRPERSON—DEPARTMENT OF BIOCHEMISTRY

Wayne State University invites applications and nominations for the position of chairperson of the Department of Biochemistry. The School of Medicine seeks a scientist with an outstanding research program and demonstrated academic leadership abilities. The position offers the opportunity to build from an established core of 15 full-time faculty with diverse research interests. Wayne State University is a state-supported institution committed to academic excellence.

Candidates should submit curriculum vitae by 1 January 1986 to:

Harry Maisel, M.B., Ch.B.
Professor and Chairman
Department of Anatomy
Wayne State University
540 East Canfield
Detroit, Mich. 48201

Equal Opportunity Affirmative Action Employer.

ELECTRON MICROSCOPIST

STAFF APPOINTMENT: the Biology Department of Hamilton College seeks an electron microscopist to maintain the department's transmission electron microscope, participate in research with students and faculty members of biology and other science departments, and teach a one semester course in electron microscopy techniques. It is expected that the successful candidate will have a master's degree. Independent research is encouraged. We anticipate purchasing a scanning electron microscope in the next year and prefer that the candidate have expertise on, and be able to maintain, the scanning electron microscope as well. Applications should be received by 6 January 1986 and should include curriculum vitae, transcripts, and the names of three references. Send résumés to: **Professor Tom Brady, Chairman, Biology Department, Hamilton College, Clinton, N.Y. 13323.**

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

Toxicologist

The Agricultural Research Division of American Cyanamid Company has an excellent career opportunity for an experienced toxicologist to join our toxicology department with responsibilities for a wide-range of toxicological and environmental studies covering both plant and animal products. Safety evaluations on complex issues as well as submissions to various regulatory agencies are involved. This position does not involve hands-on laboratory work.

Successful applicant will have a Ph.D. with 5+ years' experience in industry, government, or contract laboratories.

American Cyanamid offers a competitive compensation and benefits package. For prompt and confidential consideration, forward your resume and salary history to the Employment Office.



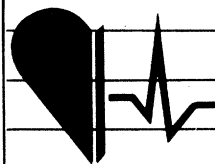
American Cyanamid Company

Agricultural Research Division

P.O. Box 400

Princeton, New Jersey 08540

An Equal Opportunity Employer M/F/H



Kolff 75

International Symposium on Artificial Organs, Biomedical Engineering & Transplantation

IN HONOR OF THE 75th
BIRTHDAY OF W.J. KOLFF
Father of Artificial Organs

SALT LAKE CITY, UTAH, U.S.A.

JANUARY 20-23, 1986

State-of-the art scientific program with submitted and invited papers in the areas of heart, kidney, neuroprostheses, drug delivery/biomaterials

Program includes many social activities plus daily skiing.

FOR INFORMATION CONTACT:

Symposium Registration Center, P.O. Box 17413,

Washington Dulles International Airport,

Washington, D.C. 20041, U.S.A.

Phone: (703) 471-6180

Developmental, Reproductive and Endocrine Biology/ Molecular and Cell Biology/ Neurobiology



Having appointed a new President and Scientific Director, the Worcester Foundation for Experimental Biology is seeking candidates for a substantial number of new junior and senior faculty positions, to be filled over the next two years in the research areas listed above. These positions are institute-backed appointments, with competitive salaries and research support funds. In 1984-85, six such positions were filled, and we now wish to continue building on this momentum.

Our criteria are intellectual creativity and a record of significant work; the quality of a candidate's training is also of importance. We wish to attract scientists whose collegial qualities are in keeping with the Worcester Foundation's tradition as an interactive community of scholars.

Applicants are asked to send a curriculum vitae, names of references and a synopsis of current and planned research; please do not submit reprints or manuscripts.

Send materials to codes DREB, MCB or NB (as appropriate), C/O Personnel Office, Worcester Foundation for Experimental Biology, 222 Maple Avenue, Shrewsbury, MA 01545. We plan to make the first two-three of these appointments by September.

The Worcester Foundation for Experimental Biology is an Affirmative Action/Equal Opportunity Employer.

POSITIONS OPEN

DEAN, SCHOOL OF ENGINEERING VANDERBILT UNIVERSITY

Applications and nominations are invited for the Dean of the School of Engineering, Vanderbilt University. We seek a strong academic leader with a distinguished record of research and a proven ability to attract funding. The dean must have the leadership skills to play a major role in the expansion of high quality research and teaching.

The School of Engineering consists of the departments of chemical engineering, civil and environmental engineering, computer science, electrical and biomedical engineering, and mechanical and materials engineering. The school presently has an undergraduate enrollment of approximately 1100 and a graduate enrollment of approximately 200.

Candidates should have an earned doctorate in engineering or a related field and demonstrated administrative ability. Candidates must meet standards for appointment at the rank of professor (with tenure) in the school.

Applicants should forward résumés and names of three references by 15 January 1986 to: Professor Frank L. Parker, Chairman, Search Committee for the Dean, School of Engineering, Vanderbilt University, Box 1596, Station B, Nashville, Tennessee 37235.

Vanderbilt University is an Equal Opportunity and Affirmative Action Employer.

DIRECTOR: The University of Vermont invites applications for the position of director of the Vermont Cooperative Extension Service. Essential qualifications: demonstrated leadership, communication skills, commitment to extension mission. Begins 1 July 1986. Application deadline: 3 February 1986. Contact: Chair, Extension Director Search Committee, Office of Academic Affairs, University of Vermont, Burlington, Vermont 05405.

DIRECTOR HISTOCOMPATIBILITY TESTING

The University of Tennessee Memorial Research Center and Hospital (UTMRCH) in Knoxville invites applications for a position in transplantation immunology. Candidates should be Ph.D. level with 2 years of experience in histocompatibility and have credible evidence of achievement in basic transplant-related immunologic research. A tenure-track combined position in the departments of Surgery and Medical Biology is available. UTMRCH is a 602-bed regional referral hospital and university teaching and research medical center. Send curriculum vitae to: Mitchell H. Goldman, M.D., UTMRCH, 1924 Alcoa Highway, Knoxville, Tennessee 37920; or telephone 615-544-9234 for further information. An Affirmative Action Title IX/Section 504 Employer.

EVOLUTIONARY BIOLOGIST

The Department of Zoology, University of Washington, invites applications for a faculty position in the area of evolutionary biology broadly defined, including such areas as population genetics, evolutionary morphology, and paleobiology. The rank is open, although the appointment will likely be made at the level of assistant professor. Candidates must present evidence of excellence in research and an interest in undergraduate and graduate teaching in this area. Send by 1 February 1986 curriculum vitae, copies of three publications, a brief description of research and teaching interests, and three letters of recommendation to: Professor Charles Laird, Chairman, Department of Zoology NJ-15, University of Washington, Seattle, Wash. 98195. *Equal Opportunity/Affirmative Action Employer.*

FACULTY POSITION IN VIROLOGY

The Department of Virology and Epidemiology, Baylor College of Medicine, invites applications for a tenure-track position in a research-oriented department. Candidates should have a strong foundation in animal virology and be qualified to establish an independent, high-quality research program in MOLECULAR VIROLOGY and to contribute to the departmental graduate program. Appointment will be made at the assistant professor level. Applicants should have a Ph.D. or M.D. degree and postdoctoral training. Interested persons should reply by 15 January 1986, by sending curriculum vitae, statement of research interests, and the names of three references to: Dr. Janet S. Butel, Search Committee, Department of Virology and Epidemiology, Baylor College of Medicine, One Baylor Plaza, Houston, Texas 77030. *Baylor College of Medicine is an Equal Opportunity Employer.*

POSITIONS OPEN

DIRECTOR, DIAGNOSTICS PROGRAM

An established company seeks a scientific leader for research and development in diagnostics. The candidate should have a sustained record of achievement in immunoassay and/or probe assay development. The successful candidate will lead a group of Ph.D. scientists and technicians in development of products aimed at rapid diagnosis of infectious agents. A minimum of 6 years of postdoctoral experience is required. Send résumé and list of references to: BOX 264, SCIENCE.

DIRECTOR, DEPARTMENT OF PATHOLOGY

The JOHNS HOPKINS UNIVERSITY SCHOOL OF MEDICINE and the JOHNS HOPKINS HOSPITAL are seeking a physician to lead our Department of Pathology as professor and director. Applicants should have demonstrated outstanding abilities in research and teaching, as well as the capability to direct the service missions of the department.

Please send letter of application, curriculum vitae, and bibliography to: Dr. David A. Blake, Secretary, Pathology Search Committee, Johns Hopkins University School of Medicine, 720 Rutland Avenue, Baltimore, Maryland 21205.

An Affirmative Action/Equal Opportunity Employer.
Deadline date for submission: 1 February 1986.

ELECTRON MICROSCOPIC ASSISTANT ASSOCIATE IN RESEARCH I

Biological electron microscopic technician skilled in fundamentals and procedures for preparation of tissue for examination with transmission electron microscope, as well as ultra-thin sectioning and dark room work. Responsible for electron microscopic research associated with EM core of the Liver Center. M.S. or B.S. with experience is required. Send curriculum vitae and two references to: Dr. J. L. Boyer, Yale University School of Medicine, Liver Center, LMP 1080, 333 Cedar Street, New Haven, Conn. 06511. *An Affirmative Action Equal Opportunity Employer.*

FACULTY POSITION IN GEOPHYSICS

The Geophysics Program at the University of Washington invites applications for a tenure-track position at the assistant professor level. Applicants must have a Ph.D. and will be expected to teach courses primarily at the senior and graduate student level and to establish innovative, forward-looking research programs in seismology. Curriculum vitae and four letters of references should be sent prior to 9 January 1986 to: Professor John Booker, Chairman, Recruitment Committee, Geophysics Program, AK-50, University of Washington, Seattle, Wash. 98195. *The University of Washington is an Affirmative Action/Equal Opportunity Employer.*

FACULTY POSITIONS DEPARTMENT OF BIOCHEMISTRY AND MOLECULAR BIOLOGY THE UNIVERSITY OF CHICAGO

The Department of Biochemistry and Molecular Biology at The University of Chicago wishes to invite applications and nominations for six tenure-track or tenured faculty positions to be filled within the next few years. It is expected that at least two positions will be filled in the 1986 to 1987 academic year. Candidates should have a doctoral degree, significant postdoctoral research experience, a strong record of research accomplishment, and demonstrable potential for the development of an independent research career in an academic setting. We are seeking outstanding individuals with research interests in any area of modern biochemistry and molecular biology, including nucleic acid biochemistry, protein-nucleic acid interactions, DNA replication and transcription, membrane and cell biochemistry, molecular endocrinology, transmembrane signalling, physical biochemistry, structural biology, and molecular structure and dynamics. Applications should include curriculum vitae, a list of publications, a summary of current research activities and future research plans, and the names of at least four individuals from whom letters of reference may be solicited. Please send applications or nominations to:

Howard S. Tager, Chairman
Department of Biochemistry and Molecular Biology
The University of Chicago
920 East 58 Street
Chicago, Illinois 60637
The University of Chicago is an Equal Opportunity Employer.

POSITIONS OPEN

GENETICIST. Tenure-track position at assistant professor level. Teaching responsibilities include genetics, alternate year courses in microbiology and a second area of specialty such as immunology or development, and participation in the introductory biology courses. A research program involving undergraduates is encouraged. The Ph.D. is required and previous teaching experience is preferred. Available 1 July 1986. Please submit curriculum vitae and three letters of recommendation by 15 January 1986 to: Dr. Joanne Rosinski, Chair, Biology Department, Sweet Briar College, Sweet Briar, Virginia 24595. *Equal Opportunity/Affirmative Action Employer.*

HEAD, DEPARTMENT OF VETERINARY SCIENCE MONTANA STATE UNIVERSITY (MSU)

Applications or nominations are invited for the position of Head of the Department of Veterinary Science. We are seeking an enthusiastic individual to provide progressive leadership in research, teaching, and service. The department has 12 full-time faculty positions of which several are vacant, 6 graduate students, and more than 20 support personnel. The department has research programs in bacteriology, immunology, parasitology, pathology, protozoology, and virology that emphasize basic, applied, and biotechnological approaches to diseases of livestock. Applicants must have a D.V.M. or Ph.D. (D.V.M. and Ph.D. preferred), a productive research background preferably on diseases of livestock, a strong interest in graduate and undergraduate education, an aptitude for administration, and good communication skills. Applicants should submit by 1 March 1986 a letter of application, curriculum vitae and names, addresses, and telephone numbers of three references to: Dr. C. A. Speer, Department of Veterinary Science, Montana State University, Bozeman, Montana 59717; telephone: 406-994-6389. *MSU is an Equal Opportunity/Affirmative Action Employer.*

HEAD, DEPARTMENT OF ZOOLOGY, UNIVERSITY OF TENNESSEE, KNOXVILLE (UTK). The Zoology Department seeks a person of national professional stature as head, beginning 1 September 1986. The Department has 26 full-time faculty members and an active graduate and undergraduate program. The successful individual must demonstrate a commitment to the continuing development of research and academic programs and of faculty and departmental resources. Some previous administrative experience is desirable. The Department of Zoology is part of a Life Sciences Consortium made up of the Departments of Biochemistry, Botany, Microbiology, Psychology and Zoology, and the Graduate Program in Ecology. Most of its faculty are also associated with one of the Life Sciences Graduate Programs (administered by the Consortium) in Biotechnology, Environmental Toxicology, Ethology, Physiology, or Cellular, Molecular and Developmental Biology. Applicants should send curriculum vitae and a list of the names and addresses of at least three individuals who may be asked to provide letters of reference, to: Dr. Susan E. Riechert, Headship Search Committee, Department of Zoology, University of Tennessee, Knoxville, Tenn. 37996-0810. Deadline for the receipt of applications is 10 February 1986. *UTK is an Equal Opportunity/Affirmative Action/Title IV/Section 504 Employer. Women and minorities are encouraged to apply.*

MICROBIAL ECOLOGIST. Assistant professor (tenure-track) position open 1 September 1986. Ph.D. in biological sciences with field and laboratory research experience in microbial ecology; salary open. Appointment may be considered at associate professor (tenured) for person with strong record of teaching, publication, and extramural support. Responsibilities include: establishment of strong externally funded research program; supervision of graduate students; instruction of general microbiology, course in area of specialization, participation in biology core curriculum. Opportunities for collaborative research exist within the University, Environmental Toxicology Center, Natural Resources Research Institute, and with state and federal laboratories in the area. Send curriculum vitae, transcripts, three letters of recommendation, statement of teaching, research, and professional goals by 10 February 1986; only completed applications will be considered. Send to: Dr. John B. Carlson, Department of Biology, University of Minnesota, Duluth, Minn. 55812. *The University of Minnesota is an Equal Opportunity Educator and Employer, and specifically invites and encourages applications from women and minorities.*



INTERNATIONAL ATOMIC ENERGY AGENCY

RADIOCHEMIST

The International Atomic Energy agency seeks for the International Laboratory of Marine Radiochemistry in Monaco a Radiochemist at the P-2 level to perform laboratory and field research on radiochemistry, low level measurements of environmental samples and marine radioecology. Good experience of development of radiochemical separations and nuclear measurement techniques is particularly desirable. PhD or equivalent in radiochemistry, radioecology, marine chemistry or radiation physics.

Initial contract 2 years, total annual emoluments approximately US\$ 26,000.-. Additional allowances if married. Travel and removal expenses paid. Installation and repatriation grants. Six weeks annual leave.

Send application with an indication of your nationality under Vacancy Notice No 85/071 to the **Division of Personnel, International Atomic Energy Agency, P.O. Box 100, A-1400 Vienna, Austria.**

RESEARCH MOLECULAR BIOLOGIST

Wyeth Laboratories' Radnor facility is a top pharmaceutical company's center for R&D. As part of a major, on-going expansion, we require an additional Research Molecular Biologist.

You will be responsible for designing certain important enzymes and other biologicals using rDNA technology. We look to you to propose, plan, and implement research projects with a minimum of direction.

This important vacancy requires at least two years post-doctoral study in molecular biology. At least two years experience in rDNA techniques, preferably using animal viruses as the subject of research, is essential. Demonstrated skill in protein purification and characterization is important, as is a working knowledge of immunology.

You will enjoy the tutelage and counsel of several accomplished scientist-managers in our modern, well-equipped facilities in Philadelphia's prestigious Main Line suburban area. Besides an environment which fosters discovery, we offer a competitive salary, excellent benefits, and superior opportunities for advancement.

Respond immediately by forwarding your CV and salary requirements in confidence to: Position #WD 5103C, **Recruitment Manager, Wyeth Laboratories, Inc., P.O. Box 8299, Philadelphia, PA 19101.** Equal Opportunity Employer. M/F/H/V responses encouraged.

Wyeth Laboratories, Inc.



RESEARCH INSTITUTE UNIVERSITY OF PETROLEUM AND MINERALS DHAHRAN, SAUDI ARABIA



NEEDS

Physical or Geological Oceanographer to participate in on-going studies of the marine environment of the Arabian Gulf.

Applicants should have a strong field orientation with emphasis on nearshore, circulatory processes and sedimentation. Other required skills include scuba diving, boat handling experience, computer expertise, and report writing experience. Ph.D. or equivalent required.

Initial contract will be for one year with possible opportunity to extend. Salary is competitive. Benefits include annual repatriation, housing and transportation allowance.

Candidates possessing the above requirements should apply to address listed below, furnishing detailed resume of educational qualifications and experience, names and addresses of four referees, including present employer, and present position held, and attaching copies of degrees and transcripts, last salary drawn certificate and passport size photograph.

University of Petroleum and Minerals
Houston Office, Department 236
5718 Westheimer, Suite 1550
Houston, Texas 77057 USA

Biochemist/ Cell Biologist

Pfizer Central Research has a position for a biochemist or cell biologist to pursue research aimed at the discovery of new therapeutic agents for cancer control. You will be expected to participate in research on the role of oncogenes and growth regulation in tumor progression and metastatic spread. You must have a PhD in biochemistry, cell biology or molecular biology and have completed at least one postdoctoral fellowship working with the biochemistry or cellular biology of malignant cells, particularly in laboratories concerned with growth regulation and oncogene molecular biology. Experience with growth factor/receptor purification will be especially valuable.

This position offers an excellent opportunity for professional recognition and career growth. We offer competitive compensation, benefit package and the opportunity to live in an attractive Connecticut shore community. Please send resume and description of research accomplishments to: Jerry K. Larson, PhD, Manager of Employment, Pfizer Central Research, Eastern Point Road, Groton, CT 06340.



An equal opportunity employer

POSITIONS OPEN

IMMUNOCHEMIST. The applicant must have a Ph.D. degree in immunology or biochemistry, with a minimum of 5 years of postgraduate research experience in one or more of the following areas: immunoaffinity purification of proteins or peptides; development and utilization of quantitative assays for specific complement components; purification of eukaryotic plasma membrane receptors; or use of monoclonal antibodies in assay development. Cytotech, Inc., 2½ years old, is a biotechnology firm focused on the development of diagnostic products for human autoimmune and infectious diseases. Please send curriculum vitae to: **The Personnel Department, Cytotech, Inc., 11045 Roselle Street, Suite C, San Diego, Calif. 92121.**

The University of Michigan Department of Pathology has a faculty opening for an **IMMUNOPATHOLOGIST**. This position requires training in anatomic pathology and Board-eligibility or certification. Training in diagnostic renal and lung pathology (light and electron microscopy; immunofluorescence) is required for participation in diagnostic activities. The applicants must have training in experimental immunopathology and present research plans for future research. Experience in medical school teaching is also required. Applicants must hold a medical license in the United States and be eligible for a state of Michigan medical license. Qualified candidates should contact: **Peter A. Ward, M.D., Professor and Chairman, Department of Pathology-MO45, M524, Medical Science I, University of Michigan, 1315 Catherine Road, Ann Arbor, Mich. 48109-0010.**

INVERTEBRATE BIOLOGIST—Horn Point Laboratories of the University of Maryland, Center for Environmental and Estuarine Studies seeks to fill a tenure-track faculty position in invertebrate biology. Specialties of interest include invertebrate biochemistry/nutrition and/or feeding interactions. Salary and rank are dependent on experience. Send résumé, a statement of research interests and the names of three references by 15 February 1986 to: **Dr. M. R. Roman, University of Maryland, Horn Point Laboratories, Box 775, Cambridge, Md. 21613.** The University of Maryland is an Affirmative Action/Equal Opportunity Employer.

UNIVERSITY OF HONG KONG LECTURER IN PHYSIOLOGY

Applications are invited for a lectureship in the Department of Physiology, available immediately. The appointee will be required to participate in the teaching of physiology (in particular cardiovascular physiology) to dental and medical students. Preference will be given to applicants with higher degrees in physiology or medical or dental degrees. Some research and teaching experience is desirable, together with a special research interest in one of the following areas: (i) cardiovascular physiology; (ii) biomedical engineering; (iii) biophysics; (iv) neurophysiology.

Annual salary (superannuable) is on an 11-point scale: HK\$160,980 to 269,100 (U.S. \$1 = HK\$7.80 as of 5 October 1985). Starting salary will depend on qualifications and experience. A medically qualified appointee who has just completed his preregistration year will be appointed as a lecturer at the minimum point of the scale. At current rates, salaries tax will not exceed 17 percent of gross income. Housing benefits at a rental of 7½ percent of salary, children's education allowances, leave, and medical benefits are provided.

Further particulars and application forms may be obtained from **The Secretary General, Association of Commonwealth Universities (Appointments), 36 Gordon Square, London England WC1H 0PF, or from the Appointments Unit, Secretary's Office, University of Hong Kong, Hong Kong, as soon as possible.**

NEW ZEALAND UNIVERSITY OF CANTERBURY LECTURER IN PLANT PHYSIOLOGY

Applications are invited for the position of lecturer in the Department of Plant and Microbial Sciences in the subject area of plant physiology.

Applicants should have a proven record in whole plant physiology and an ability to interact with existing staff in plant biochemistry, plant pathology, genetics, and ecology. Some experience of plant tissue culture could be an advantage.

The salary for lecturers is on a scale from NZ\$28,000 to NZ\$35,000 per annum.

Applications close on 31 January 1986.

Further particulars and conditions of appointment may be obtained from **W. Hansen, Registrar, University of Canterbury, Private Bag, Christchurch, New Zealand.**

POSITIONS OPEN

MOLECULAR BIOLOGIST

The **Biology Department, Creighton University**, seeks a faculty member with expertise in the developmental/genetic control mechanisms of eukaryotes. The successful candidate must hold a Ph.D. degree, have a strong commitment to independent, continuing research, and an enthusiastic instructional program. Initially, the candidate will be responsible for presentation of contemporary nucleic acid methodology in suitably integrated upper-division laboratory courses. Ultimately, the selected individual will be expected to teach a semester of the general biology course as a part of the normal teaching load (currently four courses over two semesters). Participation in the graduate program (M.S.) is requisite.

This tenure-track, 9-month appointment will be at the assistant professor level, with summer teaching a possibility. Application materials must be received by 31 January 1986. Applicants should send curriculum vitae, transcripts, and the names and addresses of three references to:

**Search Committee
Department of Biology
Creighton University
Omaha, Neb. 68178
Telephone: 402-280-2811**

Creighton University is an Affirmative Action/Equal Opportunity Employer.

MOLECULAR BIOLOGY, ASSISTANT PROFESSOR. Department of Biological Sciences, Barnard College, Columbia University, seeks molecular biologist for September 1986 to participate in undergraduate teaching and conduct an active research program. Teaching responsibilities include development of introductory molecular biology course with laboratory, and additional course in second semester. Requires ability to function in undergraduate college with affiliation to larger research institution. Possible areas of interest within molecular biology include, but are not limited to, genetics or developmental biology of plants or animals, endocrinology, immunology, or neurobiology. Ph.D. required; postdoctoral/teaching experience desirable. Submit curriculum vitae, statement of research and teaching interests, three representative publications, and three letters of recommendation by 1 February 1986 to: **Professor Paul E. Hertz, Chairman, Molecular Biology Search Committee, Barnard College, 3009 Broadway, New York, N.Y. 10027.** An Equal Opportunity Employer.

MICROBIOLOGY AND CELL BIOLOGY (two positions)—Middlebury College. (i) Regular (tenure-track) faculty appointment in **MICROBIOLOGY** for an instructor or beginning assistant professor, to develop a program in microbiology including introductory microbiology, a seminar in an area of microbial specialization, shared responsibility for an advanced genetics laboratory course, a course which would serve the general college community, and supervision of senior research students. (ii) A temporary (1-year) appointment for an instructor or beginning assistant professor in **CELL BIOLOGY** with an interest in developmental biology. Responsibilities will include a course in developmental biology, shared responsibility for a course in cell biology required of all majors, advanced lecture and laboratory courses in cell biology, and supervision of senior research. The successful candidates will be active in research and interested in excellence in undergraduate biology education. Ph.D. or A.B.D. required. Both positions are open 1 September 1986. Completed applications including curriculum vitae, statements of teaching and research interests and goals, all undergraduate and graduate transcripts, and recommendations must be received by 15 January 1986. Three recent letters of recommendation should be sent directly to: **C. R. Landgren, Chairman, Department of Biology, Middlebury College, Middlebury, Vt. 05753.** Telephone 802-388-3711, extension 5435. An Equal Opportunity Employer.

MOLECULAR VIROLOGY—POSTDOCTORAL FELLOW. Two-year position available to work on the molecular evolution and epidemiology of RNA viruses with emphasis on vesicular stomatitis virus. Recent Ph.D. and experience in molecular biology and/or animal virology desirable. Salary: \$17,500 to \$20,000, depending on experience. Reno is located at 4500 feet on the eastern slope of the Sierra Nevada mountains and offers exceptional living environment and recreational opportunities. Send curriculum vitae and names of three references to: **Dr. Stuart Nichol, Cell and Molecular Biology Program, Room 145, Howard Building, University of Nevada, Reno, Nev., 89557.**

An Affirmative Action/Equal Opportunity Employer.

POSITIONS OPEN

MICROBIAL MOLECULAR GENETICIST

Tenure-track position available August 1986. Rank and salary commensurate with qualifications and experience. Candidates expected to establish a graduate research and teaching program in microbial and molecular genetics. Responsibilities also include undergraduate teaching. Forward curriculum vitae, reprints, transcripts, statement of research goals, and three letters of recommendation to: **Dr. G. Alex Marsh, Chairman, Department of Biological Sciences, Florida Atlantic University (FAU), Boca Raton, Fla. 33431.** Deadline 1 March 1986. FAU is an Affirmative Action/Equal Opportunity Institution.

MOLECULAR BIOLOGISTS. Postdoctoral and senior technical positions available immediately with **Dr. Stuart Smith** for studies on structure and regulation of certain mammalian genes. Experience with gene cloning and sequencing required. Salaries in range \$22,000 to \$27,000. Send résumé and names of three references to: **HUMAN RESOURCES, Ruth Robinson, CHILDREN'S HOSPITAL, 747 52nd STREET, Oakland, Calif. 94609.** Equal Opportunity/Affirmative Action Employer.

NUTRITIONIST-BIOCHEMIST. Tenure-track ASSISTANT PROFESSOR position available 1 February 1986. Responsibilities include contributions to departmental teaching effort and implementation of nutritional counseling program for patients. It is expected that the applicant will establish and maintain an independent research program. Applicants should send curriculum vitae and three references to: **Dr. David Platt, Department of Microbiology-Biochemistry, School of Dental Medicine, University of Pittsburgh, Pittsburgh, Pa. 15261.** Closing date for position—3 January 1986. The University of Pittsburgh is an Equal Opportunity/Affirmative Action Employer.

VANDERBILT UNIVERSITY Tenure-Track Position in Living State Physics

A **PHYSICIST** for teaching undergraduate and graduate students and for conducting research in the physics of the living state is being sought to fill a tenure-track appointment as an assistant professor of physics, for a 3-year term commencing September 1986. In addition to teaching and research, the selected individual will be joining a small faculty cadre immersed in shaping and promoting our academic program in living state physics. Pursuit of independent, as well as collaborative research in related areas would be encouraged. Our Department of Physics and Astronomy is currently actively involved in investigations in cellular biophysics, surface/atomic physics, and nuclear and high energy physics. Applicants should make their availability and interest known by writing and sending their curriculum vitae and the names of three references to: **John P. Wikswo, Jr., Associate Professor of Physics, Vanderbilt University, Nashville, Tenn. 37235; telephone: 615-322-2977.** Vanderbilt University is an Affirmative Action Equal Opportunity Employer.

The Biology Department of Vassar College seeks two 1-year and one-half year replacements for the academic year 1986 to 1987. For all the positions a Ph.D. is required; postdoctoral and teaching experience are desirable. The positions are:

(i) **PHYSIOLOGICAL ECOLOGIST** with expertise in plant physiology and evolution (1 year position). Teaching load includes general botany, introductory biology, evolution, and plant physiology.

(ii) **PHYSIOLOGIST/ENDOCRINOLOGIST** with interest in behavior (one 1-year, one half-year positions). Teaching load will be some combination of comparative anatomy and physiology, introductory biology, human sexuality, and an advanced-level endocrinology course. Participation in a biopsychology senior seminar may also be required.

Applicants should submit curriculum vitae and three letters of recommendation by 31 December to: **Chairman of Biology, Box 251, Vassar College, Poughkeepsie, New York 12601.** Affirmative Action/Equal Opportunity Employer.

PHYSIOLOGIST—

Faculty teaching/research position available 1 July 1986. A Ph.D. degree in human physiology is required. Knowledge of human neuroanatomy is desirable. Strong commitment to teaching and research is required. Submit curriculum vitae to:

**Douglas H. Poorman, Ph.D.
Vice President of Academic Affairs
Southern College of Optometry
1245 Madison Avenue
Memphis, Tenn. 38104
Equal Opportunity Employer**

DEAN

School of Basic Life Sciences

The University of Missouri-Kansas City

The University of Missouri-Kansas City invites nominations and applications for the position of Dean of the School of Basic Life Sciences. The School was established in 1985 to support the health science and research missions of the campus. The School offers degrees at the masters and doctoral level and provides instruction to the Schools of Dentistry, Medicine, Nursing, and Pharmacy and the College of Arts and Sciences. The University of Missouri-Kansas City, situated in an attractive part of the Kansas City metropolitan area, is one of four campuses of the University of Missouri with an enrollment of more than 11,500 students.

RESPONSIBILITIES: The Dean is the chief academic officer of the School and reports to the Vice Chancellor for Academic Affairs. The Dean provides leadership and will be responsible for the development of the School through recruitment of faculty, new programmatic development and the building of strong programs of research.

QUALIFICATIONS: The successful applicant will be qualified for an appointment within the School as a full professor. A record of outstanding scholarly achievement is essential, as demonstrated by leadership abilities and a record of excellence in research and teaching. The University seeks an individual to lead and help build the School of Basic Life Sciences into an academic unit of national eminence.

APPLICATIONS: Applications and nominations will be accepted until the position is filled. Screening will begin December 15, 1985 with an anticipated starting date of July 1, 1986. Each applicant should submit a letter of application, a current resume, and the names, addresses and telephone numbers of three current professional references. Correspondence should be addressed to:

Dr. Eugene P. Trani
Vice Chancellor for Academic Affairs
221 Scofield Hall
University of Missouri-Kansas City
5100 Rockhill Road
Kansas City, MO 64110

The University of Missouri is an equal opportunity, affirmative action employer.

TECHNICAL SERVICES

Join Bethesda Research Laboratories' growing Technical Services Group. This group provides technical support for BRL products through the Tech-Line™, workshops, seminars, *FOCUS*, and the applications laboratory. Innovative scientists with good communication skills and experience in all molecular and cellular biology techniques are sought for the following positions:

- Staff Scientist (Ph.D.): Teach workshops; develop new applications in the laboratory; present techniques seminars; handle technical questions.
- Instructor (Ph.D.): Develop curriculum in cellular and molecular biology for Sales staff; teach theory and techniques in lecture and laboratory.
- Technical Specialist (B.S./M.S.): Handle technical questions; develop new applications in the laboratory; assist at workshops.

These positions offer competitive salary and benefits. Travel is required.

If interested, please send your resume in confidence to:

Mr. Wayne E. Fowler
GIBCO/BRL Division
Life Technologies, Inc.
Box 6009, 8717 Grovemont Circle
Gaithersburg, MD 20877

An equal opportunity employer. M/F/H.

NORTHEASTERN OHIO UNIVERSITIES COLLEGE OF MEDICINE SEEKS CANDIDATES FOR TENURE TRACK 12 MONTH APPOINTMENT FACULTY POSITIONS FOR EXPANDING PROGRAMS IN THE FOLLOWING BASIC SCIENCE FIELDS:

ASSISTANT PROFESSOR OF ANATOMY Ph.D. or M.D. degree with a record of productivity in research and teaching experience in histology.

ASSISTANT PROFESSOR OF BEHAVIORAL SCIENCES Ph.D. or equivalent with an active research program in the areas of medical psychology or sociology, behavioral biology, or behavioral medicine.

ASSISTANT PROFESSOR OF BIOCHEMISTRY Ph.D. with experience in biomedical Mass Spectrometry. Duties include teaching of medical and graduate students, participation in independent or cooperative research, and the running of the biomedical Mass Spectrometer Laboratory.

ASSISTANT PROFESSOR OF MICROBIOLOGY/IMMUNOLOGY Ph.D. with interests in immunology or bacteriology preferred.

ASSOCIATE PROFESSOR OF PHARMACOLOGY Ph.D. in Pharmacology with minimum of four years teaching experience in a medical school at the Assistant Professor level. Research interests in behavioral pharmacology, neurochemistry (HPLC) and/or receptor binding preferred.

Northeastern Ohio Universities College of Medicine, a consortium of the University of Akron, Kent State University, and Youngstown State University in association with eight community teaching hospitals in northeastern Ohio, offers a combined B.S./M.D. degree program.

Candidates should send curriculum vitae indicating specific position of interest, bibliography, statement of teaching, research experience, and funding together with names and addresses of three references by January 1, 1986 to **Office of Human Resources, Northeastern Ohio Universities College of Medicine, Rootstown, Ohio 44272**. An affirmative action/equal opportunity employer.

HOFFMANN-LA ROCHE

Obesity Research Senior Scientist

Hoffmann-LaRoche, an established leader in the pharmaceutical industry, has a career opportunity in obesity research.

The successful candidate will participate in a team effort to identify and characterize therapeutic agents for the treatment of obesity; and oversee a project for the study of hormone regulation and energy balance.

Qualifications: PhD in Biochemistry or related discipline and a minimum of 2 years postdoctoral experience. Knowledge in endocrinology, appetitive behavior, intermediary metabolism, and obesity. Experience with *in vivo* and *in vitro* methodologies; whole organ perfusion and perfusion systems; isolated cell preparations; and receptor-ligand interactions and RIA's. A good publication record is essential.

Roche offers a professional environment and an attractive compensation package. Please send resume and publication list to: Position JT, c/o Mrs. Eleanor M. Malone, Professional Employment & Staffing Specialist.



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POSITIONS OPEN

MOLECULAR VIROLOGIST YALE UNIVERSITY SCHOOL OF MEDICINE

The Section of Comparative Medicine invites applications for a **junior faculty position**. Applicants should have postdoctoral research experience, potential to attract research support, and an interest in use of molecular techniques to study viral pathogenesis and diagnosis. Research interests of current faculty include the pathogenesis of viral infections of laboratory rodents and development of diagnostic tests for rodent viruses including: rodent coronaviruses, parvoviruses, adenoviruses, Sendai virus, and ectromelia virus. Applications, including curriculum vitae, reprints of recent publications, and three letters of reference should be sent to: **Abigail L. Smith, Section of Comparative Medicine, Yale University School of Medicine, 375 Congress Avenue, P.O. Box 3333, New Haven, Conn. 06510.**

Yale University is an Equal Opportunity/Affirmative Action Employer.

Deadline for submission of applications is 15 February 1986.

PHARMACOLOGIST/ANALYTIC CHEMIST

The Department of Obstetrics and Gynecology, Wayne State University, has a position available. Expertise in pharmacodynamics is important. Experience with HPLC, LC, and GC methods. Appointee will collaborate with clinicians and basic scientists in oncology, perinatology, and teratology projects, as well as develop an independent research program supported by external funds. Experience with cancer chemotherapeutic drugs, drugs used during pregnancy and labor, and pregnant animal models would be valuable assets.

A Ph.D. degree and minimum of 2 years of postdoctoral or research experience required. Candidates must have proven record of research productivity. Salary and rank commensurate with experience. Send curriculum vitae and brief outline of research activities to: **Robert Sokol, M.D., Professor and Chairman, Search Committee, Department of Obstetrics and Gynecology, Wayne State University, 4707 St. Antoine, Detroit, Mich. 48201.** *Wayne State University is an Equal Opportunity Affirmative Action Employer.*



PHARMACOLOGY FACULTY POSITION

The University of Southern California (USC), School of Pharmacy, has a tenure-track position (assistant professor) in pharmacology available 1 July 1986. Candidates should have a Ph.D. in pharmacology, 2 years of postdoctoral experience, and research interests in behavioral and/or molecular neuropharmacology. The candidate will be expected to develop a fundable research program and participate in teaching professional and graduate pharmacology courses. Send curriculum vitae and a brief synopsis of research goals by 15 February 1986 to: **Jean C. Shih, Ph.D., Chair-Search Committee, USC School of Pharmacy, 1985 Zonal Avenue, Los Angeles, Calif. 90033-1086.**

An Equal Opportunity/Affirmative Action Employer.

POSTDOCTORAL ASSOCIATE with experience in protein chemistry or rDNA for program on proton conduction in membranes. Available 1 January 1986. Send curriculum vitae and the names of three references to: **Dr. R. Sanadi, Department of Cell Physiology, Boston Biomedical Research Institute, 20 Staniford Street, Boston, Mass. 02114.** *We are an Equal Opportunity/Affirmative Action Employer.*

POSTDOCTORAL ASSOCIATES: CELLULAR NEUROBIOLOGY

Two positions are available to study postsynaptic mechanisms regulating synaptic efficacy in the vertebrate CNS. We are using both in vivo and in vitro preparations to analyze the properties of inhibitory responses at identified synapses and to characterize ligand-activated ion channels. We are also using computer simulations to model quantal responses and the influences of various structural constraints on their kinetics. Experience in cellular electrophysiology and/or modeling is desirable. Send curriculum vitae and names and addresses of references to: **Dr. Donald S. Faber, Division of Neurobiology, Department of Physiology, State University of New York at Buffalo (SUNYAB), 313 Cary Hall, Buffalo, N.Y. 14214.** *SUNYAB is an Equal Opportunity/Affirmative Action Employer.*

POSITIONS OPEN

AGRIGENETICS CORPORATION PLANT GENETICIST/BREEDER

The Advanced Research Division of Agrigenetics Corporation, at Madison, Wisconsin, has a career position (Ph.D. level) currently available for a plant geneticist, preferably with experience in the genetics and breeding of *Brassica* species or other oilseed crops. The position is in an integrated research group involved in the improvement of *Brassica* crops. The successful candidate will assume a critical role in the development and evaluation of new germplasm, utilizing both novel and conventional plant breeding techniques, and interface with the breeding effort. The salary will be commensurate with background and experience.

Agrigenetics Corporation is a broadly based plant science company contributing to America's agricultural productivity by producing and marketing improved varieties of more than 50 crop species.

Send résumé and names of three references by 27 December 1985 to: **Dr. John Ingle, Director, Agrigenetics Advanced Research Division, 5649 East Buckeye Road, Box PG/S, Madison, Wisc. 53716.**

PLANKTON TAXONOMIST

Natural History Museum of Los Angeles County has an opening for a technician with expertise in some area of zooplankton or fish taxonomy. Primary activity will be to collaborate with other specialists in identifying fish eggs and larvae. Some opportunity for independent research in systematics/ecology as part of the Larval Fish Group's investigation of spawning patterns in larval ecology in the coastal ocean. Salary range \$18,500 to \$23,500 per year. M.S. or equivalent experience is desired. Send letter, résumé, and list of references to: **Dr. Robert J. Lavenberg, Curator of Fishes, Natural History Museum of Los Angeles County, 900 Exposition Boulevard, Los Angeles, Calif. 90007.** Telephone: 213-744-3373. *An Affirmative Action/Equal Opportunity Employer.*

PLANT PHYSIOLOGY

A 12-month, tenure-track position at the level of assistant or associate professor. The responsibilities of the position are 84 percent research and 16 percent teaching. Seeking an individual who will establish a vigorous research program in plant physiology, using modern methods directed toward basic problems of relevance to plant science and agriculture. Significant ongoing research support is available to assist in establishing an active research program. Submit curriculum vitae, a short (three pages or less) statement of research interests, and have three letters of reference sent to: **C. R. Somerville, Chairman, Botany Search Committee, Department of Botany and Plant Pathology, Michigan State University, East Lansing, Mich. 48824.** Applications received by 15 February 1986, will be assured of full consideration. *An Equal Opportunity/Affirmative Action Employer.*

PLANT SYSTEMATIST/EVOLUTIONIST

Applications are sought for a staff position in plant systematics and evolution. The appointee must have an outstanding record with some postdoctoral experience; applications from individuals at various career levels are encouraged. The position will involve development of a research program, preferably in plants of the U.S.-Southwest or other similar Mediterranean-type regions. Field of specialization should complement present staff, and might include biosystematics, experimental taxonomy, cladistics, or monographic work. Duties also include teaching in the graduate program in botany. Salary commensurate with experience. Position available fall 1986, but timing is negotiable. Letter of application, résumé, plan of proposed research, and three letters of recommendation should be received by 15 February 1986. Address:

**Search Committee
Rancho Santa Ana Botanic Garden
1500 North College Avenue
Claremont, California 91711
*An Equal Opportunity Employer***

POSTDOCTORAL POSITION (biochemist) isolation and characterization of calcium transport proteins from sperm plasma membranes. Available 1 April 1986. Salary negotiable. Send résumé and names of three referees to: **Dr. R. N. Peterson, Department of Physiology, School of Medicine, Southern Illinois University, Carbondale, Illinois 62901.**

POSITIONS OPEN

POSTDOCTORAL POSITION

A position is available to study expression of genes on human chromosome 21 during differentiation of hematopoietic cells or to study the molecular organization and regulation of a trifunctional protein involved in pyrimidine biosynthesis in mammalian cells. Molecular, biochemical, and genetic approaches are being used. Experience in DNA, RNA, or tissue culture techniques desired. Potential to develop independent research program within a well-funded department with a stimulating scientific environment. Salary negotiable. Send curriculum vitae and three letters of reference to: **Dr. Jeffrey N. Davidson, Department of Medical Microbiology and Immunology, University of Kentucky College of Medicine, Lexington, Ky. 40536-0084.** *An Equal Opportunity Employer.*

POSTDOCTORAL POSITION available immediately to study site directed mutagenesis of dehydrofolate reductase relevant to problems of protein folding, as well as the enzymatic mechanism. Send curriculum vitae and three letters of recommendation to: **Dr. Carl Frieden, Department of Biochemistry, Washington University School of Medicine, St. Louis, Mo. 63110.** *Washington University is an Affirmative Action/Equal Opportunity Employer.*

POSTDOCTORAL POSITION. Available immediately for research on molecular and genetic control mechanisms on transmembrane signaling of cellular growth factors. Applicant must have strong desire to challenge new approach to above problem. Salary dependent upon qualifications. Send curriculum vitae, description of research interests, and three letters of recommendation to: **Dr. N. Shimizu, Department of Molecular and Cellular Biology, University of Arizona, Tucson, Ariz. 85721.** Telephone: 602-621-7528. *An Equal Opportunity/Affirmative Action Employer.* Closing date: 15 January 1986.

POSTDOCTORAL POSITION available June 1986 to study the structure, photochemistry, and transport properties of halorhodopsin, a retinal protein which functions as a light-driven chloride pump in the cytoplasmic membrane of halobacteria. The goal is to describe the molecular mechanism of the chloride translocation by studying the pigment in cell envelope vesicles, in purified, solubilized form, and after reconstitution into proteoliposomes. Background in the chemistry of membrane proteins and immunological techniques desirable. Send curriculum vitae, copies of publications, and names of three references to: **Dr. Janos K. Lanyi, Department of Physiology and Biophysics, California College of Medicine, University of California, Irvine, Calif. 92717.** *Equal Opportunity/Affirmative Action Employer.*

POSTDOCTORAL POSITION available in developmental neurobiology in well-established study of synapse formation in the auditory system. Research focuses on tissue and cellular interactions in the chick embryo, using state-of-the-art and classical neuroanatomical methods, transplantation, and cell culture. Interdisciplinary approach involving electrophysiological and biochemical collaborations with a congenial neuroscience faculty. Competitive salary, long-term support. Preference for strong background in electrophysiology. Please send résumé to: **D. K. Morest, Department of Anatomy, University of Connecticut Health Center, Farmington, Conn. 06032.**

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POSTDOCTORAL POSITION available at University of New Mexico. NIH-funded project on brain extracellular matrix in brain edema, using quantitative autoradiography, modeling of biological systems, and image processing. Second year possible. Send curriculum vitae to: **Gary Rosenberg, M.D., Department of Neurology, University of New Mexico, Albuquerque, N.M. 87131.** *Equal Employment Opportunity.*

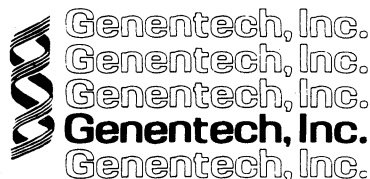
POSTDOCTORAL POSITION available immediately. Candidate should have solid experience in recombinant DNA technology. The candidate will participate in our research on the role of cAMP and of the cAMP-dependent protein kinase in the development of *Dictyostelium discoideum*, particularly in cell type-specific gene expression. Please send curriculum vitae and the names and addresses of three referees to: **B. H. Leitching or H. V. Rickenberg, Department of Molecular and Cellular Biology, National Jewish Center for Immunology and Respiratory Medicine, 1400 Jackson Street, Denver, Colorado 80206.**

Senior Scientist Scientist Senior Research Associate

The Cell Culture Process Development Department at Genentech, Inc., is recruiting for several individuals to join an interdisciplinary team developing state-of-the-art processes to prepare biologicals from cell culture. Successful candidates will play a major role in design, execution and interpretation of experiments. Qualified individuals may lead a small laboratory group.

Requirements include appropriate biological or biochemical degree(s), experience in mammalian cell biology and ability to participate effectively in a team environment. Desirable experience includes exposure to process development and/or large scale cell culture. Good communication skills essential. Salary and benefits are commensurate with experience and education.

Genentech, Inc., located on the San Francisco Peninsula, is a leader in the field of biotechnology and offers the opportunity to make a significant contribution to our organization. Please send resume to Human Resources Dept. EM, Genentech, Inc., 460 Pt. San Bruno Blvd., South San Francisco, CA 94080. An equal opportunity employer.



PhDs • PHARMACOLOGY • PHYSIOLOGY

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Count on making a contribution
with a strong future
in the scientific community

Hoechst-Roussel Pharmaceuticals, Inc., fast-growing subsidiary of American Hoechst Corporation, a \$1.6 billion division of one of the world's leading producers of chemicals and pharmaceuticals, has several newly created opportunities for published pharmacologists or physiologists in its Pharmaceutical Division. Primary responsibilities will entail developing contacts within medical institutions, universities, teaching hospitals and government research groups. In addition, you will prepare auxiliary technical sales materials and develop training programs for field sales personnel.

Ideal candidates will possess a BS in Pharmacy, a PhD in Physiology or Pharmacology, and 2-3 years teaching

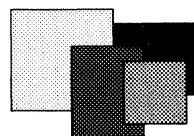
experience at the university level.

These highly visible positions will provide direct contact with prominent figures in the medical and pharmaceutical industry.

We offer a superb compensation package, including an excellent salary plus expense account, a company car and outstanding company benefits. Positions are available in Detroit, Denver, Kansas City, Los Angeles, Miami, Pittsburgh and San Francisco.

Send curriculum vitae with current earnings requirements to Mr. Gary Kowalski, Hoechst-Roussel Pharmaceuticals, Inc., Route 202-206 North, Somerville, New Jersey 08876. An affirmative action employer M/F/H.

Hoechst



More Than A
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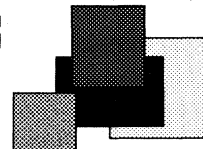
Research Scientist

A move to Collagen Corporation is more than a step forward in your career. It's a step into the future of biotechnology. With the successful research, production and marketing of Zyderm®I and Zyderm®II Collagen Implant, we are now leading the way to new applications in the areas of dermatology, plastic surgery, podiatry, dentistry, otolaryngology and orthopedics. If you're looking for a progressive, high-energy environment where creativity counts, join the innovators — at Collagen Corporation.

You will head our Biochemistry effort as part of a team developing processes for isolation, purification and recovery of aqueous proteins used in the enhancement of soft (skin) tissue and/or repair of hard (boney) tissue products. Requires a PhD in Biochemistry, or equivalent, with a minimum of 5-12 years' experience to include industrial experience in the development of manufacturing processes for isolation and purification of aqueous protein or enzyme products.

Collagen Corporation offers excellent growth potential and attractive salaries and benefits. To apply, please send your resume to D. Webster, Human Resources, Collagen Corporation, 2500 Faber Place, Palo Alto, CA 94303. We are an equal opportunity employer.

Collagen Corporation



POSITIONS OPEN

POSTDOCTORAL POSITION IN GENETIC EPIDEMIOLOGY. We are looking for an individual with a strong background in human population genetics, quantitative genetics, or epidemiology and interest in genetic mediation of disease susceptibility, to collaborate with investigators in our Population Genetics Laboratory (Drs. Jean W. MacCluer, Candace M. Kammerer and Bennett Dyke). Ongoing projects include linkage studies of single gene defects in man; an investigation of genetic factors contributing to susceptibility to atherosclerosis in pedigreed baboons; and evaluations of methods of genetic analysis using computer-simulated data. Experience with complex segregation analysis and linkage analysis desirable. Please send résumé and names of three references by 15 January 1986 to: Personnel Director, Southwest Foundation for Biomedical Research, P.O. Box 28147, San Antonio, Tex. 78284. *Equal Opportunity Employer, M/F.*

POSTDOCTORAL POSITION MOLECULAR BIOLOGY

A position is available immediately for a colleague familiar with recombinant DNA methods to participate in a comparative analysis of patterns of gene regulation in different species of *Drosophila*. We anticipate identification of interspecific regulatory differences that can serve as models for investigations into basic mechanisms of gene regulation. We also expect the comparative data to broaden our understanding of the evolutionary significance of regulatory genes.

Send curriculum vitae and list of references to:

W. J. Dickinson
Department of Biology
University of Utah
Salt Lake City, Utah 84112

POSTDOCTORAL POSITION IN MOLECULAR BIOLOGY available to investigate the role of chromatin structure in gene expression, including the use of expression vectors for study of chromatin-binding proteins and Z-DNA sequences. Send curriculum vitae and the names of three references to: Dr. J. D. Saffer, The Jackson Laboratory, Bar Harbor, Maine 04609. *The Jackson Laboratory is an Equal Opportunity/Affirmative Action Employer.*

POSITIONS OPEN

POSTDOCTORAL POSITION

Position available immediately to study the biochemistry of transport and receptor coupling in cardiomyocytes. Highly motivated candidates should have background in any one of the following areas: membrane transport, purification of membrane proteins, receptor characterization, or phospholipids. Position is renewable annually up to 3 years. Salary will be commensurate with experience. Submit curriculum vitae, summary of research experience, and letters of reference to: Dr. H. D. Kim, Department of Pharmacology, School of Medicine, M-517B Medical Sciences Building, University of Missouri-Columbia, Columbia, Mo. 65212. *An Equal Opportunity/Affirmative Action Employer.*

POSTDOCTORAL POSITION-HUMAN MOLECULAR GENETICS, available immediately to clone and characterize human DNA repair genes. **Potential to develop independent research program after 2 to 3 years.** Please submit curriculum vitae, selected reprints, and names of three references to: Steve S. Sommer, M.D., Ph.D., Department of Biochemistry and Molecular Biology, Mayo Clinic/Mayo Foundation School of Medicine, Rochester, Minn. 55905. Telephone: 507-284-6033. *An Equal Opportunity/Affirmative Action Institution.*

POSTDOCTORAL POSITION IN MOLECULAR GENETICS OF NEMATODE DEVELOPMENT

Support will be available beginning 1 April 1986 for molecular cloning and characterization of genes affecting (i) pheromone reception and the development of the *Caenorhabditis elegans* dauer larva, or (ii) RNA polymerase II structure and function. The laboratory group consists of geneticists and molecular biologists working independently in a cooperative environment. Previous experience in recombinant DNA technology is necessary. The position offers competitive salary, a well-equipped facility, and stimulating research environment. Send curriculum vitae and the names and telephone numbers of at least three references to: Dr. Donald L. Riddle, Division of Biological Sciences, Tucker Hall, University of Missouri, Columbia, Mo. 65211. *Equal Opportunity Employer.*

POSITIONS OPEN

POSTDOCTORAL POSITION: MOLECULAR GENETICS

Postdoctoral position available to study developmental expression of the components of the β -adrenergic receptor-adenylate cyclase system. The project will involve cloning and characterization of the genes involved in this system. Stipend is negotiable up to \$18,000, depending on experience. Applicants should have a strong background in molecular biology and biochemistry, with practical experience in molecular cloning. Send curriculum vitae, short statement of research experience, and three letters of recommendation to: Ifeanyi J. Arinze, Ph.D., Department of Biochemistry, Meharry Medical College, Nashville, Tenn. 37208.

POSTDOCTORAL OR RESEARCH AFFILIATE POSITION—available immediately on a federally funded grant administered through Health, Research, Inc., to study glycoprotein biosynthesis and secretion in yeast using recombinant DNA technology. Projects include structural studies on N-linked oligosaccharides, enzymology of oligosaccharide processing, and intracellular targeting and compartmentalization of biosynthetic intermediates. Appointment is for 1 year, renewable, with an annual salary of \$16,000 to \$24,000, depending on experience. Send résumé and names of three references to: Dr. R. B. Trimble, Wadsworth Center E524, New York State Department of Health, Empire State Plaza, Albany, N.Y. 12201. *An Affirmative Action/Equal Opportunity Employer.*

POSTDOCTORAL RECEPTOR RESEARCH. Position available immediately. Grant-supported research position, 1 year, renewable. Starting salary: \$20,304 per year. Labeling, characterization, and affinity-purification of receptors controlling metamorphosis of molluscan larvae. Send curriculum vitae, copies of relevant publications, statement of research interests, and arrange three letters of recommendation to be sent to: Professor Daniel E. Morse, Department of Biological Sciences, University of California, Santa Barbara, Calif. 93106; telephone 805-961-3157. Application Deadline: January 1986.

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

GRADUATE RESEARCH IN BIOLOGY

Texas A&M University (TAMU) offers challenging opportunities for Graduate Studies in Biological Sciences leading to the Ph.D. Of some 36,000 students at TAMU, over 5,000 are graduate students. The Biology Department awards degrees in Biology, Botany, Microbiology, and Zoology and participates in interdisciplinary programs in Genetics and Plant Physiology; several other programs in biochemical and biological sciences are administered by different departments. In addition to modern research laboratories, the Biology Complex houses an Electron Microscope Center and a DNA Sequencing Unit. There are 40 members of the biology faculty, and several active research programs involving state-of-the-art recombinant DNA technology exist.

Areas of study include:

- *Gene isolation, Characterization, Transfer and Expression
- *Developmental Biology
- *Molecular Evolution
- *Molecular Parasitology
- *Molecular Virology
- *Chromatin, histones and nucleolar proteins
- *Endocrinology of Aquatic Animals
- *Genetics and Cytogenetics
- *Microbiology
- *Morphology and Taxonomy

Highly qualified candidates (GPA of approximately 3.5 and combined verbal and quantitative GRE exceeding 1200) are encouraged to apply, as soon as possible and preferably by 15 January 1986, for Graduate Assistantships carrying an annual stipend of \$9000. Additionally, a number of Teaching Assistantships will be available.

The campus lies in the green Brazos Valley within the College Station-Bryan community, and is located some 100 miles from Houston and Austin. Excellent recreational facilities are available, including sailing on nearby Lake Somerville. The campus encompasses a golf course, polo field, and an airfield providing commercial airline service to Houston and Dallas. We enjoy a mild climate from September to June.

Forms for admission to Graduate School and a brochure describing the Graduate Programs in Biology may be obtained from:

Graduate Advisor
Department of Biology
Texas A&M University
College Station, Texas 77843-3258

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ROCHE

We are looking for a

Head of experimental dermatology

A dermatologist, cell biologist or biochemist with an interest and experience in experimental and/or clinical dermatology would find a challenging task in leading a group effort directed at the detection and development of novel drugs against acne, psoriasis as well as inflammatory and allergic skin diseases. Studies aiming at the elucidation of the mechanism of action of retinoids and the application of mechanistic principles to the detection of new drugs will be an important part of the group's activity. The head of the group should be prepared and capable of guiding these activities.

Expertise in skin pharmacokinetics, metabolism, galenical formulation as well as experience in a pharmaceutical company would also be desirable but is not considered mandatory.

Interested applicants are requested to send complete application documentation to our Personnel Department, quoting reference **Science Sk/156/85**.

F. Hoffmann-La Roche & Co. Limited, CH - 4002 Basle

ROCHE

AUBURN UNIVERSITY
DEAN, COLLEGE OF
SCIENCES AND MATHEMATICS

Nominations and applications are invited for the position of Dean of the College of Sciences and Mathematics at Auburn University, Alabama's major land-grant university. The College is being created this year by combining some existing departments, splitting some departments, and creating two new departments. The new College will consist of the Departments of Biochemistry, Botany and Microbiology, Chemistry, Geology, Mathematics, Physics, Statistics, Zoology and Wildlife. The College will have a faculty of approximately 175, with 630 undergraduate majors and 250 graduate students in 7 M.S. and 6 Ph.D. programs. The faculty are research-oriented and increasingly successful at obtaining extramural grants. The Dean will be expected to provide strong leadership toward the development and strengthening of the programs while creating a spirit of cohesiveness in the new College. The Dean is the chief academic and administrative officer of the College and reports directly to the Vice Presidents.

QUALIFICATIONS DESIRED:

- Proven record of excellence in research and teaching
- Successful academic administrative experience
- Earned doctorate in one of the fields in the College
- Experience in attracting extramural funding

The salary and starting date are negotiable. Applications or nominations should be submitted to:

Dr. Warren W. Brandt
Chairman, Search Committee
208 Sanford Hall
Auburn University, AL 36849-3501

Applications should include a letter of interest addressing special qualifications, resumé, and a list of 3 to 5 current references. The Committee will begin its review of applications February 3, 1986.

AUBURN UNIVERSITY IS AN AFFIRMATIVE ACTION, EQUAL OPPORTUNITY EMPLOYER



THE
WISTAR
INSTITUTE

Post-Doctoral
Training in
Molecular and
Cell Biology

Post-doctoral fellowships are available for training in various areas of cancer research including cell differentiation, chemical carcinogenesis, membrane biochemistry, genetics and immunology.

A strong background in molecular biology, virology, biochemical genetics and/or protein chemistry is required.

Applicants are requested to send curriculum vitae and the names of three references to:

Dr. Giovanni Rovera
Coordinator of Research Training
THE WISTAR INSTITUTE
OF ANATOMY AND BIOLOGY
36th & Spruce Streets
Philadelphia, PA 19104

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CHIEF OF THE
SPACE PHYSIOLOGY BRANCH

Major responsibility involves planning, coordinating and directing an experimental research program designed to investigate the effects of the space flight environment on human physiological functions. Studies are conducted to determine the mechanisms involved in the physiological adaptations to space flight conditions, particularly in the musculoskeletal system. Applicants must have an advanced degree in the life sciences or medicine with a minimum of 3 years of independent research experience in bone or muscle physiology or aerospace medicine. Experience in managing or leading a research program is desirable. (Salary: \$44,430-\$67,940).

PHYSIOLOGIST

Conducts research to identify the biochemical, endocrinological, mechanical and physiological mechanisms towards clarifying the factors that underlie muscle atrophy in microgravity, and develops the means to control and reverse the atrophy process. Applicants must have an advanced degree in the life sciences or medicine with a minimum of 3 years of independent research experience in muscle physiology. (Salary: \$37,599-\$57,759).

Competitive salary and fringe benefits are available for highly qualified individual. Please send resume to **NASA-Ames Research Center, Moffett Field, CA 94035, ATTN: Mail Stop 241-6 (Personnel Manager for Code S)**. Application deadline is **December 31, 1985**. U.S. Citizenship is required. NASA is an Equal Opportunity Employer.

DIRECTOR, CARCINOGEN ASSESSMENT GROUP
SENIOR EXECUTIVE SERVICE

The U.S. Environmental Protection Agency (EPA) is seeking a director, Carcinogen Assessment Group. The director plans and coordinates comprehensive technical programs related to the development of carcinogenic risk assessment guidelines; advises agency operating programs on the risks associated with chemicals that are suspected or known to cause cancer in human or animal tissues; directs the programs and staff of the group. Serves as an advocate for proper use of cancer data analysis and risk assessments information in agency decisions on standards, guidelines, and regulations.

Applicants must meet Federal Office of Personnel Management X-118 qualification requirements in either the general biological sciences, general health sciences, or general physical sciences and must possess substantial professional experience demonstrating the ability to perform in a senior executive position. Additionally, to be rated qualified for the position, applicants must have the following **MANDATORY FACTORS**: (i) technical experience in the field of carcinogenicity; (ii) management experience (planning, organization, direction, coordination, and control) of projects in the environmental health field involving the accomplishment of tasks through the efforts of in house staff and/or contracts; (iii) experience working in health-related environmental programs whose outputs have public policy implications; and (iv) demonstrated ability to communicate effectively, both orally and in writing, regarding complex issues and problems. The following **DESIRABLE FACTORS** will be used to rate successful applicants: (i) postgraduate degree in one of the following disciplines: life or health sciences, or physical sciences; (ii) experience or training in bioassay or epidemiological aspects of carcinogenicity—general research in carcinogenesis or epidemiology is equivalent; and (iii) demonstrated recognition in the environmental or health field as evidenced by membership in professional organizations, serving on environmental concern committees, and/or authorship of papers dealing with these concerns.

Location: Washington, D.C.

Salary range: \$61,296 to \$66,232, plus civil service benefits.

Telephone inquiries: Edna Morse—telephone: 202-382-3328.

Application submissions: please submit a completed SF-171, available at Federal Job Information Centers and federal agency personnel offices, postmarked by 3 January 1986 to: Edna Morse (PM-224), Environmental Protection Agency, 401 M Street, S.W., Washington, D.C. 20460. A summary describing specifically how your background and experience relate to all factors will be appreciated.

An Equal Opportunity Employer

Biozentrum, University of Basel,
Department of Cell Biology

PROFESSORSHIP in CELL BIOLOGY

Applications are invited from candidates working on molecular aspects of developmental biology, cell biology or genetics of eukaryotic organisms. The candidate's work should complement existing lines of research in the Department of Cell Biology and in the other Departments of the Biozentrum.

The candidate is expected to teach basic aspects of cell biology to undergraduate students and to participate in postgraduate education. The University provides a core of research support including research and technical positions.

Applications containing a curriculum vitae, a list of publications, reprints of a few selected key publications, a short overview of past, present and planned research activities and a statement on teaching experience should be submitted before **December 31, 1985** to the Dean of the Faculty of Science.

Address: Dekanat der Philosophisch-
Naturwissenschaftlichen
Fakultät der Universität Basel,
Klingelbergstrasse 70, CH - 4056 Basel,
Switzerland

POSITIONS OPEN

POSTDOCTORAL POSITION IN MOLECULAR NEUROBIOLOGY available for studies of neuronal acetylcholine receptors. Candidate should have experience in recombinant DNA technology. Salary depends on experience. Send curriculum vitae and three letters of recommendation to: Dr. Jon Lindstrom, The Salk Institute for Biological Studies, P.O. Box 85800, San Diego, California 92138.

POSTDOCTORAL POSITION PLANT MOLECULAR BIOLOGY

A funded position is available to study basic molecular processes in plants using gene transfer techniques. Previous experience with recombinant DNA methods is desirable. Send curriculum vitae and the names and telephone numbers of three references to: Dr. Arthur G. Hunt, Department of Agronomy, University of Kentucky, Lexington, Ky. 40546.

POSTDOCTORAL RESEARCH ASSOCIATE

Position now available in tumor biology to study mechanisms involved in cancer metastasis. Studies include biochemical characterization of cell surface markers linked to the metastatic phenotype, quantitation and isolation of metastatic variants by flow cytometry, and a detailed investigation of environmental conditions affecting the generation and emergence of highly metastatic tumor variants.

Applicants must hold a M.D., Ph.D., or D.V.M. degree and have experience in cell culture, hybridoma technology, flow cytometry, membrane biochemistry, and immunopathology. Salary negotiable and dependent upon experience.

Interested candidates please send curriculum vitae to:

Dr. A. Kimura
Department of Pathology, Box J-275
College of Medicine
University of Florida
Gainesville, Fla. 32610

Equal Opportunity Employment/Affirmative Action Employer

POSTDOCTORAL RESEARCH ASSOCIATE sought to begin early 1986 in research on the theory of optical properties and energetics of complex molecular systems using new multipole interaction approaches. Qualifications include experience with theoretical and computational methods in molecular problems and a record of productive research activity. Excellent facilities in a stimulating academic and cultural environment. Attractive salary commensurate with experience. Send résumé to: Professor Jon B. Applequist, Department of Biochemistry and Biophysics, Iowa State University, Ames, Iowa 50011.

PROTEIN CHEMISTRY: Two postdoctoral/research associate positions available in the laboratory of Professor Timasheff, Brandeis University, to carry out research in protein chemistry. The areas of research are: (i) Pathways of tubulin self-assembly and ligand (nucleotides, ionic species) control of the end products formed (microtubules, rings, sheets); (ii) Mechanisms of interaction of anticancer drugs with tubulin and consequent inhibition of microtubule formation; linkages between drug binding and tubulin polymerization and effects of structural modifications and structural simplifications of the drug molecules on interactions with tubulin; (iii) Solution mapping of the surface of the tubulin molecule by distance measurements between the various ligand-binding sites (GTP, cations, drugs, and drug moieties) using energy transfer fluorescence and resonance techniques and changes in topography induced by the binding of various ligands; (iv) Mechanisms of protein and protein assembly structural stabilization by solvent additives and of solvent modulation of biological activity. Send applications to: Dr. Serge N. Timasheff, Graduate Department of Biochemistry, Brandeis University, Waltham, Mass. 02254. *Equal Opportunity/Affirmative Action Employer.*

RESEARCH ASSOCIATE I, ANIMAL SCIENCE. University of Nevada, Reno, Department of Animal Science. Research associate I to develop fluorescent staining systems for bovine sperm. Qualifications include a Ph.D. in the biological sciences and strong biochemical background. Experience evaluating male gametes is essential. U.S. Department of Agriculture grant support. Nontenured-track, contingent upon availability of funding. Send application letter, curriculum vitae, and three reference letters to:

Dr. Duane L. Garner, Head
Department of Animal Science
University of Nevada-Reno
Reno, Nevada 89557; 702-784-6644
Application deadline: 31 January 1986
Affirmative Action/Equal Opportunity Employer

POSITIONS OPEN

POSTDOCTORAL/RESEARCH ASSOCIATE POSITIONS available immediately in an expanding Program of Biochemistry and Molecular Biology.

Dr. Michael Blackburn: Structure and function of inhibitors of blood coagulation using physical, chemical, and immunochemical approaches.

Dr. Richard Courtney: Herpes simplex virus glycoproteins; synthesis, processing, and membrane targeting. Background in molecular virology and/or membrane biochemistry is desirable.

Dr. John Smith: Molecular biology of purine metabolism in *Escherichia coli* and other organisms. Those interested in receiving training in molecular biology are encouraged to apply.

Competitive salaries commensurate with experience. All résumés will be reviewed by Dr. Michael Blackburn, Dr. Richard Courtney, Dr. John Smith. To insure proper handling and routing, send your inquiries, including your curriculum vitae and names and addresses of references to: Ms. Martha Lennard, Louisiana State University Medical Center, Department of Human Resource Management, P.O. Box 33932, Shreveport, La. 71130. Inquiries concerning graduate student research fellowships are also invited.

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RCA PROFESSORSHIP IN ARTIFICIAL INTELLIGENCE UNIVERSITY OF PENNSYLVANIA

A chaired professorship in artificial intelligence, supported by RCA Corporation, has been established in the Department of Computer and Information Science. The person appointed to this chair will be a distinguished scholar who has performed outstanding research in artificial intelligence of both theoretical and practical significance, especially in the areas of knowledge representation and reasoning with potential applications to the new generation of expert systems technology. The incumbent should be able to exercise scholarly leadership in this major interdisciplinary activity. It is hoped that the appointee will be able to assume tenure by 1 July 1986. Applications and nominations should be directed to: Professor A. K. Joshi, Chair, RCA Professorship Search Committee, Department of Computer and Information Science, University of Pennsylvania, Philadelphia, Pa. 19104-6389.

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

RESEARCH ASSOCIATE

Two positions available immediately related to studies on insulin growth factor/regulation of protein phosphorylation. Experience in protein purification; experience in recombinant DNA technology, including expression of cloned genes in mammalian cell culture. Protein microsequencing, oligonucleotide, and peptide synthesis are available via an adjacent core facility. Salary commensurate with experience. Send curriculum vitae and three letters of support to: J. Avruch, Howard Hughes Medical Institute Laboratory, Diabetes Unit, Massachusetts General Hospital, Boston, Mass. 02114; or telephone: 617-726-6909.

The Department of Pathology at The University of Michigan Medical School seeks applicants with clinical training in pathology and special expertise in molecular genetics/biology to fill three available **RESEARCH POSITIONS**. These individuals will be expected to be competitive in the raising of research grant or contract support, have duties chiefly related to research and teaching, and will work collaboratively with the Howard Hughes Medical Research Institute.

Qualified candidates should contact: Peter A. Ward, M.D., Professor and Chairman, Department of Pathology—M045, M5240 Medical Science I, The University of Michigan Medical School, 1315 Catherine Road, Ann Arbor, Michigan 48109-0010.

TECHNICAL DIRECTOR INTERNATIONAL DIAGNOSTICS

Seattle-based nonprofit organization developing new diagnostic technologies which address major developing world health problems seeks technical director. Requires: Ph.D., significant recent experience in molecular/biochemical research, 2 years-plus product development experience with immuno and/or hybridization assays, demonstrated research management, technical writing, and interpersonal skills. Immediate opening. Telephone: Dr. Michael Free, 206-285-3500, or send curriculum vitae to: Program for Appropriate Technology in Health, 130 Nickerson Street, Seattle, Wash. 98109. *Equal Opportunity Employer.*

POSITIONS OPEN

RESEARCH ASSISTANT PROFESSOR Duke University Medical Center

Position available immediately for Ph.D. in biochemistry or physiology to study the regulation of the synthesis and release of placental lactogen and prolactin and to purify several placental proteins. Should have knowledge of general protein chemistry and tissue culture techniques. Salary commensurate with experience. Please send résumé and three references to: Stuart Handwerker, M.D., Department of Pediatrics, Box 3080, DUKE UNIVERSITY MEDICAL CENTER, Durham, N.C. 27710. *Duke University is an Equal Opportunity/Affirmative Action Employer.*

RESEARCH ASSOCIATE OR POSTDOCTORAL ASSOCIATE

A funded position is available immediately to determine DNA sequence changes induced by mutagenesis of mammalian cells. Applicants with experience with culturing mammalian cells preferred. Send curriculum vitae and names of three references, with telephone numbers, to: F. Hutchinson, Department of Molecular Biophysics and Biochemistry, Yale University, Box 6666, New Haven, Conn. 06511.

TWO RESEARCH ASSOCIATE POSITIONS: The Microbiology Department of The New Jersey Medical School is accepting applications for two research associate positions in the general area of molecular virology (molecular genetics of polyomaviruses and human genetics). Candidates should have a doctoral degree (or completed thesis requirements) in molecular biology/biochemistry. In addition, knowledge and experience in molecular genetics, recombinant DNA technology, protein biochemistry, and transfer and expression of genes in mammalian cells is preferred. Attractive salaries commensurate with capabilities and experience.

The Department of Microbiology has ten vigorous, well-funded, young groups with research interests in the area of molecular genetics and offers an outstanding academic environment. Our location (8 miles from downtown Manhattan) permits easy access by public transportation or by car to New York City and a variety of attractive suburbs within a 3- to 10-mile range.

Please send curriculum vitae and names and telephone numbers of three references to:

Dr. Giampiere Di Mayorca
Professor and Chairperson
Department of Microbiology, MSB F-607
University of Medicine and
Dentistry of New Jersey
New Jersey Medical School
100 Bergen Street
Newark, N.J. 07103

RESEARCH ASSOCIATE position available immediately to study molecular genetics and evolution of plants and algae. Requires M.S. or equivalent. Ph.D. and experience in recombinant DNA techniques desired. Send curriculum vitae and three references to: Dr. C. William Birky, Jr., Department of Genetics, The Ohio State University (OSU), Columbus, Ohio 43210. *OSU is an Equal Opportunity/Affirmative Action Employer.*

A RESEARCH POSITION in the area of neurobiology/gut regulatory peptides is available beginning early 1986 for Ph.D. with at least 2 years of prior postdoctoral experience to examine interrelationship of components of enteric nervous system with gastrointestinal endocrine cell function. Specific areas of interest relate to cholinergic, adrenergic, and GABAergic control of gut regulatory peptide release. Experience in cell and nerve culture, radioimmunoassay, and immunocytochemistry desirable. Salary and status negotiable. Submit curriculum vitae and three references to: Richard F. Harty, M.D., Department of Internal Medicine, University of Nebraska Medical Center, 42nd Street and Dewey Avenue, Omaha, Nebraska 68105. *The University of Nebraska is an Affirmative Action/Equal Opportunity Employer.*

SENIOR RESEARCH ASSISTANT to conduct research in the area of molecular genetics of one-carbon metabolism. Duties include DNA sequencing, S1 mapping, Southern blotting, site-specific mutagenesis, protein purification, and so forth. Qualified candidates will have an M.S. degree or equivalent, and several years of experience in productive research in molecular biology. Send curriculum vitae and names of three references by 31 December 1985 to: G. Stauffer, Department of Microbiology, University of Iowa, Iowa City, Iowa 52242. *An Equal Opportunity/Affirmative Action Employer.*

*A new book from AAAS
on the benefits and hazards of
the new biotechnology:*

Biotechnology and the Environment

Risk and Regulation

Edited by Albert H. Teich,
Morris A. Levin, and Jill H. Pace

The new biotechnology, based on research using recombinant DNA, cell fusion, and similar techniques, has progressed from the laboratory stage to practical application in fields such as medicine, agriculture, chemicals, and environmental protection. But as the commercialization of biotechnology proceeds, so too do questions of potential hazards and government regulation.

This book presents the results of a seminar series on environmental aspects of biotechnology conducted by AAAS for the U.S. Environmental Protection Agency. Of interest to all government policymakers, members of the biotechnology industry, researchers, lawyers, scholars, and students, this volume includes the edited and updated seminar papers, each with the questions and answers that followed the original presentation.

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MOLECULAR BIOLOGIST - Ph.D.

This position in our Diagnostics Division will study novel mechanisms of mutagenesis and DNA repair in *E. Coli*. Ph.D. degree and experience in recombinant DNA techniques necessary. Background in the areas of recombination, DNA repair, and bacterial genetics, as well as postdoctoral experience, preferred. **Reply to Dept. SHW.**

MOLECULAR BIOLOGIST - MS/BS

Successful candidates for this position in our Pharmaceutical Division will participate in experiments aimed at the Cloning, Expression, and Directed Mutagenesis of genes for proteins central to Inflammatory, Allergic, and Cardiovascular Diseases. An MS/BS degree in a Biological Science with 1-4 years of laboratory experience in Molecular Biology is required. **Reply to Dept. CEG.**

CELL CULTURE - MS/BS

This position in our Diagnostics Division requires an MS/BS degree with 2-5 years experience in cell culture, with emphasis on gene transfer techniques. Familiarity with nucleic acid hybridization and immune detection of protein helpful, but not required. **Reply to Dept. SHW.**

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RESEARCH NEUROSCIENTIST

A position is available for a Ph.D. with 1 to 4 years of postdoctoral experience in an area relevant to cerebrovascular disease with expertise in autoradiography. The person selected will hold a joint academic appointment in a Basic Science Department and Clinical Neurological Sciences and is expected to obtain independent research funding. Submit curriculum vitae and three letters of reference to: **Dr. V. C. Hachinski, Chairman, Division of Cerebrovascular Research, University of Western Ontario, London, Ontario, Canada N6A 5A5.**

ASSISTANTSHIPS

RESEARCH ASSISTANTSHIP available beginning 1 July 1986, in ongoing project studying effects of ethyl alcohol on animal behavior. Applicant must be interested in pursuing a Ph.D. in motor control and/or biopsychology, focusing on effects of chronic alcohol on fast movement reactions to sensory stimuli in rats. Contact: **Dr. Waneen Spirduso, Belmont 222; telephone: 512-471-4168 or Dr. Timothy Schaller; telephone: 512-471-5175, The University of Texas, Austin, Tex. 78712.**

GRADUATE STUDY

GRADUATE TRAINING PROGRAM IN NEUROSCIENCE—The Neuroscience Program at The Milton S. Hershey Medical Center of The Pennsylvania State University has assistantships available in September 1986. This interdepartmental program is designed to confer a Ph.D. degree with a major in neuroscience after 4 years of study. A master's degree program is also available. Participating faculty have established research programs in molecular biology of the nervous system, electrophysiology, neuroendocrinology, neuropsychology, neuropharmacology, and cerebral metabolism. Interested candidates are invited to apply to: **Dr. Robert Page, Chairman, Neuroscience Program, The Milton S. Hershey Medical Center, The Pennsylvania State University, P.O. Box 850, Hershey, Pa. 17033. An Equal Opportunity/Affirmative Action Employer.**

GRADUATE TRAINING IN BIOLOGICAL SCIENCES (Ph.D./M.S.) in areas including microbial, animal and plant molecular biology, ultrastructural and cellular biology, neurobiology, and ecology. The 25 faculty are young and active, and interactions exist with many of the scientific establishments in the Baltimore-Washington-Frederick area. The plan of study is individualized for each student. Predoctoral teaching and research assistantships are available for qualified applicants. Write to: **Chairman, Graduate Program, Department of Biological Sciences, University of Maryland, Baltimore County (UMBC), Catonsville, Maryland 21228. UMBC is an Affirmative Action/Equal Opportunity Employer.**

TRAINING GRANT

MOLECULAR PARASITOLOGY TRAINING PROGRAM

Meharry Medical College has recently been awarded a Molecular Parasitology Training Grant. In collaboration with Vanderbilt University, graduate and postgraduate students will be trained in molecular, biochemical, and immunological aspects of African trypanosomiasis, Chagas' disease, schistosomiasis, malaria, and leprosy. The initial faculty of this training program includes: (i) Dr. George C. Hill—African Trypanosomiasis; (ii) Dr. Frank Hatcher—Chagas' Disease; (iii) Dr. P. J. Patel—Leprosy; (iv) Dr. Clint Carter—Schistosomiasis; (v) Dr. Daniel Colley—Schistosomiasis.

Candidates with strong interests in these aspects of parasitic diseases should apply immediately. Stipends for graduate students will be \$6,552 the first year, plus payment of tuition and fees. The positions are open to U.S. citizens or permanent residents. Stipend for postgraduate students with no previous experience will be \$15996. Deadline for applications is 1 February 1986. Please send a letter stating research interests, curriculum vitae, and three letters of recommendation to:

**Dr. George C. Hill
Program Director
Molecular Parasitology Training Program
Meharry Medical College
Division of Biomedical Sciences
Nashville, Tenn. 37208
Telephone: 615-327-6193**

PROGRAM

M.S. DEGREE IN APPLIED MOLECULAR BIOLOGY

The University of Maryland, Baltimore County, offers a 2-year, highly laboratory-intensive program leading to a master's degree in applied molecular biology. The program, in which ten biotechnology companies participate, is designed primarily to supply highly qualified research personnel for industry. Formal laboratory courses, exclusive to this program, are in recombinant DNA methods, microbial genetics, and hybridoma production. Research internships, both at a company and on-campus, are arranged. For information write:

**Dr. Richard E. Wolf, Jr.
AMB Program Director
Biological Sciences Department
University of Maryland, Baltimore County
Catonsville, Md. 21228**

FELLOWSHIPS

POSTDOCTORAL POPULATION RESEARCH

Fellowships are offered by the Carolina Population Center (CPC) for 1986 to 1987. Completed applications require sponsorship by a CPC faculty fellow, and must be received by 3 February 1986. Request application materials from: **J. Richard Udry, Director, Carolina Population Center, University of North Carolina (UNC), University Square 300A, Chapel Hill, N.C. 27514. We encourage applications from minorities. UNC is an Equal Opportunity/Affirmative Action Employer.**

NASA PLANETARY BIOLOGY SUMMER INTERNSHIPS. The Marine Biological Laboratory, Woods Hole, Massachusetts, invites applications from graduate students and seniors accepted in graduate programs for \$1,800 awards to participate in research at NASA centers and collaborating institutions during the summer. Application deadline: 1 April 1986. For information and applications, contact: **Michael Enzien, Planetary Biology Intern Program, Department of Biology, Boston University, 2 Cunningham Street, Boston, Mass. 02215. An Equal Opportunity/Affirmative Action Institution.**

BIOLOGY PREDOCTORAL FELLOWSHIPS AT GEORGETOWN UNIVERSITY (1985 TO 1986)

The Georgetown University, Department of Biology, affords a graduate student an excellent opportunity to obtain a broad education in biology with an appropriate specialization. Graduate students are given considerable individual attention. Areas of active research are animal fertilization, behavior, biochemistry, cell physiology, developmental biology, ecology, entomology, enzymology, evolution, immunology, invertebrate physiology, membrane biology, microbiology, molecular genetics, neurochemistry, neurophysiology, psychology, protozoology, toxicology, and ultrastructure.

A student may earn either an M.S., Ph.D., or both, with a specialization in any of the above biological areas. Predoctoral fellowships are available to qualified students. Awards are made on a competitive basis, and applications should be submitted directly to: **Professor Barrows** no later than 1 February 1986 to be considered for September 1986. G.R.E. scores are required of all applicants. T.O.E.F.L. scores are required of applicants whose first language is not English. For further information, please contact: **Dr. E. M. Barrows, Department of Biology, Georgetown University, Washington, D.C. 20057.**

PREDOCTORAL FELLOWSHIPS IN BIOMEDICAL AND PHYSICAL SCIENCES

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FELLOWSHIPS

DOCTOR OF ARTS IN BIOLOGY: FELLOWSHIPS are available for qualified persons interested in the D.A. degree in biological sciences. The program stresses preparation for undergraduate teaching at colleges and universities. Applicants should hold a master's degree in some area of biological science. Deadline for receipt of application is 1 March 1986. For more information, contact: **Chairman, D. A. Committee, Department of Biological Sciences, Idaho State University, Pocatello, Idaho 83209. An Equal Opportunity Employer.**

PREDOCTORAL EXCELLENCE FELLOWSHIPS in Biomedical Engineering, Ceramic Science and Engineering, Chemical and Biochemical Engineering, Chemistry, Ecology, Food Science, Mathematics, Mechanical and Aerospace Engineering, Mechanics and Materials Science, Nutrition, Physics, Psychology, Statistics.

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CONFERENCE

CONFERENCE: EMBRYONIC ORIGIN AND CONTROL OF NEOPLASIA

DATE: 15 to 19 October 1986.

LOCATION: Dubrovnik, Yugoslavia.

REGISTRATION, ROOM, AND BOARD: (5 days): \$300.00

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INFORMATION FROM ORGANIZERS: **Dr. Ivan Damjanov, Hahnemann University, Philadelphia, Pennsylvania 19102-1192. Telephone: 215-448-3745.**

**Dr. Davor Solter, Wistar Institute
Philadelphia, Pennsylvania 19104
Telephone: 215-898-3790**

The Eighth Chemical Industry Institute of Toxicology (CIIT) Conference on Toxicology, "APPROACHES TO ELUCIDATE MECHANISMS IN TERATOGENESIS," 2 and 3 April 1986 in Raleigh, North Carolina. **TOPICS:** Studies on pharmacokinetics of chemicals in animals that help explain species differences in embryotoxic response; in-depth examination of a small number of compounds to understand their mechanism of action; application of whole embryos, limb buds, and cells in culture to probe mechanisms of teratogenicity; identification of promising future research directions to accomplish the objective of making predictions for embryotoxic risk assessment in man. **SPEAKERS:** R. Brent, N. Brown, O. Flint, W. Horton, M. Juchau, D. Neubert, R. Pratt, T. Sadler, W. Scott, Jr., R. Sleet, M. Snow, and F. Weisch. **Registration fee:** U.S. \$275. Deadline is 18 February 1986. For further information, please contact: **Chemical Industry Institute of Toxicology, P.O. Box 12137, Research Triangle Park, N.C. 27709. Telephone: 919-541-2070, extension 219 or 221.**

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