points of view, both competing and complementary, are also presented.

The authors were charged to "speculate freely as a means of generating innovative concepts and new hypotheses." Most of the contributors have plainly taken up the challenge, pointing out gaps in the literature and possibilities for the future. If recent rumors and abstracts are any guide, important new developments in LTP can soon be expected on the biochemical and molecular biological fronts. Years ago it could be said that there were only two answers to any electrophysiological question: voltage clamp and quantal analysis. Neither will provide a satisfying solution to the puzzle of LTP, and a more extensive discussion along the newer lines of investigation might have been interesting.

The book, which includes a commendable number of references to recent work, will do much to put future work in context. Those wishing to get a detailed look at what has been going on in LTP research, as well as laboratory workers interested in taking part, will want to have copies.

B. E. Alger Department of Physiology, University of Maryland School of Medicine, Baltimore, MD 21201

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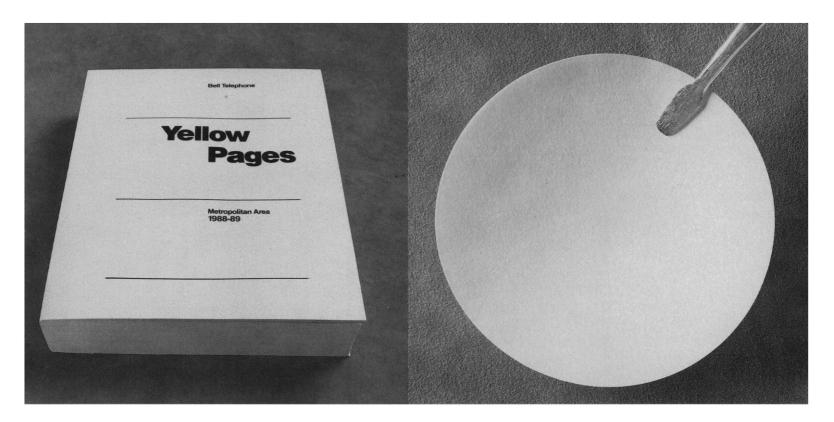
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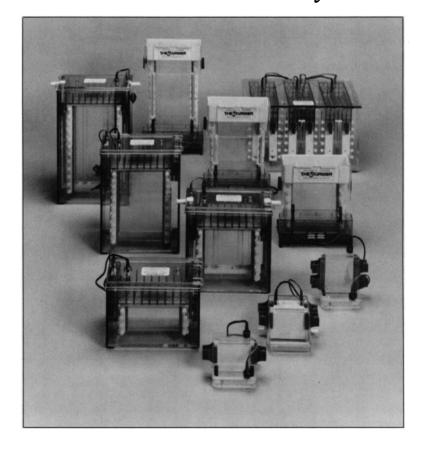


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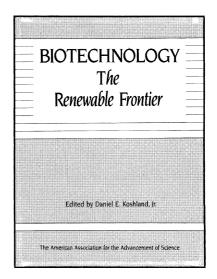
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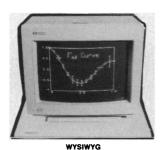
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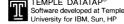
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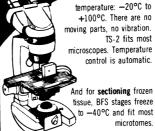
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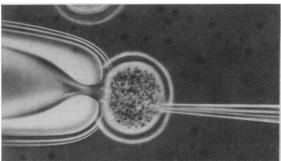
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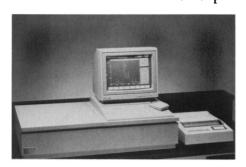
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Products & Materials

UV-VIS Spectrophotometer

The 8700 Series is a line of mouse-driven ultraviolet-visible light spectrophotometers. All models have a wavelength range of 190 to 900 nm and an absorbance range of -0.3 to 3.0~A. A nonvolatile memory holds 24 kilobytes of information. Data manipulation routines are built into the series 8700 spec-



trophotometers, allowing data to be smoothed, tracked, expanded, compared, and rescaled. The resolution of spectral data is not restricted by the screen display: all results are plotted from the original data, not from a screen dump. Other features include a master holographic monochromator, silica-coated optics, and a speed of 2000 nm/min. Depending on the model, bandwidth is either fixed at 2 nm or variable from 0.2 to 2 nm, and either a color or monochrome monitor is included. Nicolet Instrument. Circle 553.

Video Analysis Software

JAVA software measures and quantitatively analyzes video images. Images for analysis may be entered from RS170 or National Television Standard Code composite video sources. Some predigitized computer images, such as computerized axial tomography, magnetic resonance imaging, and ultrasound, may also be entered. Measurement capabilities include densitometry, morphometric analysis, automatic line and edge digitizing, and automatic object counting. JAVA can process the image by contrast enhancement, histogram equalization, image filters, and low-pass, high-pass, Laplace,

Newly offered instrumentation, apparatus, and laboratory materials of interest to researchers in all disciplines in academic, industrial, and government organizations are featured in this space. Emphasis is given to purpose, chief characteristics, and availability of products and materials. Endorsement by *Science* or AAAS is not implied. Additional information may be obtained from the manufacturers or suppliers named by circling the appropriate number on the Readers' Service Card and placing it in a mailbox. Postage is free.

Sobel, and user-defined convolutions. The software contains an internal 64,000 row by 16,000 column worksheet with editing functions. Or data may be transferred to other programs. JAVA requires an IBM XT, AT, or compatible computer; 640 kilobytes of memory; a hard disk; a mouse; a video display monitor; and a video digitizing board ("frame grabber"). \$795. Jandel Scientific. Circle 539.

Benchtop pH Meter

The pHI 50 is a pH meter that measures pH to a thousandth of a unit. The meter has one-button standardization that automatically senses which buffers are being used, computes the temperature-adjusted buffer value, and then adjusts the meter reading for accurate measurement. When a reading is stable, the meter automatically locks onto the value and emits a signal. Other automatic features include selectable pH resolution and one- or two-point standardization. Ionselective electrodes can also report directly in units of concentration. The pHI 50 has resolutions of 0.1 mV and 0.1°C. \$995. Beckman Instruments, Scientific Instruments Division. Circle 536.

Intracellular Calcium Analyzer

The CAF-100 measures intracellular calcium (Ca²⁺) concentration in living cells. Cells may be in suspension or in tissue. Platelet aggregation can be measured at the same time. Temperature may be manually controlled between 10° and 45°C or automatically set at 37°C. A magnetic stirrer is included for keeping cells in suspension. Measurements can be made with a calciumbinding dye such as Aequorin. Jasco. Circle 562.

Mechanically Stressed Cell Culture

The Flexercell is a computerized vacuum-operated instrument that applies cyclic tension or compression to growing cells in vitro. It tries to mimic the in vivo conditions of heart, tendon, bone, and other cells that are normally under mechanical stress. The vacuum deforms rigid plastic-bottomed culture dishes with a 0.13% compression to cells on the inner surface, and it deforms flexible elastic-bottomed culture dishes to give 200% tension to cells. The elastic-bottomed plates have been treated with either genetic type I collagen or a tissue

culture. Cells may be examined on the culture dish with a bright-field microscope, or they may be removed and put on a slide. Flexcell. Circle 542.

Scanning Electron Microscope

The Wet-SEM is a scanning electron microscope that can operate in either a high- or a low-vacuum environment, allowing it to analyze specimens that are dry, moist, or liquid. Samples do not need to be coated,



fixed, dehydrated, or subjected to critical-point drying. Because the Wet-SEM can operate with high electron beam energies, an optional energy-dispersive x-ray detector enables it to provide elemental analysis. Magnifications from $\times 10$ to $\times 150,000$ are possible. Samples can be as large as 15 cm in diameter. \$72,500. International Scientific Instruments, Circle 538.

Literature

Test Measurement and Data Acquisition is a catalog of fast-Fourier-transform spectrum analyzers, digital scopes, logic analyzers, data acquisition cards, stepper motor control cards, data analysis software, and other personal computer—based instruments. Rapid Systems. Circle 443.

Personnel and Product Protection: A Guide to Laboratory Equipment explains how to select equipment for working safely in a laboratory. Labconco. Circle 546.

CALS Lab Manager is a brochure that describes a laboratory information management system that schedules tests, tracks sample status, collects and analyzes data, and reports test results for analytical laboratories. Beckman Instruments, Computer Inquiry Systems. Circle 550.

The Betascope 603 Blot Analyzer is a brochure about an instrument that images ³²P-labeled blots and displays an autoradiogramlike picture on a display or printout in 30 min. Betagen. Circle 551.

244 SCIENCE, VOL. 241

Personnel Placement

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

LINE CLASSIFIED ADVERTISING DEADLINES:

Thursday, 10 a.m., 2 weeks prior to issue date (mailed on issue date). For deadlines for display advertising, please contact Scherago Associates.

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

LINE CLASSIFIED (POSITIONS OPEN, COURSES, FELLOWSHIPS, MARKETPLACE, and so forth): \$38.00 per line; \$380 minimum, per week (minimum charge covers one inch on a single column; one inch equals 10 lines of 52 characters and spaces per line). No charge for use of box number. No agency commission for ads less than 4 inches. No cash discount. Prepayment required for all foreign ads. Purchase orders and/or cover letter including billing address required for all other advertising.

To ESTIMATE ad cost:

O ESTIMATE ad cost:
Structure ad copy on a separate page, on lines of 52 characters and spaces. Include any desired heading. Each line of heading, and/or extra line spaces, and all partial lines (including centered reply information) are counted as full lines. Ad titles located within the text are printed in boldface caps and are only 32 characters per line. In ESTIMATING the cost, multiply total lines × \$38.00 = approximate cost of ad, (This is an approximate cost ONLY: Allow for variation between setimated lines and the result. estimated lines and actual typeset lines and the resulting final cost. Purchase orders must allow for some degree of flexibility and/or adjustment.)

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Send copy for all **Positions Wanted** ads and **Line Classified** ads less than 1/6 page in size (39 lines) to:

SCIENCE Classified Advertising 1333 H Street, NW, Room 940 Washington, DC 20005 Telephone: 202-326-6555

Send copy for **Fractional Display** ads, 1/6 page and larger, and all **Marketplace** ads to:

Scherago Associates, Inc. 1515 Broadway New York, NY 10036 Telephone: 212-730-1050

Blind ad replies should be addressed as follows:

Box (give number) SCIENCE 1333 H Street, NW Washington, DC 20005

POSITIONS WANTED

Biophysicist. Interested in structural and molecular as-Experience in circular and molecular aspects of protein-protein and protein-DNA interactions. Experience in circular dichroism, laser light scattering, analytical ultracentrifuge, FPLC-HPLC and conventional chromatography (protein chemistry) and plasmid manipulation, with teaching interests in biophysics. Seeking position as an assistant or associate professor. Box 97, SCIENCE.

Neurobiologist, Ph.D. Principal investigator with 10 years of academic experience. Proven grant and publication record. Broad research experience in neurochemistry, neurotoxicology, neurohistochemistry. Seeking industrial research opportunity. Box 113, SCIENCE.

Simultaneous Interpreter and Translator from Japanese publications, patents, and technical report. P.O.B. 211063, Columbus, OH 43221.

POSITIONS WANTED

Pathogenic Microbiologist, Ph.D. Research in bacterial adherence, mucosal immunity, immunodiagnostics. Postdoctoral training and administrative experience. Seeks commercial research and development position in mid-Atlantic, Northeast, Box 98, SCIENCE.

Ph.D. Microbiologist, Postdoctoral Training. Molecular biology, biochemistry, immunology, plant sciences and field work experience. Publications. Enjoys teamwork. Seeks challenging industrial/university position. Box 114, SCIENCE.

Ph.D. (Physiology) 1988. Seeks immediate postdoctoral position to study carbohydrate metabolism in cultured preadipocyte 3T3 cell lines or hypothalamic-obese anipreadipocyte 313 cell lines of hypothalamic-obese animals. Experienced in cell and tissue culture techniques, SDS gel electrophoresis and Western blots. Knowledgeable in PC-based productivity programs. Area of interest flexible. Box 110, SCIENCE.

POSITIONS OPEN

ASSISTANT ENTOMOLOGIST. Develop and conduct research on termites and other structural insect pests. Requires Ph.D. in entomology and training in insect pest management. Starting salary \$35,564. Send a letter describing qualifications and interest in position, curriculum vitae, transcripts, reprints of publications, and a list of three references to: Dr. Louis A. Magnarelli, Chief, Department of Entomology, The Connecticut Agricultural Experiment Station (CAES), P.O. Box 1106, New Haven, CT 06504. Application deadline is 31 August 1988. CAES is an Affirmative Action/ Equal Opportunity Employer.

DEPARTMENT OF PHYSIOLOGY AND BIOPHYSICS ANNOUNCEMENT OF OPEN POSITION

The Department of Physiology and Biophysics at the University of Oklahoma Health Sciences Center at Oklahoma City invites applications for a tenure-track position at the ASSISTANT PROFESSOR level. Applicants should have training in neurochemistry or neuropharmacology with experience using molecular biology techniques. The successful candidate will establish an independent research program, assist in the teaching programs of the department, participate in departmental and college governance, and must have a Ph.D. or M.D. degree and at least 2 years of postdoctoral training. The salary is competitive, and the tentative starting date is 1 January 1989. Applicants should send curriculum vitae, including a brief description of current research efforts, and a list of three references no later than 1 September 1988, to: Robert W. Blair, Ph.D., Chairman, Search Committee, Department of Physiology and Biophysics, University of Oklahoma Health Sciences Center, Oklahoma City, OK 73190. The University of Oklahoma is an Equal Opportunity/Affirmative Action Employer.

ASSISTANT PROFESSOR

Department of Molecular and Cell Biology, University of Connecticut. A tenure-track position is available for a biochemist/biophysical chemist studying the structure and function of biological macromolecules. Research areas of particular interest to the Department include, but are not limited to, protein-nucleic acid interactions, structure and assembly of macromolecules, and cytoskeleton-membrane interactions. In addition to establishing an independent research program, the candidate would an independent research program, the candidate would be expected to participate in teaching undergraduate biochemistry and also in the departmental graduate training program. The Department consists of 40 faculty members and 91 graduate students in the following programs: Biochemistry, biophysical chemistry, microbiology, molecular and developmental genetics, and plant cell and molecular biology. Interviews of candidates will begin on 1 September 1988. A letter of application containing a statement of research goals, curriculum containing a statement of research goals, curriculum vitae, and the names and addresses of three references vitae, and the names and addresses of three references should be sent to: Professor Alvah H. Phillips, Search Committee, The Department of Molecular and Cell Biology, The University of Connecticut, 75 North Eagleville Road, U-125, Storrs, CT 06268. The University of Connecticut is an Equal Opportunity/Affirmative Action Employer, and encourages applications from qualified minority across and converge (Carola #9.4351) minority groups and women. (Search #8A351)

POSITIONS OPEN

ASSISTANT PROFESSOR

The Department of Chemistry and Biochemistry of the University of California at Los Angeles is considering making a regular faculty appointment in organic chemistry. The position will be at the assistant professor level. The Department is particularly interested in applicants specializing in bio-organic chemistry, at the interface to molecular biology, or in organic material sciences. Outstanding applicants with interest in other areas of organic chemistry will also be considered. Candidates must give evidence of potential distinction in scholarship and teaching and must show exceptional promise of a creative and active career as a research scientist. The University of California is an Equal Opportunity/Affirmative Action Employer and encourages applications from women and minority candidates. A complete application should include curriculum vitae, a description of proposed research not exceeding four pages, and letters of recommendation from at least three professional references. Applications should be completed by 15 October 1988 and directed to: Chairman, Organic Search Committee, Department of Chemistry and Biochemistry, University of Cali-fornia, Los Angeles, CA 90024–1569.

ASSISTANT PROFESSOR BIOCHEMISTRY AND MOLECULAR BIOLOGY. The Animal Science and Dairy Science Departments, University of Florida, invite applicants for two tenure-accruing 12month appointments at the assistant professor level to conduct research in the general areas of mammalian growth, lactation or reproduction using techniques of growth, factation of reproduction using techniques of molecular biology and to implement a graduate course in methods of recombinant DNA technology. Opportuni-ties are available for a joint appointment in the Depart-ment of Biochemistry and Molecular Biology and inter-action with an interdisciplinary group in Reproductive Biology. A Ph.D. in biochemistry, molecular biology, or related area and postdoctoral training in molecular biology are required. The last date for receipt of application is 15 August 1988. Send a letter of application, curriculum reference to: Dr. Fuller W. Bazer, Animal Science Department or Dr. W. W. Thatcher, Dairy Science Department, University of Florida, Gainesville, FL 32611–0691. The University of Florida is an Equal Employment Opportunity/Affirmative Action Employer.

ASSISTANT PROFESSOR MEDICAL MICROBIOLOGY

The department invites applications for a position at the level of assistant or associate professor. Candidates must possess an ability and commitment to teaching microbiology to medical students. Development of an active research program is desirable. Candidates should have a Ph.D. degree and postgraduate research experience. Applicants should submit statement of interest, résumé and names of three references to: John T. Lohr, Ph.D., Chairman, Search Committee, Department of Microbiology–Immunology, Philadelphia College of Osteopathic Medicine, 4150 City Avenue, Philadelphia, PA 19131.

ASSISTANT PROFESSOR, TENURE-TRACK, to complement the current faculty in industrial hygiene with a primary appointment in the School of Health Sciences and a partial appointment in the School of Pharmacy and Pharmacal Sciences, Department of Me-dicinal Chemistry and Pharmacognosy. Must have Ph.D. in industrial hygiene or related area such as toxicology, epidemiology, analytical chemistry, biochemistry, biostatistics, environmental or industrial engineering. Will be expected to establish a vigorous, extramurally funded research program, as well as to assume an active teaching role. Strong potential for interaction with campus-wide programs such as toxicology, biochemistry, industrial and environmental engineering, and the Purdue Cancer Center. Submit curriculum vitae, names and addresses of three references, and a description of research interests to Dr. Robert Landolt, Chair, Search Committee, School of Health Sciences, Purdue University, West Lafayette, IN 47907. Applications should be received by 1 September 1988. An Equal Opportunity/Affirmative Áction Employer.

ASSISTANT TOXICOLOGIST (436500). \$383.60 to \$522.80 per week. The Maine State Department of Human Services, Bureau of Health seeks to fill an immediate vacancy in Augusta, Maine. This is professional work in the identification of health hazards due to toxins in the air, water or land and assisting the state toxicologist. Qualifications include a 6-year combination of education, training and experience to include a B.S. in toxicology, biochemistry, biology, public health science, chemistry or related field—or an M.S. in toxicology or public health with experience in chemical risk management—or an equivalent combination of education, training, and experience. Familiarity with PC/computer systems is highly desirable. For application materials, contact: The Bureau of Human Resources, State Office Building, Station 4, Augusta, ME 04333. All completed applications must be received in the Bureau of Human Resources by no later than 5:00 p.m., 15 August 1988. Equal Opportunity/Affirmative Action Employer M/F/H.

ASSISTANT/ASSOCIATE PROFESSOR. The Departments of Neuroscience and Neurological Surgery at the University of Florida College of Medicine are seeking to fill a tenure-track position with an anticipated starting date of 1 March 1989. The focus of this search is for an individual with research interests that could integrate with our Spinal Cord Injury and Regeneration Program which presently emphasizes neural tissue transplantation, neuroanatomy, electrophysiology, and behavior (i.e., psycho-physics). Applications are being sought from individuals with complementary expertise (e.g., in neuropharmacology of spinal cord function, identification and expression of trophic and/or tropic factors in the injured CNS, or neuroimmunology). The successful candidate will be expected to establish an independent research program and to participate in teaching medical and graduate courses. We encourage applications from persons having a Ph.D. and/or M.D. degree and a minimum of 2 years of postdoctoral experience.

Persons interested in applying for this position should send their curriculum vitae, a brief overview of present and future research directions, and the names, addresses, and telephone numbers of four references by 1 October 1988 to: Dr. Paul J. Reier, Department of Neurological Surgery, University of Florida College of Medicine, JHM Health Center, Box J-265, Gainesville, FL 32610–0265.

The University of Florida is an Affirmative Action and Equal Opportunity Employer.

BIOMEDICAL/BIOLOGICAL SCIENTIST

Lockheed Engineering and Management Services Company is seeking qualified individuals for the following positions: MANAGER, BIOLOGICAL SYSTEMS: Position is responsible for the scientific, engineering, and administrative management of biological research-related activities in support of NASA Headquarters, Life Sciences Division. Position also provides laison with the NASA Branch Chief for biological disciplines. Doctorate in a biomedical/biological discipline and a minimum of 10 years of directly related experience required. Planetary protection and exobiology and global ecosystems experience desirable.

BIOMEDICAL/BIOLOGICAL SCIENTIST: Po-

BĬOMEDICAL/BIOLOGICAL SCIENTIST: Position requires fluency in Russian for interface with the international scientific community. Position involves high-level technical/scientific analysis of life sciences projects and systems related to the Space Program. Doctorate in a biomedical/biological discipline and a minimum of 5 years of experience in life sciences required

years of experience in life sciences required.

BIOMEDICAL/BIOLOGICAL: Position involves high-level technical/scientific analysis of life sciences projects and systems related to the Space Program. Position requires masters and doctorate scientific degrees in the biological and biomedical research fields, with a minimum of 5 years of experience in a life sciences-related environment. To apply, send your résumé to E. Foust at the address below:

Lockheed Engineering and Management
Services Company
Life Sciences Programs Office
600 Maryland Avenue S.W., Suite 600
Washington, D.C. 20024
Telephone: 202-488-5854

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POSITIONS OPEN

ASSOCIATE OR ASSISTANT PROFESSOR OF INTERNAL MEDICINE AND MICROBIOLOGY. The University of Texas (UT), Southwestern Medical Center at Dallas. M.D. degree or M.D./Ph.D. molecular virologist with experience in the virology of the HIV virus. Will establish a basic research program devoted to AIDS. Candidates must have evidence of proven research ability as evidenced by publications in stringently reviewed journals and successful competition for research support from the National Institutes of Health. Modest teaching and clinical responsibilities. Send curriculum vitae and three letters of recommendation to: Daniel W. Foster, M.D., UT Southwestern Medical Center, 5323 Harry Hines Boulevard, Dallas, TX 75235–9030. UT Southwestern is an Equal Opportunity Employer.

Middlebury College—BIOCHEMIST. The Department of Chemistry and Biochemistry of Middlebury College invites applications for a 2-year renewable appointment as visiting assistant professor in biochemistry beginning September 1988. Responsibilities will include teaching undergraduate biochemistry courses and supervision of undergraduate research in biochemistry. A Ph.D. in chemistry or biochemistry is required, and preference will be given to candidates with some prior teaching or research experience. Send résumé, a letter describing research interests, three letters of recommendation, and undergraduate and graduate transcripts by 15 July 1988 to: J. A. Larrabee, Department of Chemistry and Biochemistry, Middlebury College, Middlebury, VT 05753. Middlebury College is an Equal Opportunity Employer.

The Children's Mercy Hospital in Kansas City, Missouri, is searching for a CANCER PHARMACOLOGIST. Our hospital is a 167-bed pediatric acute care center and is affiliated with the University of Missouri. This faculty position would be at an assistant or associate professor level. Responsibilities include monitoring chemotherapy levels in order to determine optimum treatment and perform research in cancer pharmacology. Laboratory and technician support provided. Qualified applicants will need to prove research accomplishments and evidence of independent research. Submit curriculum vitae to: Dr. Arnold Freeman, Professor, Chief, Section of Hematology/Oncology, The Children's Mercy Hospital, 24th at Gillham Road, Kansas City, MO 64108.

CELL BIOLOGY FACULTY

The Biology Division at the California Institute of Technology has a tenure-track faculty position open in the areas of cell biology or cellular neurobiology. These fields are broadly defined and include biophysical, structural, biochemical, and immunological approaches. Applications from women and minority candidates are especially encouraged. Interested persons should submit curriculum vitae, a statement of research interests, and the names of three references to:

Cell Biology Search Committee c/o Candace Hochenedel Division of Biology 216-76 California Institute of Technology Pasadena, CA 91125

CHAIRMAN, DEPARTMENT OF PHARMA-COLOGY AND TOXICOLOGY. Medical College of Wisconsin. New Chairman sought for this strong department in a rapidly growing, private medical school. Existing interest in cardiovascular pharmacology and neuropharmacology are complemented by developing interdepartmental efforts in molecular biology, cancer research and the neurosciences. Individuals with active scientific programs and a desire to play a leadership role in an exciting environment should contact: John P. Kampine, M.D., Ph.D. Chairman, Pharmacology Search Committee C/O Office of the Dean, Medical College of Wisconsin, 8701 Watertown Plank Road, Milwaukee, WI 53226. The Medical College of Wisconsin is a private, free-standing medical school with 650 full-time faculty members, located on the campus of the Milwaukee Regional Medical Center. It admits 200 medical students annually, has a graduate school enrollment of 65, and currently receives \$26 million annually in extramural research grant support. The Medical College of Wisconsin is an Equal Opportunity/Affirmative Action Employer committed to increasing female and minority representation in leadership positions.

POSITIONS OPEN

CELLULAR BIOPHYSICS AND MOLECULAR PHYSIOLOGY: Several TENURE-TRACK POSITIONS (Assistant-Associate-Full Professor) will be available in the Department of Physiology at the University of Virginia School of Medicine that is to be expanded in these areas with the appointment of Dr. A. P. Somlyo as the new Chairman of the Department. Applications are invited from individuals with demonstrated accomplishments in applying the methods of molecular genetics, light opitical, electron optical, spectroscopic and modern electrophysiological approaches to cell physiology. Potential areas of interest include subcellular transport and transporting membrane proteins, intracellular signaling and cell motility. Some preference may be given to individuals with an interest in the cell physiology of the cardiovascular system and contractility. Send curriculum vitae and a list of four references to: Physiology Departmental Search Committee, School of Medicine, Box 449, Charlottesville, VA 22908. The University of Virginia is an Equal Opportunity/Affirmative Action Employer.



CHAIR, DEPARTMENT OF BIOLOGICAL SCIENCES

We seek nominations, including self-nominations, of persons actively engaged in research to chair this Department, which encomposases a broad range of lifescience subdisciplines. The Department consists of 27 faculty members and approximately 130 graduate students in M.S. and Ph.D. programs. A new \$21 million research building is planned for occupancy in 1990 with accompanying expansion of faculty and program. The position is available in January 1989 but may be deferred to as late as August 1989. An attractive salary, substantial start-up funds, etc. will be negotiated. Please send curriculum vitae and other pertinent material to:

Professor Richard L. Lintvedt
Chair, Selection Advisory Committee
Department of Chemistry
Wayne State University
Detroit, MI 48202

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

CONSULTING TOXICOLOGIST

Exxon Biomedical Sciences, Inc. has an opening for a qualified toxicologist in our chemical and petroleum groups. The successful candidate will have a Ph.D. in toxicology with 0-3 years of experience and be knowledgeable in the design of toxicology studies for petroleum and chemical products. Consulting activity includes product line interaction, literature evaluation, general biomedical research as well as governmental/regulatory body interactions and risk assessment. The position requires extensive consulting with Exxon Affiliates world wide. Client interactions are an important aspect of our work, and thus we are seeking individuals who possess excellent communication skills. Please forward résumé to: Human Resources,

EXXON BIOMEDICAL SCIENCES, INC. CN 2350, Mettlers Road East Millstone, NJ 08875-2350

Equal Opportunity Employer M/F/H/V

DEAN COLLEGE OF MEDICINE UNIVERSITY OF OKLAHOMA

Applications are invited for the position of Dean, College of Medicine. The College is located in Oklahoma City, with a clinical campus in Tulsa, and is one of seven University of Oklahoma Colleges in the Health Sciences Center. Applications with demonstrated administrative skills and strong broad academic background should submit curriculum vitae before 1 September 1988 to:

Dean's Search Committee Office of the Provost University of Oklahoma Post Office Box 26901 Oklahoma City, OK 73190

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For our Research Centre near Lausanne, Switzerland (on the lake of Geneva), we are seeking

A NUTRITIONIST OR A PHYSIOLOGIST

to head our group working on

METABOLIC STUDIES WITH STABLE ISOTOPES.

The section is concerned with studying the kinetics of whole-body metabolism in man, as well as other animals, with nitrogen 15 and carbon 13. The main research interests are those of protein and amino acid metabolism and of carbohydrate and fat oxidation. The facilities include three isotope-ratio mass spectrometers and an optical emission spectrometer together with associated sample preparation systems.

The successful candidate will have a PhD in Nutrition or Physiology and relevant experience in this field, as well as in directing an active research group.

Kindly send a detailed Curriculum Vitae with three names for reference purposes to Mrs. M. Germanier Audrin, Personnel Services, Nestlé Research Centre, P.O. Box 353, CH-1800 VEVEY, Switzerland.

SENIOR ASSISTANT SCIENTIST

PHARMACEUTICAL RESEARCH

Parke-Davis Pharmaceutical Research Division, Warner-Lambert Company, has an immediate opening for a Senior Assistant Scientist in the Pharmacokinetics and Drug Metabolism Department. The successful candidate will assist in conducting pharmacokinetic and metabolic studies of novel drug candidates, isolate drug and potential metabolite(s) from biological matrices by various bioanalytical techniques and quantitate drug and/or metabolite(s) by HPLC, GC, or TLC. The candidate will also quantitate levels of radioactivity and distribution of radiolabel in biological samples.

The successful candidate will possess:

- BS/MS degree in chemical or biological sciences
- 2-3 years analytical experience in chromatography (HPLC, GC, TLC)
- Pharmacokinetic experience, including knowledge of metabolism principles, experience in handling radioactive materials
- Possess some statistical knowledge
- · Computer familiarity

We offer excellent compensation and benefits at our modern facilities adjacent to The University of Michigan campus. Interested, qualified applicants should send curriculum vitae to: Ms. S. Hultquist, PARKE-DAVIS, 2800 Plymouth Road, Ann Arbor. MI 48105.

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IMMUNOLOGIST Ph.D.

Merck Sharp & Dohme Research Laboratories is currently offering an excellent career opportunity for an Immunologist to join our expanding cancer research program.

The successful candidate will have expertise in lymphocyte activation, cell surface receptors and ligands, epitope mapping, and lymphokines. Some background in protein chemistry would be desirable.

A Ph.D. in Immunology, Biochemistry or the equivalent and at least two years of postdoctoral experience is required.

Excellent salary and benefits programs accompany this position at our modern research facilities located in suburban Philadelphia.

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Manager, Personnel Relations, W42-2

Merck Sharp & Dohme Research Laboratories West Point, PA 19486

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Princeton University CONNECTIONIST: The Human Information Processing Group (HIPG) at Prince ton University offers a position for a member of the professional research staff to coordinate a broad range of research in human information processing and to conduct research in neural networks, connectionist, or PDPstyle models. The applicant should have some interest or background in neuro-science and its relation to neural network models and be willing to collaborate or interact with neuroscience faculty. The application should also have a familiarity with main-stream cognitive science

areas, human factors, and computational modeling more generally. Ph.D. required. Deadline 1 September 1988.

HIPG is an inter-disciplinary group within Princeton University consisting of psychologist, engineers, philosophers, linguists, and computer scientists. Its facilities Computer Graphics Laboratory, the Robotics Laboratory, the Engineering Anomalies Laboratory, and the Cognitive Motivation Laboratory. Princeton University is

i Equal Opportunity Employer. Address inquiries to:

Search Committee **Human Information Processing Group** Department of Psychology Green Hall Princeton University Princeton, NJ 08544

DEPARTMENT CHAIRPERSON AND ASSO-CIATE DIRECTOR. Combined position of Chairperson, Department of Horticulture and Crop Science at Rutgers-The State University of New Jersey and Associate Director of the New Jersey Agricultural Experiment Station for programs in Intensive Production Agriculture. The applicant must have a Ph.D. in a field of plant science, with a distinguished record of research and teaching, and the ability to attract outside grants. The individual is expected to provide leadership and vision for this newly reorganized department and will have the opportunity to maintain an active research program. The present department has some 30 faculty that will be expanded to 40 by recruiting and will be housed in a new building to be completed by 1992. This new department will become a premier University department serving the thriving horticultural industry in New Jersey. Salary negotiable. Position available 1 January 1989. Application deadline 16 September 1988. Send résumé to: Dr. Paul Eck, Search Committee Co-Chairman, Department of Horticulture and Forestry, Cook College, Rutgers University, New Brunswick, NJ 08903. Rutgers-The State University of New Jersey is an 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 several tenure-track or tenured faculty positions to be filled within the next 2 years. It is hoped that at least two positions will be filled in the 1988 to 1989 academic year. An immediate objective in our recruitment program is to identify outstanding individuals with research interests in structural biology including, but not limited to, x-ray crystallography, magnetic resonance, or molecular dynamics. Candidates for tenure-track positions should have a doctoral degree, significant postdoctoral research experience, a strong record of research accomplishment, and demonstrable potential for the development of an inde-pendent research career in an academic setting. Candi-dates at the tenured level must have demonstrated a strong continuing program of innovative research and have a solid record of scholarly achievement. 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. While we have no formal deadline, we would appreciate receiving applications by 30 September 1988. Please send applications or nominations to:

Marvin W. Makinen
Department of Biochemistry and Molecular Biology
The University of Chicago
920 East 58th Street Chicago, IL 60637

The University of Chicago is an Equal Opportunity Employer.

POSITIONS OPEN

CONSULTING TOXICOLOGIST

Exxon Biomedical Sciences, Inc. has an opening for a qualified toxicologist in our chemical and petroleum groups. The successful candidate will have a Ph.D. in toxicology with 3-5 years of experience and be knowledgeable in the design of toxicology studies for petro-leum and chemical products. Consulting activity includes product line interaction, literature evaluation, general biomedical research as well as governmental/regulatory body interactions and risk assessment. The position requires extensive consulting with Exxon Affiliates world wide. Client interactions are an important aspect of our work, and thus we are seeking individuals who possess excellent communication skills. Please forward résumé to: Human Resources,

EXXON BIOMEDICAL SCIENCES, INC. CN 2350, Mettlers Road East Millstone, NJ 08875-2350

Equal Opportunity Employer M/F/H/V

DIRECTOR OF RESEARCH INSTITUTE DEPARTMENT OF SURGERY THE ST. LOUIS UNIVERSITY

The St. Louis University School of Medicine seeks a

director for The Surgical Research Institute.

Qualifications include an M.D. and/or Ph.D. degree and a record of administrative and research accomplish-

The Director will have primary responsibility for the overall administration of research programs for the insti-tute. It is expected that the Director will have an active tute. It is expected that the Director will have an active research program which preferably will be in the area of, but not limited to, basic immunology, metabolism or shock. The directorship is associated with academic appointment to the St. Louis University School of Medicine. Interested individuals should submit their curriculum vitae to: Chairman, Search Committee, Department of Surgery, St. Louis University Hospital, 1325 South Grand Boulevard, St. Louis, MO 63104. Equal Employment Opportunity/Affirmative Action.

ECOTOXICOLOGIST

Exxon Biomedical Sciences, Inc. has an immediate opening for a qualified individual specializing in ecotoxi-cology and environmental hazard assessment. The successful candidate will have a Ph.D. in ecotoxicology or in an environmentally related field with 0-2 years postdoctoral experience. Experience in or a knowledge of the application of both effects and fate data to real world concerns, as well as knowledge of regulatory requirements (TSCA/PMN) would be desired. Exxon Biomedical performs both consulting and laboratory toxicology for affiliates around the world. Its resources include stateof-the-art aquatic toxicology, environmental chemistry and mammalian toxicology laboratories. The candidate will perform as a study monitor and internal consulting toxicologist. Client interactions are an important aspect of our work, and thus, we are seeking an individual who has excellent communication skills. Please forward résumé to: Human Resources,

EXXON BIOMEDICAL SCIENCES, INC. CN 2350, Mettlers Road East Millstone, NJ 08875-2350

Equal Opportunity Employer M/F/H/V

UNIVERSITY OF FLORIDA FACULTY POSITION IN BIOCHEMISTRY AND MOLECULAR BIOLOGY

I have an opening, 1 September 1988 for an assistant research scientist (nontenure-track) to join my research group to study the molecular events in the replication and interference of mammalian negative-strand RNA viruses. I seek a highly qualified virologist with a Ph.D. and at least 3 years of postdoctoral experience as well as a background in recombinant DNA, expression vectors, and hybridoma technology. An attractive working environment and a salary commensurate with experience are offered. Interested individuals should send their curriculum vitae and at least three letters of recommendation to: Sue A. Moyer, Ph.D., Associate Professor, Box J-245, JHMHC, University of Florida, Gainesville, FL 32610.

Equal Employment Opportunity/Affirmative Action Employer.

POSITIONS OPEN

The Marine Sciences Research Center, State University of New York at Stony Brook, invites applications for a tenure-track FACULTY POSITION IN ENVIRON-**MENTAL CHEMISTRY**, effective 1 September 1988. Ph.D. is required. Salary and rank are open and dependent dent on qualifications. The position is affiliated with the Center's Waste Management Institute. The Institute conducts basic and applied research on a spectrum of issues involving the management of wastes and waste disposal in coastal environments. Applicants should have an active research program in organic or inorganic chemistry of aquatic marine systems or groundwater and be familiar with RCRA and other EPA regulations including EPA approved sample analysis techniques. Areas of interest include, but are not limited to the transport, degradation and fate of contaminants, chemical stabilization of waste materials, the dispersal and fate of sewage sludge in coastal waters, and the potential environmental impacts of new waste treatment technolo-

It is expected that the successful candidate will develop an active research program in accordance with the goals of the Waste Management Institute and will teach graduate-level courses in his/her specialty. He/she will be expected to secure 3 months of salary through external grants or contracts. Applicants should send a résumé, statement of research interests and names of at least three references to: Dr. R. L. Swanson, Waste Management Institute, Marine Sciences Research Center, State University of New York, Stony Brook, NY 11794—5000. Closing date for applications is 15 August 1988. SUNY Stony Brook is an Affirmative Action/Equal Opportunity Educator and Employer. AK#167A.

FACULTY POSITION IN PHARMACOLOGY

Applications are invited for a tenure-track assistant or Applications are invited for a tenure-track assistant or associate professorship beginning 1 January 1989. Candidates should document experience in the broad area of molecular pharmacology. The position requires a Ph.D. degree, preferably in pharmacology, with proven accomplishments in modern areas of molecular pharmacology. Of special interest are receptor structure and function, nucleic acid metabolism, and mechanisms for intracellular communication, including toxicological aspects.

A clear capability for generating extramural research

ar communication, including toxicological aspects.

A clear capability for generating extramural research support and for working as an independent investigator are critical factors in the selection process. Start-up funds are available. Salary is negotiable, depending on experience. The successful applicant will participate in the teaching of pharmacology to graduate and medical students.

Please send curriculum vitae, three representative reprints, and the names and addresses of three references to: Dr. Elliot S. Vesell, Department of Pharmacology, Pennsylvania State University College of Medicine, Hershey, PA 17033. Deadline for receipt of applications is 30 September 1988.

An Affirmative Action/Equal Opportunity Employer. Women and minorities encouraged to apply.

FACULTY POSITIONS IN CARDIOVASCULAR/RENAL PHARMACOLOGY

The Department of Pharmacology, University of Tennessee, Memphis, is seeking candidates for two tenure-track positions available immediately, in cardiovascular/renal pharmacology. Rank and salary will be commensus rate with experience. Candidates should possess a Ph.D. degree in pharmacology or related discipline, or an M.D., and should have demonstrated excellence in research and commitment to teaching. Candidates should have appropriate experience in application of physiology, biochemistry, molecular biology, or immunology to cardiovascular/renal pharmacology. Candidates will be expected to participate in teaching of pharmacology to professional and graduate students. Applications from minority candidates and women are strongly encouraged. Please submit curriculum vitae, the names of three references, and a brief statement of future research plans to: Murray Heimberg, Ph.D., M.D., Chairman, Deservers of Phase plans. Livings it of Tengasea. murray reimoerg, Ph.D., M.D., Chairman, Department of Pharmacology, University of Tennessee, Memphis, The Health Science Center, Memphis, TN 38163. Search will continue until positions have been filled. The University of Tennessee is an Equal Opportunity/ Affirmative Action Employer.

SCIENCE, VOL. 241 248



We are looking for a young scientist to join our new research centre near Lausanne, Switzerland (on the Lake of Geneva), and are offering a

POSTDOCTORAL FELLOWSHIP IN EXPERIMENTAL ONCOLOGY

The person appointed will investigate in the role of hormones and growth factors during hepatocarcinogenesis and participate in diverse ongoing projects.

Applicants should have a PhD or equivalent and, possibly, some knowledge of tumorigenesis and/ or growth factors. This position includes a two year period of study.

Kindly send you Curriculum Vitae and three names for reference purposes to

Mrs. M. Germanier Audrin Personnel Services Nestle Research Centre P.O. Box 353 CH-1800-VEVEY, Switzerland

American Association for the Advancement of Science Program on Science, Arms Control, and National Security

VACANCY

The American Association for the Advancement of Science is seeking a **Senior Program Associate** for its Program on Science, Arms Control, and National Security.

The staff responsibilities of the successful candidate will include activities in the following areas: assisting with the Program's publication series; planning and execution of major conferences, seminars, and symposia; fund-raising efforts; and assisting with the Program's long-range planning, to include identifying substantive areas in this field that can be addressed effectively by the AAAS.

Qualifications of the successful candidate will include the following: (1) an understanding of technical and policy related arms control and national security issues, as demonstrated in previous work experience; (2) a M.A. (or equivalent combination of education and experience) in the physical sciencesor engineering; (3) excellent written and oral communication skills; (4) experience working with the Congress, federal agencies, industry, universities and/or foundations; (5) administrative experience; and (6) ability to interact effectively with other Program staff and advisory committee members.

Salary to \$30,000 contigent upon qualifications.

Please send letter of interest, resume and salary requirements to: Debra Wright, AAAS, 1333 H St., N.W., Washington, D.C. 20005. EOE

RESEARCH ASSOCIATE CARDIOVASCULAR PHARMACOLOGY

The Squibb Institute for Medical Research is recognized internationally as a leader in the research and development of novel therapeutic agents for the treatment of cardiovascular and infectious diseases. We currently have an exceptional opportunity for an experienced research scientist to join our Pharmacology Department.

You will be responsible for conducting **in vivo** and **in vitro** experiments related to myocardial ischemia and cardiovascular pharmacology. **In vitro** work will involve isolated, perfused heart models of ischemia. You will also perform large and small animal cardiothoracic surgery and conduct data analysis. Some report writing will be required.

Qualified candidates should have a BS (MS preferred) and a minimum of 2 years related research experience.

In addition to an excellent starting salary and comprehensive benefits package, we can offer the opportunity to pursue a stimulating and rewarding career. For confidential consideration, please submit your resume to: The Squibb Institute for Medical Research, Human Resources Department 729, P.O. Box 4000, Princeton, NJ 08543-4000. An equal opportunity employer.



Where science comes to life.

Careers in Technology Management and Environmental Policy

Battelle, Pacific Northwest Laboratories, is seeking qualified candidates to join its multidisciplinary team of professionals in environmental policy and compliance planning research. Our research focuses on the regulatory and policy aspects of national level environmental issues, and on the application of those policies and regulations to technology management problems. Desired background for all openings includes training or experience in the application of environmental regulations to the development and application of technology. Current openings exist for the following:

Team Leader

Will lead researchers in environmental policy and compliance planning projects, provide technical guidance and review of programs, and develop a business strategy for growth of policy analysis capabilities. Will interact frequently with clients to develop new opportunities and relay program progress.

Senior Researchers

Will perform research in the area of environmental policy and compliance, and provide regulatory analyses of environmental regulations, compliance issues and strategies, and related policy/planning issues.

If you are interested in pursuing a challenging career in environmental policy and compliance planning research, please send your resume, salary history and references to: Anthony F. Gasperino, Battelle, Pacific Northwest Laboratories, P.O. Box 999, Dept. 044, Richland, WA 99352. U.S. Citizenship required. We are an equal opportunity employer.



FACULTY POSITION BIOLOGICAL CONTROL DEPARTMENT OF PLANT PATHOLOGY UNIVERSITY OF CALIFORNIA, RIVERSIDE

Applications are invited for an 11-month tenure-track position at the assistant professor level. Appointee is to develop an innovative research program in the biological control of soil-borne plant pathogens with emphasis on molecular mechanisms of microbial antagonism and rhizosphere competence. Opportunities exist for interaction with departmental and interdepartmental programs in the biological control and genetics of plant pathogenic fungi, viruses, bacteria, nematodes, and insect pests. Teaching responsibilities include participation in teamtaught plant pathology graduate courses, the opportunity to develop an independent graduate course, and direction of graduate students. Ph.D. required with interest or experience in molecular biology, plant pathology, or rhizosphere ecology desired. Curriculum vitae, complete transcripts, a statement of research interests, and three confidential letters of recommendation should be sent by 1 October 1988 to: Dr. D. A. Cooksey, Search Committee Chairman, Department of Plant Pathology, University of California, Riverside, CA 92521

Women and minority candidates are encouraged to apply Equal Opportunity/Affirmative Action Employer.

FACULTY POSITION IN MOLECULAR BIOLOGY/REPRODUCTIVE BIOLOGY UNIVERSITY OF MISSOURI

The University of Missouri is seeking a tenure-track assistant/associate/full professor (80% research, 20% teaching) in the University's Food for the 21st Century Program. The successful candidate will be expected to conduct basic research in a project that applies advanced biotechnology procedures to an area of reproductive biology pertaining to the mammalian female and will join an established group of molecular biologists/reproductive physiologists in the Animal Sciences Research Center. An applicant should have a Ph.D. and at least 2 years of postdoctoral experience in one of the following areas: immunobiology, developmental biology, molecular endocrinology, gene transfer, protein chemistry. Applications will be accepted until 1 September 1988 or until an acceptable applicant is recruited. Applicants should send curriculum vitae, names of three references and a statement of research interests to: Dr. R. M. Roberts/Dr. B. N. Day, Department of Animal Sciences, University of Missouri, Columbia, MO 65211. The University of Missouri is an Affirmative Action/ Equal Opportunity Employer.

GAIT ANALYSIS LABORATORY—TECHNICAL DIRECTOR. A position is available as technical director of a gait laboratory in an orthopaedic clinical and research setting. Requires an engineering background with working knowledge of computer hardware and software, programming, data acquisition devices, numerical analysis, biomechanics, and 3-D kinematics and dynamics, plus experience in the measurement of human gait. The technical director will also serve as coordinator of computer resources for the department of Orthopaedics. Apply to: University of California Employment Office, TB 122, Davis, CA 95616 for VL#0706 by I August 1988. For required application materials call: 916-752-0531, Monday through Friday, between 10:00 a.m. and 2:00 p.m. Equal Opportunity Employer.

GENOME ORGANIZATION AND EXPRESSION IN WOODY PLANTS

Two positions, one a SENIOR RESEARCH ASSOCIATE and one at the POSTDOCTORAL LEV-EL, are available immediately in the newly formed Plant Biology Center to work on the genome organization and control of gene expression in woody plants. Candidates should have a knowledge of recombinant DNA techniques. Experience in plant transformation and/or tissue culture procedures would also be desirable. Applicants should submit a letter describing their research experience and interests, along with curriculum vitae and the names of three references, to: Dr. Chris Cullis, Department of Biology, Case Western Reserve University, Cleveland, OH 44106.

POSITIONS OPEN

FACULTY POSITION IN PLANT BIOLOGY

The Department of Molecular and Cell Biology at the University of Connecticut is now accepting applications for a tenure-track assistant/associate professor in plant biology.

We are seeking a highly motivated individual with at least 2 years of productive postdoctoral experience who will be expected to establish a vigorous, independent research program in plant biochemistry, physiology or cell biology. The candidate will be expected to participate in the departmental graduate training program as well as in the traching of undergraduate plant biology.

in the techning of undergraduate plant biology.

Competitive salaries and start-up funds are available. Interviews of candidates will begin in October 1988. The applicant should submit curriculum vitae, a statement of current and projected research interests, representative reprints, and three letters of reference to: Professor Edward Khairallah, Chairman, Search Committee, Department of Molecular and Cell Biology (U-125), University of Connecticut, 75 North Eagleville Road, Storrs, CT 06268. The University of Connecticut is an Equal Opportunity/Affirmative Action Employer, and encourages applications from qualified minority groups and women. (Search 8A397).

FACULTY POSITIONS IN PHARMACOLOGY AND TOXICOLOGY. The Department of Pharmacology and Toxicology, University of Arizona College of Pharmacy, has two tenure-track openings at the assistant or associate professor level. The Department seeks individuals to complement the existing research activities within the department and related disciplines. The Department has established a Center for Toxicology and the University has interdepartmental programs for Cancer Biology, Neurobiology, Biotechnology, Immunobiology and Insect Science. Scientists from these areas actively collaborate with faculty from the department. The applicants should possess a Ph.D. degree in toxicology, pharmacology, or related disciplines; postdoctoral experience; demonstrated excellence in research; and an activinterest in teaching at both the professional and graduate levels. The candidate will be expected to establish and support an active research program that utilizes modern molecular and cellular approaches. Areas of interest include, but are not limited to: neurotoxicology, immunopharmacology/toxicology, and cardiovascular pharmacology. Applicants should send a detailed curriculum vitae, statement of research plans and names and telephone numbers of three references by 1 October 1988 to: Dr. I. Glenn Sipes, Head, Department of Pharmacology and Toxicology, College of Pharmacy, The University of Arizona, Tucson, AZ 85721. An Equal Opportunity/Affirmative Action Employer.

IMMUNOLOGIST

The Department of Pathology of the Emory University School of Medicine is interviewing for a tenure-track position (assistant or associate professor) with appointment as associate director, Histocompatibility and Immunogenetics Laboratory. Emory University has developed major clinical transplantation programs and seeks to expand the level of research activities related to transplantation immunology.

to expand the level of research activities related to transplantation immunology.

Qualified candidates may be an M.D. or Ph.D. with expertise in either cellular immunology and lymphocyte cloning, or in molecular genetics. The individual also should be competent in standard laboratory immunochemical procedures. A major research goal of the Transplantation Immunology Laboratory, directed by Glenn E. Rodey, M.D., is to identify immune mechanisms that regulate alloimmunization. Applicants are expected to undertake a program of research in transplantation immunology and to interact with and support other scientists working with projects related to immunoregulation.

Please send a description of research interests, curriculum vitae, and the names of three references to:

Dr. Kenneth W. Sell
Chairman
Department of Pathology and Laboratory Medicine
Emory University School of Medicine
703 WMB

Atlanta, GA 30322

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

POSITIONS OPEN

IMMUNOLOGY FACULTY POSITIONS. The Department of Microbiology invites applications for 2 full-time tenure-track positions at any faculty level. Applicants must have a Ph.D. or M.D. and at least 2 years of postdoctoral experience. Successful candidates must establish competitive, funded research programs and help teach medical and graduate students. The Medical College and its Cancer Center are expanding in areas of molecular biology, neurosciences, bone marrow and organ transplantation, gastroenterology, and ophthalmology. Applicants with interests that may complement these areas are encouraged to apply. Send résumé, summary of research interests, and names of three references to: Immunology Search Committee, Department of Microbiology, Medical College of Wisconsin, 8701 Watertown Plank Road, Milwaukee, WI 53226. Affirmative Action/Equal Opportunity Employer.

INFECTIOUS DISEASES/MOLECULAR BIOLOGIST TENURE-TRACK—FACULTY POSITION

The Department of Pathobiological Sciences, School of Veterinary Medicine, University of Wisconsin–Madison, is seeking an individual with training in molecular aspects of infectious disease research. A demonstrated knowledge and application of contemporary technology to solve problems on the pathogenesis of infectious diseases is essential. The successful candidate will be required to participate in the teaching program for professional or graduate students. Salary and rank commensurate with training and experience. Send curriculum vitae and names of at least three references to: Dr. R. D. Schultz, Professor and Chairman, Department of Pathobiological Sciences, School of Veterinary Medicine, University of Wisconsin–Madison, 2015 Linden Drive West, Madison, WI 53706. Telephone: 608-263-9888. The University of Wisconsin is an Equal Opportunity/Affirmative Action Employer. Minorities and women are strongly urged to apply.

LABORATORY RESEARCH TECHNICIAN—Research laboratory studying plasma protein gene expression seeks responsible person with research background and minimum 3 years of professional experience. M.S. in biochemistry or molecular biology required, and familiarity with recombinant DNA work and RNA purification. Laboratory located near other research institutes. Excellent salary and benefits include: 85% tuition refund and 5 weeks of vacation. Please send résumés to: Attention: Dr. G. Grieninger, The New York Blood Center, 310 East 67th Street, New York, NY 10021. Equal Opportunity Employer M/F.

LECTURER. Teaching position available immediately in veterinary gross anatomy and histology. Ph.D. and/or D.V.M. and teaching experience required. Send curriculum vitae and three letters of reference to: Dr. L. R. Stanford, Department of Comparative Biosciences, School of Veterinary Medicine, University of Wisconsin, Madison, WI 53706. Deadline 1 August 1988. Affirmative Action/Equal Opportunity Employer.

LECTURER, ENVIRONMENTAL STUDIES

Huxley College of Environmental Studies seeks a person with environmental policy, resource economics, and/or risk assessment expertise. Will teach two of these subjects, introductory course in environmental studies, direct independent study. Scholarly/funding initiatives encouraged. One-year position; possible renewal. Ph.D. required. Send curriculum vitae, names of three referees, and research/teaching interests by 29 July 1988, to: Search Committee, Huxley College, Western Washington University, Bellingham, WA 98225. Affirmative Action/Equal Opportunity Employer.

MOLECULAR BIOLOGIST—To conduct studies on the molecular mechanisms of neoplastic development. Must have at least 2 years of postdoctoral experience in the production of anti-cancer drugs in Streptomyces. Expertise in the cloning and use of expression vectors (both prokaryotic and eukaryotic, including retroviruses) and transcriptional regulatory sequences (enhancers, promoters, transcription terminators, etc.) is required. Salary commensurate with experience. Send résumé to: The Squibb Institute for Medical Research, Human Resources Department 500, P.O. Box 4000, Princeton, NJ 08543. An Equal Opportunity Employer.

FACULTY POSITIONS MOLECULAR AND CELL BIOLOGY

Tumor Cell Biology Department seeks applicants for a research position in molecular and cell biology at the Assistant Member level. We are particularly seeking candidates with previous expertise in molecular and cell biology, biochemistry, or genetics who want to develop independent programs that complement and extend ongoing departmental activities. Current research within the department includes studies of growth factors, receptors, and oncogenes, primarily in hematopoietic systems; identification and characterization of genes which suppress the transformed phenotype; transcriptional regulation during blood cell development; and characterization of polypeptides that affect the assembly and transport of secretory proteins. The Department currently includes ten Ph.D. and M.D. faculty members engaged in full time research and participating in an active postdoctoral training program. Candidates must have a doctoral degree, postdoctoral training, and a strong commitment to basic research with prospects for individual achievement. Generous start-up funds including technical support are available for junior faculty, and prospects exist for additional monies to complement ongoing grant funded research.

The Institution is strongly committed to both basic and clinical research and includes other basic science departments in Virology and Molecular Biology, Biochemistry, Immunology, and Pharmacology: has state-of-the-art equipment and shared resources and is presently undergoing major capital development and continued expansion of its research programs.

Applications including a curriculum vitae, brief statement of research interests, and the names of four referees should be submitted to:

Dr. Charles J. Sherr, Chairman Department of Tumor Cell Biology, St. Jude Children's Research Hospital, Memphis. Tennessee 38104.

Equal Opportunity/Affirmative Action Employer.

ASSISTANT PROFESSORS

Tenure Track (Two Positions)

University of Medicine and Dentistry of New Jersey-NJMS, Department of Physiology, has 2 positions available for Assistant Professors to develop an active, independent and productive research program and to obtain extramural support. Teaching duties will include participation in the medical and dental courses and the departmental graduate program. Preferred areas of research interests are: Membrane and Muscle Physiology and Biophysics, and Endothelial and Epithelial Cell Biology. Qualifications are Ph. D., M.D. or equivalent degree and a minimum of two years of Postdoctoral experience. DEADLINE DATE: OCTOBER 1, 1988. Send a copy of your C.V., statement of research accomplishments and future goals, and the names of three references to: Chairman, Department of Physiology, UMD-New Jersey Medical School, (S), 185 South Orange Avenue, Newark, New Jersey 07103-2757.

The UMDNJ is an Affirmative Action/ Equal Employment Opportunity Employer M/F/H/V.



Plant Pathologists/ Microbial Ecologists/ Agronomists

Crop Genetics International, an agricultural biotechnology company in suburban Baltimore/Washington, is expanding its endophytology (endophyte studies) group to aggressively develop the first InCide™ products, a family of genetically engineered, microbial biopesticides that can be inoculated into seeds and plants. We are working with corn, soybeans, rice, cotton and wheat. Successful candidates will conduct research in phytobacteriology, microbial ecology, epidemiology, plant water relations, detection methodologies, vector relations and field development. Requirements are:

- A Ph.D. and research experience in Plant Pathology, Microbiology, Agronomy or a related field
- · Experience in conducting field research
- An ability and willingness to independently establish and achieve goals.

To apply forward a resume in confidence and the names of three professional references to:



Crop Genetics International Dept ES1

7170 Standard Drive Hanover, MD 21076

An equal opportunity employer

INDUSTRIAL POSTDOCTORAL POSITION

Pharmacokinetic Research

Monsanto Agricultural Company is seeking a Post-doctoral Scientist to develop physiological and pharmacodynamic modeling approaches for use in risk assessment at our Environmental Health Laboratory in St. Louis, Missouri. Qualified candidates are required to have a doctorate degree with a strong background in the area of pharmacokinetic modeling and the application of pharmacokinetic principles to toxicological problems. Previous research experience in the area of mathematical modeling of biological data is preferred. This position is renewable on an annual basis with an anticipated duration of two years. External publications and participation in the scientific community will be strongly encouraged.

Monsanto provides a generous compensation package relative to your responsibilities and qualifications. Interested candidates should forward resume to: V.L. Bozarth, Mail Zone B3NA, Monsanto Company, 800 N. Lindbergh Bhd., St. Louis, MO 63167. An Equal Opportunity/Affirmative Action Employer M/F/H/V.

Monsanto

Biochemistry Research BS/MS Associate

The Upjohn Company, a recognized leader in pharmaceutical research and development, is seeking applicants for a Biochemistry Research position in Biotechnology Product Development in our Control Division. The successful candidate will have experience in protein separation techniques such as HP-IEC, SDS-PAGE, IEF, and reverse phase liquid chromatography. Experience in ELISA, RIA and Western blotting is desirable. Responsibilities will include methods development on new protein therapeutics produced in our Product Discovery area. The candidate will join an inter-disciplinary team participating in product registration issues on a worldwide basis. This position requires either an M.S. in Chemistry or Biochemistry, or a B.S. in these areas and a minimum of 2 years of relevant experience.

We are located in Kalamazoo in southwestern Michigan, midway between Chicago and Detroit. Our area offers varied cultural events, cosmopolitan shopping and entertainment, lakes and woodlands minutes away, abundant year-round sports and recreation. Upjohn offers a highly competitive salary, advancement opportunities, comprehensive benefits and relocation assistance. For confidential consideration, please call from outside of Michigan toll free 1/800/253-8600, ext. 3-6767, (inside Michigan call collect 616/323-6767) to request an employment application be sent to you. Please refer to advertisement number 5554-FA when calling. We are an Equal Opportunity Employer M/F.

Our Commitment to Scientific Excellence Continues...



MOLECULAR BIOLOGIST GYNECOLOGIC ONCOLOGY/MOLECULAR BIOLOGY, NORTHWESTERN UNIVERSITY MEDICAL SCHOOL

Applications are invited for a tenure-track faculty position at the assistant professor level with primary appointment in the Section of Gynecologic Oncology within the Department of Obstetrics and Gynecology and secondary appointment in the Department of Molec ular Biology at the Northwestern University Medical School. Applicants should have a Ph.D. degree and postdoctoral training in molecular biology relating to the study of malignant diseases. We are seeking an individual who will develop an independent, basic molecular biology research program in gynecologic oncology, collaborate with other members of the Departments of OB/GYN and Molecular Biology and the Cancer Center on projects investigating human malignancy, and participate in medical student and graduate teaching programs of both departments.

Applicants should send curriculum vitae, a brief description of previous and future research and teaching interests, reprints of significant published work or preprints of manuscripts in press, and at least three letters of recommendation by 15 September 1988 to: John R. Lurain, M.D., Head, Section of Gynecologic Oncology, Department of Obstetrics and Gynecology, Northwestern University Medical School, 333 East Superior Street, Chicago, IL 60611.

Northwestern University is an Equal Opportunity/Affirmative Action Employer and invites applications from all qualified



MOLECULAR BIOLOGY **FACULTY POSITIONS**

The Department of Biochemistry at Wayne State University School of Medicine invites applications for several tenure-track faculty positions. Research interests should encompasss modern molecular approaches to basic problems of biology. The positions are at the level of assistant professor, although outstanding individuals at more senior levels will be considered. A Ph.D. or M.D. with relevant postdoctoral experience in molecular biology is required. A résumé, the names of at least three references, and a brief outline of future research interests references, and a brief outline of future research interests should be sent to: Dr. Barry P. Rosen, Professor and Chairman, Department of Biochemistry, Wayne State University, School of Medicine, Gordon H. Scott Hall of Basic Medical Sciences, 540 East Canfield Avenue, Detroit, MI 48201. An Equal Opportunity/ Affirmative Action Employer.

OPPORTUNITY IN CRYSTALLOGRAPHIC STUDIES

Howard Hughes Medical Institute is one of America's leading medical research organizations. You can play a role in our joint efforts with Johns Hopkins University School of Medicine as a research associate or postdoctor al fellow for x-ray crystallographic studies of gene regulatory proteins.

These laboratory projects will address problems in protein-DNA interactions, gene regulation in the human immunodeficiency virus, and design of DNA-binding proteins. This is an ideal position for a scientist interested in collaborating on interdisciplinary approaches to these problems. Experience with macromolecular crystallography is preferred, but candidates with strong backgrounds

in physics, chemistry, or math should also apply.
We offer excellent work facilities that include a Nicolet area detector, PS 390 graphics system, and Vax 8530 computer. Salary is commensurate with experience. To find out more about this position, contact: Carl O. Pabo on BITNET (PABO@JHUIGF), or send curriculum vitae and three references to:

Carl O. Pabo Howard Hughes Medical Institute
Johns Hopkins University School of Medicine
725 North Wolfe Street Baltimore, MD 21205

An Equal Opportunity/Affirmative Action Employer.

POSITIONS OPEN

NMR SCIENTIST

The Pittsburgh NMR Center for Biomedical Research [under the auspices of Carnegie Mellon University (CMU) and the University of Pittsburgh (Pitt)] has an opening for an NMR Scientist. The center has a Bruker BIOSPEC II 4.7-tesla NMR system with a 40-cm bore superconducting magnet for multinuclear NMR imaging and in vivo spectroscopic studies using animal models. The position requires a Ph.D. or equivalent, and extensive experience in NMR techniques. The appointee will participate in a multidisciplinary research program involving departments of biology, chemistry, computer science, medicine, surgery, and physics, and will have opportunities to carry out collaborative research. This is a staff appointment and salary depends on experience and qualifications. Interested persons should send curriculum vitae and names of three references to: **Dr. Chien Ho**, Pittsburgh NMR Center for Biomedical Research, Carnegie Mellon University, 4400 Fifth Avenue, Pittsburgh, PA 15213. CMU and Pitt are Affirmative Action/Equal Opportunity Employers.

NEUROSCIENTIST

Assistant professor (nontenure-track), to study the effects of embryonic lesions on the structure and function of heart and ear. At least 3 years of postdoctoral experi-ence in recording and analyzing bioelectric responses is required. Experience analyzing developing peripheral nerves is useful. Submit curriculum vitae, description of research experience, and names of three references to:
Dr. Michael J. Mulroy, Department of Anatomy,
Medical College of Georgia, Augusta, GA 30912—
2000. An Equal Opportunity/Affirmative Action Employer.

PATHOLOGY AND MICROBIOLOGY: The University of Nebraska Medical Center is seeking a CLINI-CAL CHEMIST, assistant-associate professor, with M.D. degree and board certification in anatomic and clinical pathology with special interest in clinical chemistry and demonstrated academic productivity by publications. Curterionstrated academic productivity by publications. Cufriculum vitae and three letters of recommendation to: David T. Purtilo, M.D., Chairman, Pathology and Microbiology, UNMC, 42nd and Dewey Avenue, Omaha, NE 68105. Applications accepted to 1 November 1988. An Equal Opportunity/Affirmative Action Employer.

PHYSICAL OCEANOGRAPHY. The School of Oceanography at the University of Washington invites applications for a TENURE-TRACK FACULTY POSITION in physical oceanography for which the University will provide 6 months of salary support per year. We are looking particularly for a scientist active in oceanic measurement programs who is also skilled in the dynamical interpretation of observations. Abilities to develop and lead field programs and to teach and advise students are important considerations. A commitment to education is expected. Applicants should send curriculum vitae, recent publications and the names of four references to: Dr. Arthur R. M. Nowell, Director, School of Oceanography WB-10, University of Washington, Seattle, WA 98195. Closing date for applications is 1 November 1988. The position to be filled in summer 1989 will be at the assistant or associate professor level. A doctorate is required. The University of Washington is an Equal Opportunity/Affirmative Action Employer.

PLANT VIROLOGIST

Kansas State University, Department of Plant Pathology, invites applications for a tenure-track position at the assistant professor level to begin 1 October 1988. Succandidate will be expected to investigate the molecular basis of viral biology and disease and participate in the development of control measures for imporpare in the development of control measures for impor-tant viral diseases of cereal crops. A Ph.D. in plant pathology and a strong record of training and research experience in plant virology is required. Salary commen-surate with academic training and experience. Submit striate with academic training and experience. Such milester of application, résumé, transcripts, and three letters of reference to: Dr. Frank F. White, Department of Plant Pathology, Throckmorton Hall, Kansas State University, Manhattan, KS 66506 by 1 September 1988. Kansas State University is an Equal Opportunity/ Affirmative Action Employer.

POSITIONS OPEN

POSTDOCTORAL FELLOW. Position available July 1988 to study the molecular genetics of inherited human diseases. Project will include development and application of diagnostic and therapeutic strategies. Ph.D. in biochemistry/molecular biology. Prior experience in recombinant DNA techniques required. Send curiculum vitae and names of three references to: Dr. Mark Rabin, Department of Pediatrics (D-820), University of Miami School of Medicine, P.O. Box 016820, Miami, FL 33101.

POSTDOCTORAL FELLOW

Position available to study electrophysiological, ionic and cellular control of vascular muscle. Emphasis on the renal circulation, voltage clamping endothelial cells and studying release of contractile endothelial cells and studying release of contractile factors. Techniques to include intracellular microelectrodes, patch clamping, cell fluorescence ion and pH probe, and microperfusion. Topics of interest: autoregulation, cell-cell coupling, endothelial cell function, angiogenesis. Investigators: Drs. A. W. Cowley, Jr., D. R. Harder, R. J. Roman. Send résumé to: Dr. David R. Harder, Professor, Medical College of Wisconsin, Department of Physiology, 8701 Watertown Plank Road, Milwaukee, WI 53226. Equal Opportunity/Affirmative Action Employer M/F/H.

POSTDOCTORAL FELLOW—Position available immediately to investigate important issues—bone marrow transplantation. Emphasis on use of molecular biology in the detection of minimal disease, RFLP studies of potential mixed chimerism and multidrug resistance. Previous experience in molecular biology techniques preferred. Send curriculum vitae and letters of reference to: Karl G. Blume, M.D., Stanford University School of Medicine, S-201, Stanford, CA 94305-5306.

POSTDOCTORAL FELLOW—MOLECULAR BIOLOGY OF LUNG DEVELOPMENT. Position available 1 January 1989 in NIH-supported laboratory program to study mechanisms of hormone effects on gene expression during development of specific lung cells. Qualifications: Ph.D. with background in molecular biology. Please contact: **Dr. Donald L. Shapiro**, Department of Pediatrics (Box 651), University of Rochester School of Medicine, 601 Elmwood Avenue, Rochester, NY 14642. Telephone: 716-275-5884. An Equal Opportunity Employer (M/F).

POSTDOCTORAL POSITION available 1 August 1988 for biochemist with experience or strong interest in immunochemical assay development. The project con-cerns development of monoclonal antibodies to chemically-modified blood proteins. Send curriculum vitae and names of three references to: Dr. Robert Haas, California Department of Health Services, 2151 Berkeley Way, Berkeley, CA 94704. Equal Opportunity/Affirmative Action Employer.

POSTDOCTORAL POSITION available now to study myeloid membrane structure/function. Research projects involve granulocyte membrane protein purification and characterization, protein phosphorylation, and characterization of molecules recognized by myeloidspecific monoclonal antibodies. Send curriculum vitae and three names or letters of reference to: Dr. Keith Skubitz, Department of Medicine, Box 325 UMHC, University of Minnesota Medical School, Minneapolis, MN 55455. Equal Opportunity Employer.

POSTDOCTORAL POSITION available to conduct studies in one or more of the following areas in a very exciting intellectual environment:

- Enzymology of DNA repair in human cells
 Action mechanism of DNA repair enzymes
- DNA-protein interactions Differential repair of oncogenes
- Roles of folates and flavins in enzymic catalysis

Methods and techniques used in our laboratory include enzyme purification, cloning of repair genes, specific mutagenesis, classical protein chemistry and enzyme kinetics, enzymatic and chemical footprinting, genomic Southern blotting, absorption and fluorescence spectroscopy, flash photolysis, action spectrum measurements. Send applications to: **Dr. Aziz Sancar, Universi** ty of North Carolina at Chapel Hill, Department of Biochemistry, 422 FLOB, CB# 7260, Chapel Hill, NC 27599-7260. Equal Opportunity/Affirmative Action

Chief, Epidemiology Branch



AIDS PROGRAM NATIONAL INSTITUTE OF ALLERGY AND INFECTIOUS DISEASES NATIONAL INSTITUTES OF HEALTH

The AIDS Program of NIAID invites applications for the position of Chief, Epidemiology Branch. Candidates should have a doctorate degree in Epidemiology or be a Board-eligible or Board-certified physician (e.g., Internal Medicine, Preventive Medicine, Pediatrics). Advanced training or experience in public health, epidemiology, and biostatistics is required. A background in the following areas will be helpful: clinical or basic science research; subspecialty training in infectious disease, immunology, pulmonary disease, or oncology; or clinical experience with AIDS. The Branch plans and directs a federal research program into the natural history, epidemiology, and risk factors of HIV and its associated complications. Responsibilities of the position include: providing technical and administrative leadership to the AIDS epidemiologic program; developing, planning, and coordinating extramural epidemiologic research; establishing research priorities; developing and implementing new research initiatives; collaborating in national and international studies, coordinating development of clinical research protocols, and serving as the primary scientific liaison to university- and clinic-based study sites and international agencies.

Salary commensurate with experience. Physicians comparability allowance may be available. U.S. citizenship is required. Please send curriculum vitae or SF 171 to:

> AIDS Program/NIAID Attn: Leslie Friel Executive Bidg., Room 250P 6003 Executive Bivd. Bethesda, MD 20892

NIH is an Equal Opportunity Employer

EDUCATION COORDINATOR

The American Association for the Advancement of Science, a prestigious science association located in downtown Washington, D.C. has an immediate need for an Education Coordinator.

Qualified candidate will have a doctorate in science, science education, or a related discipline, and experience as a teacher, supervisor, or administrator in the elementary or secondary schools. Must understand the social and political structure of the education system in the United States. Experience in coordinating education projects that involve states, school districts, and universities and familiar with all aspects of curriculum development. Collegiality, inventiveness, energy, commitment to educational reform, and the ability to facilitate the work of others will be major considerations for the position.

For immediate consideration, please submit your resume and salary history in confidence

> **Debra Wright** American Association for the **Advancement of Science Personnel Office** 1333 H Street, N.W. Washington, D.C. 20005

INDUSTRIAL POST DOCTORATE



Rorer Central Research

We Can

& We Will

Rorer, a world wide pharmaceutical company has a two year assignment in our Post Doctoral Program working in our Drug Disposition Department.

Candidates should have:

- a Phd or PharmD in relevant biological sciences.
- experience and/or knowledge with small laboratory animal procedures.
- familiarity with chromatographic techniques and radioisotope handling.

Responsibilites include:

- conducting mechanistic studies on the excretion of drug via active or passive diffusion from blood into the intestinal lumen and identifying physiologic factors influencing non-biliary intestinal excretion.
- implementing/developing various experimental and analytical techniques for studying the intestinal absorption/excretion of compounds.
- interacting with scientists in development and evaluation of techniques for enhancing absorption of compounds.

If your background and experience match our requirements, we would like to hear from you. We offer the opportunity for professional growth, a competitive salary and a comprehensive benefits package. Please submit your resume and salary history for confidential consideration to Robbie LaRocca, Personnel Associate, Rorer Central Research, 640 Allendale Road, King of Prussia, PA 19406. An Equal Opportunity Employer, M/F/H/V.



Rorer Central Research Focusing on the future.

ostdoctoral

The Department of Immunology at Smith Kline & French Laboratories, located in suburban Philadelphia, Pennsylvania, is seeking one postdoctoral scientist to participate in a research program in immunoregulation and biochemistry of T cell activation in an environment designed to foster creative research and to promote personal and professional growth.

We consider postdoctoral studies to be of major importance in a scientist's career and encourage publication of findings in leading journals and a full inter-action with the scientific community. Our postdoctoral appointments are normally for a period of two years.

Candidates are required to have:

- Ph.D. with 0-2 years of postdoctoral experience.
 Training in protein biochemistry or biochemical pharmacology.
 Experience and/or practical knowledge in signal transduction mechanisms, receptor binding assays and other biochemical and molecular biological techniques in the characterization of enzymes and receptors
- Good publication record.

The successful candidate will:

- Study receptor-mediated signal transduction pathways in T cell activation.
 Characterize biochemically important targets in T cell regulation.
 Interact with scientists from the Departments of Immunology, Molecular Pharmacology and Molecular Genetics.
 Present work at relevant scientific meetings and publish results in peer-
- reviewed journals.

We offer excellent compensation and benefits and an attractive relocation policy. For confidential consideration, send your C.V. and names of three references to: Angela Varrichio, Associate Employment Administrator, V0042, Smith Kline & French Laboratories, Research and Development Division, P.O. Box 1539, King of Prussia, PA 19406-0939. We are an Equal Opportunity Employer, M/F/H/V



POSTDOCTORAL POSITION, available 1 August 1988, to study the developmental biology (with emphasis on endocrinology) of experimental mammary gland tumorigenesis. Must hold Ph.D. or equivalent degree. Send curriculum vitae and names of three references to:

Dr. Clifford W. Welsch, Department of Anatomy Michigan State University East Lansing, MI 48824-1101

MSU is an Affirmative Action/Equal Opportunity Employer

POSTDOCTORAL POSITION, Drug-DNA interactions. Synthesis and characterization of oligonucleotide- and DNA-drug complexes, computer modeling, DNA sequence specificity, repair. Biorganic, medicinal, or physical biochemistry background necessary. Salary: \$24,000 minimum. Start September. Maria Tomasz, Professor, Department of Chemistry and Center for Study of Gene Structure and Function, Hunter College, City University of New York, New York, NY 10021.

POSTDOCTORAL POSITION available immediately to study regulation of gene expression and molecular changes of mutants in cultured mammalian cells. Applicant should be a recent Ph.D. with a strong molecular biology and genetics background. Send curriculum vitae and names and addresses of three references to: Dr. E. H. Y. Chu, Department of Human Genetics, University of Michigan Medical School, 4708 Medical Science II/0618, Ann Arbor, MI 48109. An Equal Opportunity/Affirmative Action Institution.

POSTDOCTORAL POSITION available for research on mapping structural and functional domains of herpes simplex virus and human cytomegalovirus proteins. Work includes gene cloning, transient expression in eukaryotic cells, construction of mutant viruses, and the use of monoclonal antibodies. Preference will be given to applicants with a strong background in molecular biology and recombinant DNA technology. Interested candidates should submit curriculum vitae and three letters of reference to: Dr. Lenore Pereira, School of Dentistry, University of California San Francisco, HSW-604, San Francisco, CA 94143. Equal Opportunity/Affirmative Action.

POSTDOCTORAL POSITION available immediately for a Ph.D. in biophysics/biochemistry or physical chemistry to participate in studies using NMR methods to elucidate biomacromolecules solution structure and function. Specific systems include metalloproteins and drug-protein interactions. Applicants must have proven experience in NMR with experience in computer programming and protein manipulation techniques preferred but not essential. Send curriculum vitae and the names of three references to:

Dr. Ian M. Armitage
Yale University
Department of Molecular Biophysics
and Biochemistry
333 Cedar Street, P.O. Box 3333
New Haven, CT 06510

POSTDOCTORAL POSITION in biology at M.I.T. available immediately for studies on control of protein synthesis in eukaryotes with emphasis on regulation of protein chain initiation by phosphorylation-dephosphorylation mechanisms. Specific aspects include roles of dsRNA-activated and heme-regulated eIF- 2α kinases, and the function of 'reversing factor' in the recycling of eIF-2. Contact: **Dr. Daniel Levin, Building E25-519**, Massachusetts Institute of Technology, Cambridge, MA 02139. Telephone: 617-253-4307.

POSTDOCTORAL POSITION available to study structure/function relationships in Clathrin and its associated proteins. Research involves analysis of protein-protein interactions, site-directed mutagenesis and expression studies in cell culture systems. Experience in protein biochemistry and molecular biology preferred. Please send curriculum vitae and three references to: T. Kirchhausen, Department of Anatomy and Cellular Biology, Harvard Medical School, 220 Longwood Avenue, Boston, MA 02115.

POSITIONS OPEN

POSTDOCTORAL POSITION in molecular developmental genetics available fall/winter, 1988 in the Biology Division of the Oak Ridge National Laboratory. Project involves the molecular and functional characterization of regions of the mouse genome associated with radiation-induced deletion mutations. Background in genetics, molecular biology, and/or developmental biology desirable. Applicants should arrange for curriculum vitac, a brief statement of research interests, and three letters of reference to be sent to: Dr. Eugene M. Rinchik, University of Tennessee—Oak Ridge Graduate School of Biomedical Sciences, P.O. Box 2009, Oak Ridge, TN 37831–8077. An Equal Opportunity/ Affirmative Action Employer.

POSTDOCTORAL POSITION AVAILABLE immediately to study regulation of protein kinase C gene expression and/or function of PKC isoenzymes. Submit curriculum vitae and three letters of reference to: Dr. Yusuf A. Hannun, Department of Medicine, Box 3355, Duke University Medical Center, Durham, NC 27710. Affirmative Action/Equal Opportunity Employer.

POSTDOCTORAL POSITION in molecular biology of drug metabolizing enzymes at the National Institute of Child Health and Human Development, National Institutes of Health, Public Health Service, to study the genetics, regulation, and expression of glucuronidating enzymes using biochemical and recombinant DNA techniques. Experience desired, but not required. Salary depends on experience and qualifications. Please respond by 26 August 1988. For further information contact: Dr. Ida S. Owens, Section on Drug Biotransformation, Building 10, Room 8C313, National Institutes of Health, 9000 Rockville Pike, Bethesda, MD 20892. NIH is an Equal Opportunity Employer.

POSTDOCTORAL POSITION, available immediately to study the mode of action of antipsychotic drugs and interactions between cholecystokinin and dopamine. Applicant should hold Ph.D. or equivalent with a strong neuroscience background. Experience with in vivo voltammetry or electrophysiological techniques is desirable. Send curriculum vitae and names of three references to: Rex Y. Wang, Ph.D., SUNY at Stony Brook, Department of Psychiatry and Behavioral Science, Putnam Hall, South Campus, Stony Brook, NY 11794–8790. SUNY Stony Brook is an Equal Opportunity/Affirmative Action Educator and Employer, AK#181.

POSTDOCTORAL POSITION

Immediate opening for a postdoctoral fellow to study the influence of aging on the alternative splicing of fibronectin. Studies will involve the use of the transgenic mouse system. While experience is desirable, we will train highly-motivated individuals in areas in which they may not have prior training. Send curriculum vitae and three references to: Dr. Robert J. Klebe, Department of Cellular and Structural Biology, University of Texas Health Science Center, San Antonio, TX 78284.

An Equal Opportunity/Affirmative Action Employer

POSTDOCTORAL POSITION available to study the role of mast cells and macrophages in inflammation. Background in biochemistry and cell biology (physiology) and/or pharmacology or immunology required. Send curriculum vitae and letters of reference to: Dr. Barbara Jakschik, Department of Pharmacology Washington University School of Medicine, 660 South Euclid, St. Louis, MO 63110. Equal Opportunity/Affirmative Action Employer.

POSTDOCTORAL POSITION available immediately to study oncogene activation and DNA damage and repair from ultraviolet light during skin carcinogenesis. Collaborative project between the Laboratory of Radiobiology and Environmental Health and the Department of Dermatology at the University of California, San Francisco. Experience in gene cloning, recombinant DNA and sequencing techniques needed. Two to 3 years funding now available. Send curriculum vitae and references to: Dr. James E. Cleaver, Laboratory of Radiobiology and Environmental Health, University of California, San Francisco, CA 94143–0750. An Equal Opportunity/Affirmative Action Employer.

POSITIONS OPEN

POSTDOCTORAL POSITION available immediately to study brain DNA damage after cardiac arrest and reperfusion, and its role in irreversible neurological damage. Preferred candidate is a molecular biologist with experience in at least one of the following areas: DNA repair, DNA enzymology, free radical mechanisms. Salary related to experience. Position available for at least 2 years. Send curriculum vitae, recent reprints, and names of references to: Dr. Lawrence I. Grossman, Department of Molecular Biology and Genetics, or Dr. Blaine C. White, Department of Surgery, both at Wayne State University School of Medicine, Detroit, M 18201. Wayne State University is an Equal Opportunity/ Affirmative Action Employer.

POSTDOCTORAL POSITION available immediately to study *E. coli* genetics in conjunction with effort to determine complete sequence of the genome. Studies will include technology development, and the relationship between gene expression and genome organization, identification of hitherto unknown genes and construction of a database on *E. coli*. Individual should have a background in molecular biology. Computer experience also helpful. Send résumé and names of references to: D. L. Daniels, Laboratory of Genetics, University of Wisconsin, Madison, WI 53706.

An Affirmative Action/Equal Opportunity Employer.

POSTDOCTORAL POSITION available immediately to study developmentally regulated penicillin-binding proteins in *Bacillus subtilis*. Experience in molecular biology desired. Send curriculum vitae and names of three references to: Dr. C. Buchanan, Department of Biological Sciences, Southern Methodist University, Dallas, TX 75275. *Equal Opportunity/Affirmative Action Employer*.

POSTDOCTORAL POSITION IN PLANT CELL CULTURE. Two-year position available 1 September 1988 to establish culture system of guard cell protoplasts for studies of chloroplast senescence. Applicants should have Ph.D. in botany, plant physiology, plant biochemistry, plant pathology, or similar field. Salary about \$20,000 per year with full benefits. Experience in plant cell culture desirable, but not absolutely required. Submit vitae and three references to: Dr. Gary Tallman, Associate Professor of Biology, Pepperdine University, Malibu, CA 90265. Inquiries by telephone: 213-456-4315.

POSTDOCTORAL POSITION

Immediate opening for an individual with a Ph.D. in marine ecology/biological oceanography specializing in phytoplankton ecology and nutrient dynamics. The successful candidate will participate in ongoing multidisciplinary research programs in Chesapeake Bay. Salary \$18,000 to \$25,000 depending on experience. Send curriculum vitae and three letters of reference to: Dr. Thomas C. Malone, Acting Director, The University of Maryland, Center for Environmental and Estuarine Studies, Post Office Box 775, Cambridge, MD 21613. An Affirmative Action/Equal Opportunity Employer.

POSTDOCTORAL POSITION: FISH ECOLOGY

Two-year postdoctoral position available (starting September 1988) for directed research on annual reproductive and lipid cycles of coastal plain stream fishes (approximately 50% time). Remainder of time open to research of candidate's choosing, but preferably in life history evolution, stream community ecology, or ecological genetics. Completed Ph.D. and US citizenship required; publications and independence expected. Salary approximately \$25,000; research support provided. Send curriculum vitae, statement of research interests, reprints, and names and telephone numbers of three professional references before 20 July 1988 to: Dr. Garry K. Meffe, University of Georgia's Savannah River Ecology Laboratory, Drawer E, Aiken, SC 29801. Telephone: 803-725-2472. An Equal Opportunity/Affirmative Action Institution.

GIBCO/BRL..

A Leader in Biotechnology Applications to Research and Industry — currently is seeking candidates for openings in these areas:

Molecular Biology Biochemistry Enzymology DNA Diagnostics

As a division of Life Technologies, Inc., GIBCO and BRL are recognized as leading brands in the field of cell and molecular biology research products . . . and our success in the marketplace has resulted in a number of new professional positions.

They include:

Group Leader/Instructors for Workshops, Seminars and Training Programs

 Ph.D. in Molecular Biology; excellent written, verbal and communications skills

Scientists/ Senior Scientists

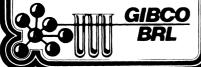
- Ph.D. in Biochemistry/ Molecular Biology/Molecular Virology and 2-4 years postdoctoral training with enzyme system experience
- Ph.D. in Microbial Genetics or Physiology and 4 years postgraduate experience
- Ph.D. in Molecular Biology and 2-3 years experience in diagnostic product development
- Ph.D. with 2 years post-doctoral experience in molecular biology and immunochemistry

Biochemists/ Lab Technicians

 B.S. or B.S. in Biochemistry, Biology, Chemistry or the Health Sciences; M.S. in some positions helpful and some experience in molecular biology. Will carry out development work, planning and experiments in laboratories to support present and new products.

Please send resume or C.V. to: Richard L. Hotaling, Jr., Personnel Personnel Manager, Dept. S1 GIBCO/BRL, Life Technologies, Inc. 8717 Grovemont Circle, Gaithersburg, MD 20877 (A suburb of Washington, D.C.)

An equal opportunity employer, M/F/V/H



Postdoctoral Scientist

Regulation of Apolipoprotein Gene Expression

The Upjohn Company has a position available in the Metabolic Diseases and Molecular Biology Research units to study the regulation of primate apolipoprotein gene expression. An M.D. or Ph.D. in biochemistry, physiology or related field, and prior training and experience studying the physiology and metabolism of lipoproteins are required. Some exposure to recombinant DNA techniques would be helpful, but is not essential since the successful candidate will receive training in this area. This position is available for 2 years.

Kalamazoo is a medium-sized Southwestern Michigan community with immediate access to a mix of excellent cultural, educational and recreational pursuits, including numerous lakes and a four-season climate. Upjohn offers a competitive salary, and a comprehensive benefits program. For prompt, confidential consideration, please send your CV/resume and a copy of transcripts to: M. William Rex, Corporate Employment, The Upjohn Company, 7000 Portage Road, Kalamazoo, MI 49001. Please refer to advertisement number 22718-IIA in your correspondence. We are an Equal Opportunity Employer M/F.

Our Commitment to Scientific Excellence Continues...



BS/MS Scientist

A BS/MS level Scientist position is available within our Medical Products Department's molecular biology laboratory focusing on the molecular genetics of Human Immunodeficiency Virus. The successful candidate will have formal training and work experience in mammalian cell culture and virology, preferably that of retroviruses, as well as experience in recombinant DNA techniques. The applicant will participate in research programs to express HIV genes in mammalian cells and analyze HIV gene function through site directed mutagenesis. The candidate will also be responsible for day-to-day oversight of a virus containment laboratory.

You'll find a highly stimulating scientific environment in a modern research facility near Wilmington, DE. We provide excellent compensation and benefits including relocation. Wilmington's Mid-Atlantic location offers an attractive lifestyle with easy access to affordable housing and a wide range of academic, cultural and recreational activities. Interested candidates should send their resumes and references to: Professional Staffing, Employee Relations Department, Room X-51162, Du Pont Company, Wilmington, DE 19898.



An Equal Opportunity Employer M/F/H/V U.S. Citizenship Required

POSTDOCTORAL POSITION available on 1 July 1988 for beginning postdoctoral candidate. Position will be in laboratory studying epithelial cell polarity and membrane protein sorting—research will involve analysis of targeting in epithelial cells transfected with genes encoding ion pump proteins—experience in molecular biology is desirable. Position is funded by a departmental NIH training-grant. Applicants must be U.S. citizens. Send curriculum vitae with names of references to:

Dr. Michael Caplan
Department of Cellular and Molecular Physiology
Yale University School of Medicine
P.O. Box 3333
New Haven, CT 06510

HARVARD MEDICAL SCHOOL DEPARTMENT OF MICROBIOLOGY AND MOLECULAR GENETICS POSTDOCTORAL POSITION IN BACTERIAL GENETICS AND PHYSIOLOGY

A position is open for studying respiratory regulation of glycerol dissimilation. In Klebsiella pneumoniae the dha regulon specifies four glycerol fermentation enzymes. The work will involve physical mapping, and determination of transcriptional units and direction of the clustered dha structural and regulatory genes. Another major objective is to study the mechanisms of aerobic repression of the structural genes and the inactivation of two of the enzymes during aerobic metabolism. Most of the studies will be carried out in an E. coli host in which a typical regulatory pattern of the dha system was observed. Applications with curriculum vitae and naming three referees to: Professor E. C. C. Lin, Department of Microbiology and Molecular Genetics, Harvard Medical School, 200 Longwood Avenue, Boston MA 02115.

POSTDOCTORAL POSITION IN GENETIC EPIDEMIOLOGY available in Neurogenetics Program at Boston University School of Medicine in midlife neurodegenerative diseases; Huntington's, Alzheimer's, and Wilson's diseases, and Framingham Heart Study. Training in genetics or genetic epidemiology essential. Send curriculum vitae, statement of research interests, and three letters of recommendation to: Dr. Lindsay A. Farrer, Department of Neurology, Boston University School of Medicine, 720 Harrison Avenue, Suite 1105, Boston, MA 02118. An Equal Opportunity/Affirmative Action Employer.

POSTDOCTORAL POSITIONS are available immediately in two areas of biochemistry, (i) mechanistic studies of pyridine nucleotide-dependent enzymes and (ii) the molecular basis for drug-mediated damage of DNA. Experience in one or more of the following areas is desirable: enzymology, synthetic organic chemistry. DNA sequencing, or NMR spectroscopy. Send curriculum vitae and names of three references to: Dr. Norman J. Oppenheimer, Department of Pharmaceutical Chemistry S-926, University of California at San Francisco, San Francisco, CA 94143–0446. An Equal Opportunity/Affirmative Action Employer.

Three 2-year **POSTDOCTORAL POSITIONS** are available immediately in a research group investigating basic mechanisms of synthesis, storage, and utilization of sucrose in sugarcane.

Position 1. Cloning of sucrose synthase gene and molecular biology of sucrose storage. Training in plant molecular biology and experience in constructing cDNA and genomic libraries are essential. Experience in enzymology is desirable (contact: Dr. S. Ramagopal).

Position 2. Biochemical regulation of sucrose metabolism. Strong background in enzymology is essential and knowledge of current concepts of sugar regulatory pathways in higher plants is desirable (contact: **Dr. A. Maretzki**).

Position 3. Biophysical regulation of sucrose storage. Candidates should have a strong background in plantwater relations. Previous experience with the pressure probe is preferred, but not essential (contact: **Dr. F. Meinzer**).

Send curriculum vitae, statement of research interests and names of three references to the relevant PI c/o Hawaiian Sugar Planters' Association Experiment Station, 99-193 Aiea Heights Drive, Aiea, HI 96701–1057.

POSITIONS OPEN

POSTDOCTORAL POSITIONS: Available for studies in various aspects of cancer research and toxicology in the Center in Molecular Toxicology through the Departments of Biochemistry, Chemistry, Medicine, Pharmacology, and Pathology. Areas of investigation include synthetic chemistry related to toxic chemicals, mechanistic bio-organic chemistry, chemistry of heavy metal antidotes, DNA-carcinogen physical interactions, enzymology and regulation of animal and human cytochromes P-450, cloning of genes coding for DNA repair enzymes, cytochromes P-450 and chromatin proteins, the basis of metal carcinogenesis, chromatin function, hepatocarcinogenesis, eicosanoids, regulation of glutathione metabolism, and NMR and mass spectrometry. Salaries are negotiable. Applicants should submit curriculum vitae and three letters of recommendation to: Dr. F. P. Guengerich, Center in Molecular Toxicology, Vanderbilt University School of Medicine, Nashville, TN 37232. An Afirmative Action/Equal Opportunity Employer.

POSTDOCTORAL POSITIONS are available in the Department of Biological Chemistry at the University of California, Irvine. These positions are generally available for 2 years under the sponsorship of department faculty. Faculty research interests focus on the regulation of gene expression (RNA splicing, regulation of protein synthesis, mammalian chromosomal organization, and nucleic acid-protein interactions) and the regulation of cellular processes (growth factor/hormone interactions, oncogene structure and function, ribosome biosynthesis and assembly, cukaryoric RNA polymerase I, molecular generation of metabolic processes, and intracellular protein localization and turnover). Applicants should send a detailed curriculum vitae and the names of two references to:

Ms. Linda Kishimoto, Personnel Administrator Department of Biological Chemistry University of California, Irvine Irvine, CA 92717

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

POSTDOCTORAL POSITIONS CARCINOGENESIS AND AGING RESEARCH

Two positions will be available in my laboratory beginning summer/fall 1988 to study DNA alterations associated with chemical carcinogenesis and aging. Modulation of chemical-induced and age-related DNA damage by pharnacological, hormonal and nutritional effects will be emphasized and correlated with biological effects. Candidates should have experience/interest in biochemistry/molecular biology, metabolism, pharmacology or toxicology. Send curriculum vitae, statement of research interests, and names of three references (or three letters) to:

Dr. K. Randerath Department of Pharmacology Baylor College of Medicine Houston, TX 77030

POSTDOCTORAL/RESEARCH ASSISTANT PROFESSOR POSITIONS

Two positions available immediately to study structure-function relationships in hemophilia-B (factor IX) protein and regulation of tissue factor pathway of coagulation. One position is for a molecular biologist and the other for a protein chemist. Highly motivated candidates with a background in molecular biology and/or protein chemistry should submit curriculum vitae, a short statement of research experience, and names of three references to: S. Paul Bajaj, Ph.D., Division of Hematology, St. Louis University Medical Center, 1325 South Grand Boulevard, St. Louis, MO 63104. St. Louis University is an Equal Opportunity Employer M/F/H/V.

POSTDOCTORAL RESEARCH ASSOCIATE—Mechanism of HIV cytopathicity. Position available to participate in studies on mechanism of HIV mediated cytopathicity and mechanisms of viral persistence in AIDS [Stevenson et al., Cell 53, 483–496 (1988)]. Experience in molecular biology is desirable. Curriculum vitae and three letters of recommendation to: Mario Stevenson, Ph.D., Pathology and Microbiology, University of Nebraska Medical Center, 42nd and Dewey Avenue, Omaha, NE 68105 by 1 September 1988. An Affirmative Action/Equal Opportunity Employer.

POSITIONS OPEN



POSTDOCTORAL RESEARCH ASSOCIATE positions available to study the regulation of cysteine proteinase activity in metastatic tumors at the levels of synthesis, processing and targetting and including regulation by endogenous inhibitors. Techniques which are being used span a spectrum from molecular biology to in vivo metastasis studies. Applicants should have a Ph.D. in biochemistry or a related field with experience in protein chemistry, enzymology, molecular biology, or immunochemistry. Candidates should send curriculum vitae, a brief statement of research experience, and the names of three references to: Dr. Bonnie F. Sloane, Department of Pharmacology, Wayne State University School of Medicine, 540 East Canfield, Detroit, MI 48201. Wayne State University is an Equal Opportunity/ Affirmative Action Employer.

POSTDOCTORAL RESEARCH ASSOCIATE—Immunologist to study secretory, humoral and cellular immune responses in birds and/or mammals orally immunized with live recombinant avirulent Salmonella vaccine strains expressing colonization and virulence antigens from other pathogens. Studies to involve cellular basis for secretory immune response, the induction of and basis for oral tolerance and the effect of immunomodulators on primary and secondary immune responses. Salary commensurate with experience. Résumé and three letters of reference should be sent to: Roy Curtiss III, Department of Biology, Campus Box 1137, Washington University, St. Louis, MO 63130. An Equal Opportunity Employer.

POSTDOCTORAL RESEARCH ASSOCIATE position available immediately for a protein biochemist, molecular biologist, or endocrinologist to study endocrine factors that regulate growth, metabolism and body composition of chickens. Experience in protein purification and characterization, radioimmunoassay, radioreceptor assay, and recombinant-DNA techniques desirable. Send curriculum vitae, research interests, and three letters of reference to: Dr. Larry A. Cogburn, Department of Animal Science, Room 040 Townsend Hall, University of Delaware, Newark, DE 19717–1303. An Equal Opportunity/Affirmative Action Employer.

The Rockefeller University POSTDOCTORAL RE-SEARCH ASSOCIATE in mass spectrometry and surface chemistry of biomolecules.

surface chemistry of biomolecules.

The Laboratory of Mass Spectrometry is seeking a postdoctoral research associate to study the mass spectrometry and chemistry of biomolecules bound to surfaces. Experience in peptide/protein chemistry is desirable. Apply to: Dr. Brian Chait, Mass Spectrometry Laboratory, Rockefeller University, 1230 York Avenue, New York, NY 10021. An Affirmative Action/Equal Opportunity Employer.

POSTDOCTORAL RESEARCH ASSOCIATE POSITIONS

(Two Ph.Ds) available in immunology group studying HIV-1. One position is available to study the role of protein phosphorylation in the infection of CD4(+) T-cells by HIV-1. A second position is available developing immunogenic vaccines to HIV-1 utilizing genetic engineering. Experience in molecular biology and/or cellular immunology is desirable. Send curriculum vitae and three letters of reference to: Dr. James M. Trevillyan, Texas Tech University School of Medicine, Department of Internal Medicine, 1400 Wallace Boulevard, Amarillo, TX 79106–1797.

POSTDOCTORAL RESEARCH— PROTEIN ENGINEERING CALIFORNIA INSTITUTE OF TECHNOLOGY (CALTECH)

Design and characterization of novel catalysts: enzymes in nonaqueous solvents and synthetic metal-binding proteins. Protein structure determination by 2D NMR. Experience with recombinant DNA and Ph.D. in chemistry or biochemistry preferred. Caltech is an Affirmative Action/Equal Opportunity Employer. Women and minorities are encouraged to apply. Send résumé and names of three references to: Dr. Frances Arnold, Division of Chemistry and Chemical Engineering, Caltech 206-41, Pasadena, CA 91125.

MOLECULAR BIOLOGISTS

Participate In Vital Research Operations With A Major Pharmaceutical Firm

OTSUKA PHARMACEUTICAL CO., LTD is an international organization with more than 12,000 employees worldwide and a reputation for excellence and success in health care. We have openings for Research. Assistants to help explore the areas of tumor cell biology and growth factors.

The positions we seek to fill are in our Molecular Biology Dept. and require a BS or MS in a related field and a strong academic and/or professional background. Knowledge of bacterial genetics would be a plus.

If you would like to explore the possibilities of a long term career in an advanced and challenging R & D environment, send your C.V. to: Ms. Anna Haight, OTSUKA PHARMACEUTICAL CO., LTD., 9900 Medical Center Drive, Rockville, MD 20850. An Equal Opportunity Employer M/F



"OTSUKA, people creating new products for better health worldwide."

RESEARCH BIOLOGIST

Cardiovascular Diseases

As a worldwide leader in the pharmaceutical industry, G.D. Searle maintains a reputation for innovation and on-going scientific research. We now offer an opportunity for a research biologist to support our continuing

Involves discovery and development of new antiarrhythmic agents, and evaluation of electrophysiological effects of drugs in isolated cardiac preparations. MS in physiology, pharmacology or related science required, with coursework in cardiovascular physiology and electrophysiology preferred. Experience in intracellular recording techniques is necessary.

We offer an attractive salary and benefits package. For confidential consideration, please send your resume with salary history to: G.D. Searle, Human Resources Dept. HY15, 4901 Searle Parkway, Skokie, IL 60077. Equal Opportunity Employer M/F.

SEARLE

Opportunities in INFLAMMATION RESEARCH Pharmacology/Immunology Specialists

As a rapidly expanding \$500 million, multinational pharmaceutical manufacturer. Alcon Laboratories is presently building its overall capability to generate new technology. The primary thrust of this effort is the development of innovative new drugs to treat certain eye and skin diseases. As part of this effort, we have an immediate need for innovative Pharmacologists to assist in the development and implenon-innovative marmacologists to assist in the development and implementation of pharmacologic and immunologic techniques to assess components of ocular disease. The selected professionals must have a thorough understanding of general pharmacological principles and ability to integrate immunological, biochemical and physiological approaches.

SENIOR SCIENTIST/TEAM LEADER

- Ph.D. in Pharmacology, Immunology, Physiology, or related science
 10 or more years in industry or post-doctoral experience in inflammation research preferred
- Demonstrated ability to collaborate and manage research or drug discovery team

SENIOR SCIENTIST

- Ph.D. in Pharmacology, Immunology, Physiology, Biochemistry, or related science
- related science

 1 or more years of industry or post-doctoral experience in inflammation research or closely related field

 In vitro and in vivo model development experience

 Good oral/written communication skills

Alcon is a high technology corporation building for the future and we Alcon is a high technology corporation building for the future and we need and appreciate talented individual contributors who can function effectively as team members. Naturally, our position includes a competitive starting salary, plus comprehensive benefits including profit sharing trust, group medical and dental. To indicate your interest in exploring these key positions on a confidential basis, please send your detailed C.V. to: Sherry H. Rightmer, T1-3, Alcon Laboratories, Inc., P.O. Box 6600, Ft. Worth, TX 76115. Equal Opportunity Employer, M/F/V/H. Principals Only, Please.



Enzymologist/Drug Discovery

ICI Pharmaceuticals Group, which includes Stuart Pharmaceuticals and ICI Pharma, is one of the fastest-growing producers of quality pharmaceuticals in the U.S. Current research activities are focused on the development of new products for the treatment of cardiovascular diseases, arthritis, cancer, infectious diseases and pulmonary diseases. We have openings at our state-of-the-art laboratories in Wilmington, DE for:

ENZYMOLOGIST/BIOCHEMIST: PhD with 2-3 years' postdoctoral expertise with sound understanding of enzyme kinetics. Will interact with team of biologists and chemists to design and analyze mechanism of action of inhibitors of human neutrophil elastase. Mechanistic studies on other enzymes anticipated. Broad background in biochemistry advantageous.

BIOCHEMICAL PHARMACOLOGIST: BS/MS in Biological Sciences with strong biochemical background to work on the characterization of synthesis and action of lipid hormones (i.e. prostaglandins, leukotrienes and platelet activating factor) in the lung. Experience with separation techniques and RIAs is desirable

PHARMACOLOGIST: BS/MS in relevant discipline with training/experience in biology/pharmacology to conduct in vivo studies measuring pulmonary mechanics. Additional assignments will include in vivo measurements of gastrointes-

We offer an excellent salary and benefits program, including tuition aid for approved graduate study, and opportunities for professional growth

Please send your resume with salary requirement, indicating the position for which you are applying, to: Paul S. Flynn, ICI Pharmaceuticals Group, Wilmington, DE 19897.



Pharmaceuticals Group

An Equal Opportunity Employer M/F

PROFESSOR AND HEAD DEPARTMENT OF BOTANY

The Department of Botany of the University of Georgia invites applications for a headship position in this vigorous department. The candidate should have an exceptional record of research, a commitment to undergraduate and graduate education, and outstanding leadership and administrative abilities. Consideration will be given to applicants with research interests in any area of the plant sciences. The deadline for receipt of applications is 1 October 1989 with the goal of filling the position by 1 September 1989. The University is prepared to negotiate with the candidate to make an attractive and competitive offer. Send curriculum vitae and a list of at least four references to: Botany Department Head Search Committee, Dr. Leonard Mortenson, Biological Sciences Division, The University of Georgia, Athens, GA 30602.

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

Division of Clinical Pharmacology, Department of Pharmacology, Vanderbilt University, School of Medicine. PROTEIN AND ANALYTICAL BIOCHEMISTS. One opportunity is for a Ph.D. postdoctoral fellowship devoted to the purification and study of proteins involved in eicosanoid synthesis and action in the laboratory of Dr. Garret FitzGerald. Prior experience with receptor purification would be desirable. A second Ph.D. postdoctoral fellowship involves study of the lipoxygenase pathways of arachidonate metabolism in the laboratory of Dr. Alan R. Brash. Prior experience in the analytical biochemistry/chemistry of lipids is desirable. These positions will offer the possibility of interacting with multidisciplinary groups focussed on prostaglandins and related compounds. Send applications with curriculum vitae immediately to the attention of: Mrs. Fran Johnston, Vanderbilt University, School of Medicine, Division of Clinical Pharmacology, Nashully/Affirmative Action Employer.

POSITIONS OPEN

POSTDOCTORATES IN PLANT BIOLOGY. Two positions available immediately: (i) molecular biology of glandular trichome-mediated insect resistance in wild potato (ii) biochemical and molecular basis of metal resistance in plant cell cultures. Background in recombinant DNA, protein biochemistry, chemistry, or enzymology preferred. Salary \$19,000 to \$21,000 depending on experience. Send résumé and names of three references to: Dr. John C. Steffens, Department of Plant Breeding and Biometry, Cornell University, Ithaca, NY 14853. Telephone: 607-255-2043.

INSTITUTE OF GENETICS, UNIVERSITY OF COLOGNE, COLOGNE, GERMANY PROFESSOR FOR GENETICS (C3 PROFESSOR)

Applicants are invited who have developed an active research program in molecular biology, with particular emphasis on virology, cell biology, human genetics or tumor (developmental) biology. Teaching obligations will be in genetics and molecular biology for biology students at the University of Cologne.

Applications including curriculum vitae and bibliography should be sent before 1 September 1988 to: The Dekan der mathematisch-naturwissenschaftlichen Fakultät der Universität zu Köln, Albertus-Magnus-Platz, D-5000 Köln 41, Germany.

RESEARCH ASSISTANTS/ASSOCIATES GENSIA PHARMACEUTICALS, INC.

Gensia Pharmaceuticals is a rapidly growing biopharmaceutical firm exploring new therapeutic approaches to cardiovascular, cerebrovascular and neurological diseases. Several B.A.—M.S. level research assistants/associates needed immediately with experience in one or more of the following areas: animal physiology, neurobiology, enzymology, cell culture, or pharmacology, Gensia offers competitive salaries, an attractive San Diego location and excellent fringe benefits. Send curriculum vitae and the names and telephone numbers of three references to: Dr. Paul J. Marangos, Gensia Pharmaceuticals, Inc., Roselle Street, San Diego, CA 92121.

POSITIONS OPEN

QUANTITATIVE ANIMAL ECOLOGIST

Tenure-track position (50% research/50% teaching and advising) assistant professor level starting 1 January 1989. Candidates must have Ph.D., in ecology, fisheries wildlife, degree or equivalent in statistics is desirable. Teaching responsibilities include two courses per year: an undergraduate course and two graduate-level courses offered in alternate years in quantitative analysis of ecological data. The candidate is also expected to develop a nationally recognized research program in their area of expertise and to secure extramural funding. Send letter of interest, curriculum vitae, relevant publications, and three letters of reference by 30 September 1988 to: Dr. Charles Hawkins, Search Committee Chairman, Department of Fisheries and Wildlife, Utah State University, Logan, UT 84322–5210. Utah State University is an Affirmative Action/Equal Opportunity Employer.

RESEARCH ASSOCIATE in nutrient cycling with the Long Term Ecological Research Program on the H. J. Andrews Experimental Forest. Ph.D. in ecology or soils with emphasis in nutrient cycling. Experience with isotopes and/or computer modelling desirable. \$22,000 to \$24,000 per year for 2 years, with possibility of extension depending on funding and performance. Send eltter of application, complete résumé, and three letters of reference by 1 September 1988 to: Dr. Logan Norris, College of Forestry, Oregon State University, Peavy Hall 154, Corvallis, OR 97331–5705. An Equal Employment Opportunity/Affirmative Action Employer. Complies Rehabilitation Act Section 504. OSU has a policy of being responsive to needs of dual-career couples.

RESEARCH ASSOCIATE/Pharmacology-biochemistry positions available immediately for investigation of enzymes encapsulated into carrier erythrocytes for drug antagonism studies. Experience with enzyme purification essential. No experience in drug carrier systems necessary. Send curriculum vitae and three references to: Dr. J. L. Way, Department of Pharmacology, Texas A & M University Medical Sciences Building, College Station. TX 77843. Equal Opportunity Affirmative Action.

Fungal Research

The Department of Anti-Infectives of Smith Kline & French Laboratories, located in suburban Philadelphia, Pennsylvania, is seeking an outstanding Ph.D. level scientist to establish a research program which is directed towards the discovery of antifungal therapeutics and identifying molecular targets for human pathogenic fungi by molecular biological techniques.

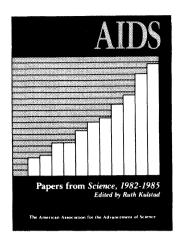
The successful candidate will have:

- Ph.D. in Biological Sciences.
- 1-5 years experience after postgraduate studies.
- Experience in protein-DNA or protein-small molecule interaction.
- Training in molecular pharmacology (preferred but not necessary).
- Training in fungal molecular biology (preferred but not necessary).

We offer an excellent compensation, benefits and relocation package as well as opportunities for personal and professional growth. It is SmithKline Beckman's policy not to employ individuals who use any illegal drugs or prescription drugs without a medical prescription. Therefore, candidates should be prepared to take a drug screening test. For confidential review, please forward your C.V. and names of three references to: Robert F. Obst, Manager, Personnel Relations, R0133, Smith Kline & French Laboratories, Research & Development, P.O. Box 1539, King of Prussia, PA 19406-0939. We are an Equal Opportunity Employer, M/F/H/V. NO PHONE CALLS, PLEASE.



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AIDS: Papers from Science, 1982-1985

Edited by Ruth Kulstad

Some of the most frequently cited papers on acquired immune deficiency syndrome (AIDS) that appeared in *Science* between August 1982 and September 1985 are included in this volume. Arranged chronologically, these 108 research papers and *Science* news reports show how far AIDS research has come and provide an indication of the directions in which it might go. This fully indexed collection is useful not only for the experimental data and conclusions, but also as an excellent source of references to AIDS work in other major journals worldwide.

An overview of research in AIDS to date is provided in the introduction by Dr. Myron Essex, chairman of the Department of Cancer Biology, Harvard University School of Public Health.

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RADIATION MEDICINE ASSISTANT/ASSOCIATE PROFESSOR (CLINICAL)

The University of Kentucky and its Department of Radiation Medicine are joining with the St. Claire Medical Center in Morehead, Kentucky to develop a new Radiation Therapy program located in Morehead. We are seeking applicants who are Board-Certified or Boardeligible in therapeutic radiology. This person will have a faculty appointment at the University of Kentucky in Lexington, and will live and practice in Morehead. The Department of Radiation Medicine will ensure that backup is provided for vacation coverage, etc.
St. Claire Medical Center is a modern, progressive 170

bed acute care regional medical center with an active educational affiliation with the University of Kentucky College of Medicine. Medical staff are progressive caregivers who serve people in an eleven-county area. St. Claire operates three primary care centers, has an extensive in-home services program, and an active public and professional educational program.

Morehead, Kentucky is situated in the scenic Appalachian Foothills and is the home of a regional university with an enrollment of 6,000 students. Morehead offers all the advantages or rural living, while also offering the educational, recreational and cultural opportunities of a university community. Located just 60 miles east of Lexington on I-64, Morehead is convenient to several metropolitan areas.

For additional information, send a confidential letter and current curriculum vitae with references to:

Yosh Maruyama, M.D. Professor and Chairman Department of Radiation Medicine University of Kentucky Medical Center (Room C-15) Lexington, KY 40536–0084

RESEARCH ASSISTANT

Research assistant in biochemical endocrinology and control of proteoglycan biosynthesis. Design and perform experiments to elucidate molecular mechanisms of regulation of proteoglycan synthesis in chick embryo chondrocytes by cell growth factors. Responsible for collecting, analyzing, and summarizing data and preparing preliminary drafts for scientific presentation. Must be able to work under general supervision via weekly conferences with senior investigators. Requirements: Master's degree in biochemistry with thesis and 2 years research experience. Job requires familiarity and experience with equipment common to biochemical laboratories. The skills to execute quantitative biochemical assays are also required. Salary \$18,500 per year; work 40 hours per week. Ad placed by Equal Opportunity Employer. To apply, contact or send résumé to: The Arkansas Employment Security Division, P.O. Box 34047, 1223 West Seventh Street, Little Rock, AR, Job Order no. 417656.

RESEARCH ASSISTANT: Position available for a recent Ph.D. in either physiology, biology, zoology, or biochemistry. Background in developmental or cell biology is desirable. The position offers opportunities in research, training and clinical responsibilities in the field of in vitro fertilization. Salary: negotiable per year. Send curriculum vitae and list of three references to: Dr. Philip J. Chan, Hillcrest Fertility Center, 1145 South Utica Avenue, Tulsa, OK 74104.

RESEARCH ASSOCIATES HOWARD HUGHES MEDICAL INSTITUTE HARVARD MEDICAL SCHOOL

The Laboratory of Molecular Genetics is seeking a research associate to study the hormonal regulation of gene expression. In particular, we are exploring the molecular mechanisms by which thyroid, sex steroid and other hormones control glycoprotein hormone gene expression. Such studies include structure-function analysis. yses of cis- and trans- (thyroid hormone and sex steroid receptors) elements involve in this regulation utilizing in vitro mutagenesis and gene transfer techniques. A Ph.D or M.D. and prior experience in molecular biology and/ or protein biochemistry are essential. Please send curriculum vitae and the names of three references to: Dr. William W. Chin, Thorn Research Building, Room 917, Brigham & Women's Hospital, 20 Shattuck Street, Boston, MA 02115.

POSITIONS OPEN

RESEARCH ASSOCIATE: Research involving total synthesis of Brevetoxins. Basic research involving synthesizing complex molecules. Requires Ph.D. in chemistry, I to 2 years of experience with state-of-the-art research experience in Brevetoxin synthesis and related systems; Must have background in analytical chemistry and chromotography, NMR spectroscopy; 40 hours a week; \$18,000 a year; submit resume or curriculum vitae to: Philadelphia Job Bank, 444 North 3rd Street, Philadelphia, PA 19123, Job Order #4191831.

RESEARCH ASSOCIATE VASCULAR SMOOTH MUSCLE CELL CULTURE/BIOCHEMISTRY

This position is available immediately to study the biochemical mechanisms involved in regulation of vascular smooth muscle contraction. Experience in vascular smooth muscle cell culture is required. Knowledge and experience in Ca⁺⁺-phosphoinositides-protein kinase mediated signal transduction is desirable but not essential. Send curriculum vitae and three references including telephone numbers to: Dr. Huzoor Akbar (telephone: 614-593-2406), Irvine Hall, Program in Physiology and Pharmacology/College of Osteopathic Medicine, Ohio University, Athens, OH 45701.

Ohio University is an Equal Opportunity/Affirmative Action Employer.

RESEARCH ASSOCIATE IN REPRODUCTIVE ENDOCRINOLOGY with experience in cell isolation, culture techniques and measurement of steroids and gonadotropins in Department of Physiology and Endocrinology. Ph.D. in endocrinology and 3 years of postdoctoral experience required with emphasis on study of ovarian function. Salary \$22,000 per annum. Qualified applicants apply with résumé to: Georgia Department of Labor, 601 Greene Street, Augusta, GA 30913, or to the nearest Georgia Job Service Center. Control #GA 5293830.

The Dana-Farber Cancer Institute is seeking to fill one RESEARCH POSITION at the postdoctoral level for an individual interested in studying the regulation of neural differentiation by aFGF, bFGF, NGF, and other defined growth factors in a multidisciplinary environment. Experience in receptor-ligand interaction and/or second messengers, an interest in development biology or neurobiology desirable. Our objective is to help establish how growth factor-receptor interactions, resultant second messengers, and changes in ion permeability control differentiation, gene expression and neurite for mation. Position carries joint appointment in Department of Biological Chemistry and Molecular Pharmacology at Harvard Medical School. Send curriculum vitae, a statement of research interests, and names of three references to: Dr. John A. Wagner, Dana-Farber Cancer Institute, 44 Binney Street, Boston, MA 02115. An Affirmative Action/Equal Opportunity Employer.

RESEARCH STATISTICIAN

Dekalb-Pfizer Genetics is looking for a research statistician. Duties will include coordinating experiments, developing experimental design, general statistical analysis and documenting statistical methods. Individual will be based in DeKalb, Illinois. Applicants should have Ph.D. or equivalent in agronomic field with statistical emphasis, or a Ph.D. in biometry or statistics. Please send résumé to: Greg Olson, Dekalb-Pfizer Genetics, 3100 Sycamore Road, DeKalb, IL 60115.

Equal Opportunity Employer, M/F

SENIOR ASSOCIATE RESEARCH SCIENTIST

Will be part of a multidisciplinary research team developing anti-infective and anti-inflammatory thera-peutics. Requirements include a B.A./B.S. degree in cellular immunology with 4 years of experience or an equivalent combination of education and experience. Expertise in the establishment of primary cell lines, cloning and cell culture scale-up is essential, as is demonstrated experience in the development of murine and human monoclonal antibody producing cell lines by classical techniques and by electrofusion. Familiarity with RIA, ELISA, RID and immunofluorescence assays is required. Annual salary: \$34,000 to \$36,000. Send résumé and job history to: J. McHugh, Cutter Biological, P.O. Box 1986, Berkeley, CA 94701. Equal Opportunity Employer/Affirmative Action.

POSITIONS OPEN

RESEARCH TECHNOLOGISTS RHEUMATOLOGY AND CLINICAL IMMUNOLOGY

As Long Island's most renowned and progressive health care institution, our strong commitment to re-search is evident at our Biomedical Science Research Center.

This opportunity requires a B.S. degree and knowledge of optics and fluorescent chemicals. Computer proficiency and familiarity with electronics will be required in addition to experience operating/managing a

flow cytometric facility.

We provide excellent salaries, tuition reimbursement, health care discounts, comprehensive insurance (including homeowners' and auto), tax-sheltered annuity, onsite banking and daycare, your birthday off—and more! Please send your résumé to: Personnel, North Shore University Hospital, 300 Community Drive, Manhasset, NY 11030.

NORTH SHORE UNIVERSITY HOSPITAL

Equal Opportunity Employer M/F

SHORT-TERM GENETIC SEQUENCE COM-PUTER ANALYSIS TRAINING FELLOWSHIPS. Available at the Dana-Farber Cancer Institute and Harvard School of Public Health. Housing and domestic vard School of Public Health. Housing and domestic travel support provided for from 1 to 3 weeks. Positions open to graduate students, postdoctoral fellows, and senior researchers in molecular biology. Positions pro-vide available software introductory training and/or collaborative research genetic sequence problem support. For further information contact: Susan Russo–J816, Molecular Biology Computer Research Resource, Dana-Farber Cancer Institute, 44 Binney Street, Boston, MA 02115. An Affirmative Action/Equal Opportunity Employer.

SOIL BIOGEOCHEMIST

Design and develop an ecologically-oriented soil science research program emphasizing geosphere-bio-sphere-atmosphere interactions for the Biological Scinces Center of the Desert Research Institute. Grant support and start-up funds are available.
Requirements include a Ph.D. in soil science, extensive

training in the plant sciences, professional experience beyond the Ph.D., a strong publication record, and the proven ability to attract research funding. A research background emphasizing soil-plant-atmosphere interac-

tions and/or remote sensing is highly desirable. Salary commensurate with qualifications, excellent benefits. Applications must be received by 19 August 1988. Send curriculum vitae, statement of research interests, and names of three references to: Personnel Office, Desert Research Institute, P.O. Box 60220, Reno, NV 89506. For additional information contact: Dr. Carl Fox at 702-673-7322.

An Affirmative Action/Equal Opportunity Employer.

MICROBIOLOGISTS/SUBSURFACE BIOREMEDIATION SCIENTISTS (senior staff and consultants) needed to provide technical assistance, coordinate technical assistance programs, and provide expert consulting associated with biotreatability studies and bioremediation of subsurface contaminated soil and ground water. Permanent on-site staff will be based in Ada, Oklahoma. Consultants will be retained on a nationwide basis. DHH/88-14 The Bionetics Corporation, Hampton, VA 23666. Equal Opportunity Employer. M/F/H/V

The Department of Biology at Laval University invites oplications for a TENURE-TRACK FACULTY PO-**SITION**. Applicants should have research expertise in population genetics or molecular biology of development in any taxonomic category (plant or animal). Qualifications: Ph.D. or D.Sc., preferably with postdoctoral experience; working knowledge of French, or ability to quire it within a year from appointment. Rank and cally 781. Active to the collective agreement (minimum Canadian: \$41,000). Send applications (with curriculum vitae and names and addresses of three referees) before 15 August 1988 to: Dr. Jacques Bovet, Département de biologie, Université Laval, Québec, Canada, G1K 7P4.



GENE-TRAK Systems is a fast growing company dedicated to the diagnosis of infectious diseases. Our continued growth has created many new opportunities.

MOLECULAR BIOLOGISTS/ MICROBIOLOGIST

Staff scientist positions available to be accountable for developing, troubleshooting and optimizing new products. Will provide technical support for existing products, scale-up and process development. Requires a Ph.D. in microbiology, molecular biology, or biochemistry with a minimum of two years of industrial experience.

DEVELOPMENT MANAGER

Position available to establish and manage a new group to detect microorganisms in normally sterile bodily fluids. Will be responsible for developing nucleic acid based assays. This senior level position requires previous experience with developing screens assays. Must have a Ph.D. and previous experience with blood culture and septicemias. Also requires at least 5 years of product development experience and good knowledge of immunoassay development and/or molecular biology.

GENE-TRAK Systems, located in the western suburbs of Boston, offers a lucrative compensation and benefits package that includes equity participation. For immediate consideration send your resume to: Brian Mazar, Human Resource Director, Dept. S7-8, GENE-TRAK Systems, 45 New York Ave., Framingham, MA 01701.

An equal opportunity employer



Research Scientist Membrane Transport

The Upjohn Company, a worldwide leader in pharmaceutical research, has an immediate opening for a Research Scientist in our Drug Delivery Systems Research Group. This program will develop new concepts for facilitating and/or enhancing the transport or delivery of polar compounds, peptides, and protein drug molecules across or to cellular barriers. The preferred candidate will have a Ph.D. and at least 2 years post-doctoral experience with a proven record of independent research potential and significant publications in major scientific journals. The position requires a background in membrane biochemistry and/or biophysics, with emphasis in membrane structure, transport, or receptors. The successful candidate will be expected to establish an independent basic research program that leads to an understanding of membrane transport and recognition phenomena which are relevant to the delivery and cell-specific targeting of bioactive molecules.

Upjohn is located in Kalamazoo, a mid-sized community in southwestern Michigan, midway between Chicago and Detroit. Our area offers varied cultural events, cosmopolitan shopping and entertainment, lakes and woodlands minutes away, abundant year-round sports and recreation. Upjohn offers advancement opportunities, a highly competitive salary, comprehensive benefits and relocation assistance. For confidential consideration, please call from outside of Michigan toll free 1/800/253-8600, ext. 3-6767, (inside Michigan call collect 616/323-6767) to request an employment application be sent. Please refer to advertisement number 21947-HA when calling. An Equal Opportunity Employer M/F.

Our Commitment to Scientific Excellence Continues...



RESEARCH SCIENTIST BIOCHEMISTRY

The Dermatological Research Group of the Bristol-Myers Pharmaceutical Research Development Division has an opportunity for a Research Scientist to join a multi-disciplinary team in the discovery of new drugs for the treatment of skin diseases. The position is in the PreClinical Biochemical Pharmacology Group.

This position requires a Ph.D. in Biochemistry or Biochemical Pharmacology with 1-3 years post-doctoral experience in general biochemical techniques with emphasis on enzymology and receptor binding techniques. The successful candidate will be expected to develop an independent research effort aimed at identifying potential enzyme (or other) targets for the development of new anti-inflammatory drugs for the treatment of psoriasis and other skin diseases. Supervisory experience and leadership skills are important since the position will supervise other scientists.

This position offers an opportunity to work on scientifically exciting and state-of-the-art programs in dermatology. A very attractive and competitive salary and comprehensive benefits package is available. Submit resume and salary requirements in confidence to:

Manager, Human Resources

Bristol-Myers Company

Pharmaceutical R&D Division

100 Forest Avenue, Buffalo, N.Y. 14213

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TENURE-TRACK PHARMACOLOGY/TOXI-COLOGY POSITIONS: Openings for Assistant, Associate, or full Professor. Requires Ph.D. in pharmacological pharmacological professor and professor are professor are professor and professor are professor are professor are professor and professor are professor are professor are professor are professor are professor and professor are professor are professor are professor and professor are pro gy/toxicology. Experience in teaching, postdoctoral training, and ability to establish independent fundable reaming, and ability to establish independent fundable research are required. Area of specialization is open. Send résumé and names of references to: Search Committee, Pharmacology Department, School of Medicine, University of North Dakota, Grand Forks, ND 58202. UND is an Equal Opportunity Employer.

Department of Physiology in the Medical School wishes to fill a TENURE-TRACK POSITION, the level to depend on experience and research support. Opportunity also exists for an appointment at Dalton Research Center. Focus is on membrane biophysics, receirch Center. Focus is on inemorane biophysics, cellular and molecular biology which can interact with programs in cardiovascular physiology and pathophysiology (hypertension, angiogenesis). Department recently recruited four faculty who are investigating membrane channel and transport regulation. A campus program in molecular biology is established which includes core facilities. The successful applicant shall establish an independent laboratory, either in the Department, the Dalton Research Center or both. Other duties include teaching in medical or graduate physiology courses. Salary and start-up funds are competitive. Send curriculum vitae and reference list to: Dr. Allan W. Jones, Department of Physiology, University of Missouri, MA415 Medical Sciences, Columbia, MO 65212. Must be received by 31 August 1988. An Equal Opportunity Employer with special initiatives for women and minorities.

THEORETICAL ECOLOGIST—Point Reyes Bird Observatory is seeking a theoretical ecologist to work with large data sets in population/community ecology and food web dynamics in its research programs. Requirements: M.S. degree in statistics; Ph.D. in ecology, vertebrate zoology (or related fields), and solid publications record. Salary: \$30,000. Send cover letter, résumé three professional references, and reprints of three publications to: Job Search, PRBO, 4990 Shoreline Highway, Stinson Beach, CA 94970.

VIROLOGIST

Hands-on bench position working with HIV and other viruses. Research involves quantitating the destruction of infectious virus by chemical disinfection. Good Industrial opportunity. Salary is \$30,000 to \$40,000 (commensurate with experience). Send a detailed résumé with a letter of application to: Microgen, Inc., 122 Fairfield Road, Fairfield, NJ 07006.

VISITING RESEARCH ASSISTANT PROFES-SOR OR POSTDOCTORAL: Outstanding individual should have background and knowledge of carbohydrate and electronchemistry and possibly electrodes. Will be and electronchemistry and possibly electrodes. Will be participating in the creative development of a unique implantable needle type glucose sensor based on an equilibrium reaction between a glucose complex-ion exchanger in a polymer matrix and a glucose solution. Pending continued funding this research program may extend for more than 1 year. Send application with résumé and references to: Professor E. Wilkins, Chemical and Nuclear Engineering University of New cal and references to: Professor E. Wilkins, Chemical and Nuclear Engineering, University of New Mexico, Albuquerque, NM 87131. Affirmative Action/ Equal Opportunity Employer. Application deadline: 26 August 1988.

AWARDS

The Rosenstiel School of Marine and Atmospheric Science of the University of Miami seeks nominations for the ROSENSTIEL AWARD.

The Rosenstiel Award is presented annually to recognize outstanding achievement and distinction in oceanographic science. This year's award will be presented for excellence in the field of marine geology and geophysics. Nominations including a curriculum vitae and the names of three referees should be sent to: **Dr. Garrett W.** Brass, Chairman, Rosenstiel Award Committee, Division of Marine Geology and Geophysics, Rickenbacker Causeway, Miami, FL 33149.

TRAINING PROGRAMS

UNIVERSITY OF ARKANSAS FOR MEDICAL SCIENCES POSTDOCTORAL TRAINING PROGRAM IN DRUG AND ALCOHOL ABUSE

The University of Arkansas for Medical Sciences anticipates filling several postdoctoral positions in the drug and alcohol abuse training program. Fellows entering the program will receive a starting salary of \$23,000 per year with a \$1,000 annual increase. These positions will be available as of 1 July 1988. The current faculty and their research interests are: T. Badger (ethanol and opiate effects on neuroendocrine function and tissue growth and development), **D. Davies** (ethanol effects on neuro-nal tissue repair), **K. Light** (developmental aspects of ethanol administration), **C. Lumpkin** (ethanol effects on tissue regeneration and growth), D. E. McMillan (behavioral pharmacology of drugs of abuse, drug discrimination, drug interactions), R. E. Mrak (ethanol effects on cholinergic transmission), **S. M. Owens** (immunological models of drug receptors, experimental therapeutics, pharmacokinetics), **G. R. Wenger** (behavioral pharmacokinetics) macology of drugs of abuse, memory and learning, drug interactions), W. D. Wessinger (behavioral pharmacology of drugs of abuse, receptor binding, drug withdrawal). In addition, collaborative arrangements with personnel from the neighboring National Center for Toxicological Research (developmental effects, chronic effects of drugs of abuse) can be arranged.

Candidates should address initial inquiries to: **Dr.**

Galen R. Wenger, Department of Pharmacology and Toxicology/Mail Slot 611, University of Arkansas for Medical Sciences, 4301 West Markham Street, Little Rock, AR 72205.

OPPORTUNITIES FOR ADVANCED STUDY IN MAMMALIAN REPRODUCTIVE BIOLOGY. NIH-supported predoctoral and postdoctoral training opportunities with an interdepartmental, multidisciplinary orientation. Research areas include: glycoprotein synthesis and role in implantation (Carson), steroid hormones and carcinogensis (Jones), neuroendocrine control of gonadal function in primates (Knobil), bio-synthesis and function of glycoproteins in differentiation (Lennarz), protein transitions in spermatogenesis and reproductive toxicology (Meistrich), control of placental blood flow and fetal cardiac output (Parisi), molecular mechanisms controlling spermatogenesis and uterine re-laxation (Sanborn), cell interactions during fertilization and early development (Shur), Sertoli cell function and and early development (Shur), Sertoli cell function and regulation of testicular functions (Steinberger), receptor-chromatin interactions and testicular polyamine metabolism (Tsai), placental prostaglandins in hypertension, pregnancy, and labor (Walsh), chemistry of glycoprotein hormones and inhibin (Ward). Limited to U.S. citizens and permanent residents. Send inquiries to: Dr. B. Sanborn, Director, Training Program in Mammalian Reproduction, Department of Biochemistry and Molecular Biology, University of Texas Medical School at Houston, P.O. Box 20708, Houston, TX 77225.

The University of Texas is an Equal Opportunity Employer.

The University of Texas is an Equal Opportunity Employer. Women and minorities are encouraged to apply.

FELLOWSHIPS

RESEARCH FELLOWSHIP IN OTOLARYN-GOLOGY AND RELATED BASIC SCIENCE SPE-CIALTIES—A 2-year fellowship is available for a basic scientist with a Ph.D. Opportunities are available in the following areas: tumor preparation, cell culture, flow cytometry, biochemistry of the inner ear, olfactory physiology, energy-linked transport in the inner ear, cancer immunology, deglutition, mucosal immunology, psychosocial interventions of cancer patients, experimental therapeutics. Apply to: Robert H. Mathog, M.D., Chairman, Otolaryngology 5E-UHC, Wayne State University, 540 East Canfield, Detroit, MI 48201.

University of Southern California (USC), Department of Biomedical Engineering, offers NIH POSTDOCTORAL (PH.D. OR M.D.) FELLOWSHIPS in cardiopulmonary research. Areas of interest include control mechanisms at rest and during exercise, respiratory and circulatory mechanics, and non-invasive circulatory assist. Permanent U.S. residency or citizenship required. Salary range dependent on experience (\$16,000 to \$30,000). Send résumé to: Dr. Stanley Yamashiro, BME Department, USC, Los Angeles, CA 90089— 1451. Applications are encouraged from minorities and women. An Equal Opportunity/Affirmative Action Employer.

FELLOWSHIPS

POSTDOCTORAL FELLOWSHIP

Available August-September 1988 in molecular biology to work on human malaria vaccine, and the role of heat shock and glucose regulated proteins in the parasite. Projects involve current methods in molecular biology, protein chemistry, human and murine MAbs [Par. Imm. 9:321 (1987); PNAS, in press]. Salary as per NIH guidelines. Send curriculum vitae and three letters to: Nirbhay Kumar, Ph.D., Immunology and Infectious Diseases, Johns Hopkins University (JHU), 615 North Wolfe Street, Baltimore, MD 21205. Tele-phone: 301-955-7177. JHU is an Equal Employment Opportunity/Affirmative Action Employer.

KING'S COLLEGE, CAMBRIDGE, ENGLAND JEANTET RESEARCH FELLOWSHIPS IN HUMAN OR MAMMALIAN MOLECULAR GENETICS

Applications are invited for Senior or Junior Research Fellowships in Human or Mammalian Molecular Genetics. Elections will take place in December 1988 and the Fellowships will run from 1 October 1989 to 30 September 1993. The Fellowships are open to men and women graduates of any university. Eligibility for the Junior Fellowship is limited to candidates who have completed no more than about 5 years of research by October 1988. Candidates for the Senior Fellowship will normally have had some years of postdoctoral research experience. Stipends range from about £8,500 to about £15,600,

depending on age and experience.

Applications will need to be made by mid-September 1988. Write at once for further details, and information on how to apply, to: The Provost, King's College, Cambridge, England CB2 1ST.

POSTDOCTORAL FELLOWSHIPS AND STUDENTSHIPS DEPARTMENT OF BIOCHEMISTRY AND MOLECULAR BIOLOGY UNIVERSITY OF BERN

Applications are invited from suitably qualified candidates to participate in one of the following projects:

- Structure and function of protein kinase c.
 Cytochrome c oxidase from P. denitrificans: Loca-
- tion of active centers and molecular aspects of the electron transport and of the proton pump.

 3) The anion carriers of the mitochondrial mem-
- branes: isolation, reconstitution and structure studies.

Annual salary ranges for a postdoc from \$35,000 to \$45,000 US\$ and for a Ph.D. student from \$17,000 US\$ to \$22,000 US\$.

OSS to \$22,000 USS.

Applicant should send as soon as possible a full curriculum vitae, including the names of two academic referees to: Professor Angelo Azzi, Director, Institut für Biochemie und Molekularbiologie, Universität Bern, Bühlstrasse 28, 3012 Bern, Switzerland. Telephone: Switzerland (31) 654111. Fax: Switzerland (31) 6543737.

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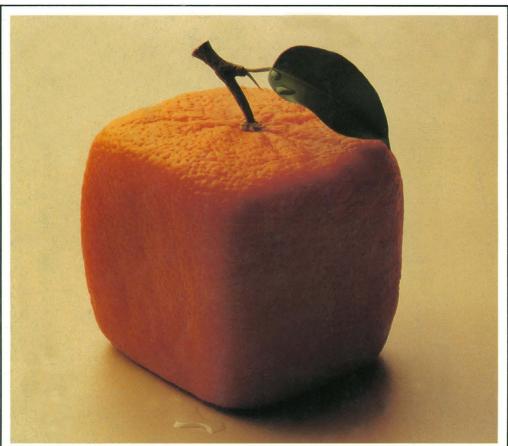
CAT. NO.	FACTOR	PURITY	ACTIVITY (ED ₅₀)
100-B	h TGF β	>97	0.1–1.0 ng/ml¹
101-B1	pTGFβ1	>97	0.1–1.0 ng/ml¹
101-B2	pTGFβ2	>96	0.1–1.0 ng/ml ²
120-HD	hPDGF	>95	1–3 ng/ml ³
125-PD	pPDGF	>96	1–3 ng/ml⁴
132-FA	b FGF(a)	>96	1–4 ng/ml⁵
133-FB	bFGF(b)	>94	0.05–0.1 ng/ml⁵

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- 1 Transforming growth factor type beta isolated from human platelets (hTGFβ) or from porcine platelets (pTGFβ1) is sequentially (first 50 a.a.) and biologically identical. Both give an ED₅₀ of 0.1-0.4 ng on NRK (49F) cells when assayed as per Assoian et al JBC 258, 7155, 1983, and 0.8-1.0 ng/ml on AKR (28) after Tucker et al CAN RES 43, p1581, 1983.
- $2 \quad \text{pTGF}\beta2 \text{ is a structurally distinct second form of TGF}\beta \text{ (sequence homology }70\% \text{ in the first 50 a.a. to hTGF}\beta/\text{pTGF}\beta1). When assayed as above, it gives the same ED50s on NRK and AKR cells. However, some cell lines can distinguish between pTGF<math>\beta2$ versus pTGF $\beta1/\text{hTGF}\beta$.
- 3 Human platelet derived growth factor h(PDGF) is assayed on Balb/c-3T3 and NIH-3T3 cells for H3-thymidine incorporation as per Raines and Ross, Meth. in Enz. 109, p749.
- 4 Porcine PDGF is structurally very different from hPDGF (i.e. differs in M.W., subunit composition, N-terminus), it's activity is determined as in 3 above.
- 5 Both the acidic and basic forms of bovine fibroblast growth factor are isolated from brain and assayed for H3-thymidine incorporation on NR6-3T3 cells after Gospodarowicz, et al JBC, 253, p3736, 1978.



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