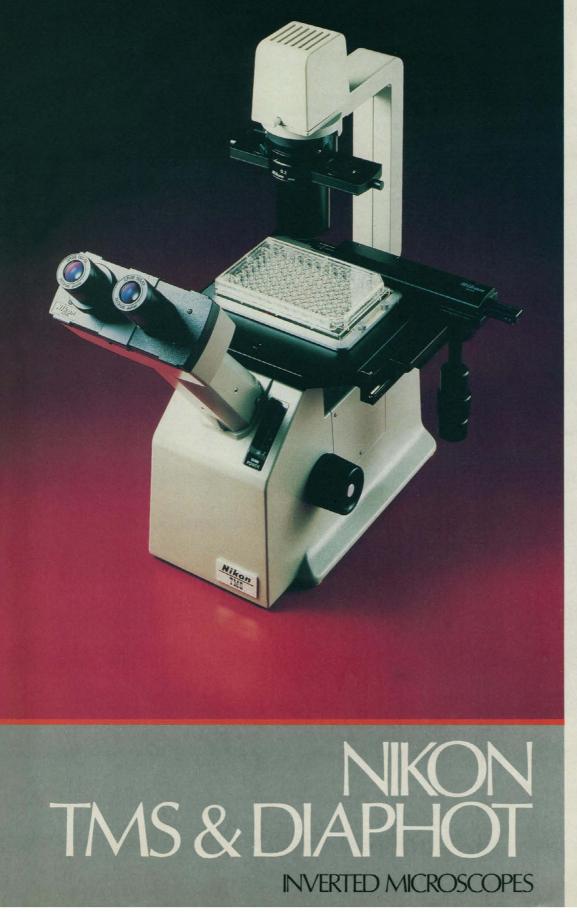
# Perfectly simple...simply perfect



he new Nikon TMS inverted microscope perfectly combines simplicity of operation with Nikon's high performance standards. It utilizes Nikon CF optics, famous for crisp, clear images. Precorrected phase objectives eliminate distortion caused by plastic vessels. The 3-place nosepiece accepts brightfield and phase contrast parfocal objectives from 4X to 40X.

All optics are quickchange, and the condenser is easily removed for scanning rollerbottles. The large stage is fixed for stability and easy micromanipulation. The 20 watt halogen illumination is pre-centered with built-in filter holders.

The Nikon TMS is the perfect inverted microscope for routine laboratory work at an amazingly affordable price.

### **F**or more

more advanced microscopy, there is the renowned Nikon Diaphot. It is perfectly suited for



documentation; from 35mm to large format and Polaroid® for CCTV and cinemicrography. The Diaphot has complete capability in phase contrast, fluorescence and Nomarski DIC.

Nikon now has the perfect answer to all your inverted microscope needs. For further information, contact Nikon Inc., Instrument Division, 623 Stewart Avenue, Garden City, NY 11530 (516) 222-0200.

For information circle reader service number 87. For a demonstration circle reader service number 88.



## **Products & Materials**

## Automated Sample Handling

The SPD 2000 is a fully programmable liquid sampling and preparation system. By means of a robotic language, the user can program serial dilutions, enzyme-linked immunosorbent assay protocols, and radioimmunoassay procedures. The user sets up the instrument and defines work areas with a tracker ball. The system can accommodate bottles, beakers, test tubes, cuvettes, and microplates. Optional modules available for the SPD 2000 include a peristaltic pump, a microplate washer, a tube washer, and two z-drive assemblies, each with a dual probe. The SPD 2000 operates with IBM XT and AT computers, as well as with many XTcompatible computers. Dynatech Laboratories. Circle 457.

## Microcentrifuge Tube

The Safe-Lock is a 1.5-ml microcentrifuge tube. A positive-sealing cap lock snaps closed and stays closed. Unlike the caps of conventional screw-cap tubes, the cap of this one-piece tube can be opened with one hand and with no risk of splashover. The Safe-Lock has an etched writing surface for sample identification and a rounded bottom for optimized pellet formation. The tube is available in blue, transparent, green, red, and yellow, as well as amber for lightsensitive samples. It can be autoclaved at 121°C. Brinkmann Instruments. Circle 458.

## Inverted Microscope

The Axiovert 405 M is an inverted photomicroscope. All focusing is accomplished with the nosepiece, ensuring that stage height does not change and stability is not impaired. The nosepiece is motorized to allow quick changes of objectives. Light is provided by a 12-V, 100-W halogen lamp, which is mounted on a hinged carrier that tilts back to allow manipulations or the

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exchange of culture dishes. Because images are upright and side corrected, specimen and image always move synchronously. Light paths for both a 35-mm and a 4 by 5 format camera are built-in, and the user presses a button on the stand to choose between them. Carl Zeiss. Circle 465.

## Graphics Supercomputer

The GS1000 is a desk-side supercomputer designed for interactive three-dimensional graphics in applications such as molecular modeling and image processing. It draws 150,000 Gouraud-shaded Z-buffered polygons per second and performs 8.6 million floating-point operations per second as measured by the 100 by 100 all-Fortran Linpack benchmark. Its machine architecture includes a multistream processing unit dedicated to transparent parallel processing



across four individual instruction streams, an integrated vector floating-point processing unit, and a dedicated graphics rendering unit. The multitasking operating environment is based on UNIX system V.3. The GS1000 has an expandable main memory of 16 megabytes, 1 megabyte of cache memory, one to four internal 380- or 760-megabyte disk drives, a 19-inch color monitor with a resolution of 1280 by 1024, five IBM AT-compatible slots, and four virtual machine environment (VME) slots. From \$98,000. Stellar Computer. Circle 464.

## Fast 3-D Graphics on PCs

The 3D Engine display controller board allows an IBM PC AT to display threedimensional (3-D) wire-frame and shading graphic functions as quickly as a graphics workstation. The 1200-polygon Teapot model, for example, can be flat shaded and rotated in about 0.25 second. Interpolated shading with the Gouraud method yields 2500 hundred-pixel four-sided polygons per second, and Phong rendering yields 500 polygons per second. The number of light sources is limited only by the size of the board's memory. Two-dimensional primitives include scan conversion of lines, polylines, markers, polymarkers, text, circles, arcs, ellipses, and splines. Hidden lines of wireframes and hidden surfaces are automatically removed. The 3D Engine's power is equivalent to that of a VAX 8600. Because none of the features are hardwired, the 3D Engine may be customized in any way by software. \$5995. Nth Graphics. Circle 460.

## X-ray Fluorescence Analyzer

The X-MET 840 is a portable x-ray fluorescence analyzer that can detect and analyze elements from aluminum through uranium in quantities of only a few parts per million. Because the instrument is modular, probes can be interchanged or a flow-through cell can be added. Liquid, powder, and solid samples may be analyzed in seconds with little preparation. The instrument may be calibrated in any unit, and results are automatically displayed on the liquid-crystal alphanumeric display and built-in printer. The memory can store procedures for quantifying as many as six elements simultaneously and for calculating interelement correlations for as many as ten elements. Because the X-MET 840 has a built-in keyboard and a 10hour battery pack, it may be easily taken into the field. In the laboratory, the instrument can be interfaced to a computer by an RS-232C serial connection. Princeton Gamma-Tech. Circle 459.

## Literature

The SpeedFuge brochure features a tabletop high-speed centrifuge that can hold 48 microcentrifuge tubes and operates at speeds as high as 10,000 rpm. Savant Instruments. Circle 474.

The Laboratory Catalog is a 430-page catalog of more than 5000 instruments, pieces of equipment, and glass and plastic products, including tissue culture flasks, water purification systems, pipettes and centrifuges made of break-resistant glass, and cryogenic vials. Corning Glass Works, Science Products. Circle 475.

Temperature Measurement is a 262-page catalog of thermocouples, remote temperature detectors, thermistors, thermowells, and other instruments for measuring temperature. JMS Southeast. Circle 484.

Chemicals, Kits & Supplies is a 12-page catalog of electrophoresis supplies. HBI, Haake Buchler Instruments. Circle 476.

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.

# 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 under-standing that the advertiser does not discriminate among applicants on the basis of race, sex, religion, age, color, national origin, handicap, or sexual prefer-ence. 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 commis-sion 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: 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 charac-ters 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 estimated lines and actual typeset lines and the result-ing final cost. Purchase orders must allow for some degree of flexibility and/or adjustment.)

#### CANCELLATION POLICY:

10TE: Ad cancellations made after Thursday, TWO reeks prior to issue date incur a 10% production harge. Final deadline for cancellations is 12 p.m. uesday, ONE week prior to issue date. Cancellations weeks p charge. Tuesday must be in writing

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**

Computational Chemist/Molecular Modeling. Ph.D. Physical chemistry, protein x-ray crystallography, molec-ular modeling, and drug design. Scientific programming to analyze complex biological systems. Publications. Seeks research and development position. Will relocate. Box 70, SCIENCE.

Electron Microscopist. M.S. in cell biology. Extensive experience in neuroscience and protistological research diagnostic EM experience. All EM process elements, immunocytochemistry, image analysis, ARG. U.S. west, sunbelt, or English-speaking laboratory situation world-wide. Box 67, SCIENCE.

Ph.D. Immunologist. Seeks industrial/academic position. Experienced in cytokine production and assay, macrophage function, flow cytometry, T cell cloning, hybridoma technology, and clinical trials. Box 68, SCI-ENCE.

### POSITIONS WANTED

Immunologist, Ph.D. Experienced researcher and project manager with background in hybridomas, monoclo nal antibodies, cancer immunology, lymphokines, and large-scale tissue culture. Seeking responsible position in development of immunotherapeutic approaches to human disease. Box 63, SCIENCE.

Instrument Maker with 20 years of experience in high energy physics and medical research field seeks position with industrial or academic establishment. Works in a wide range of media with expertise in equipment design from invention through to finished product. Box 71, SCIENCE

Membrane/Protein Biochemist (assistant professor), Ph.D. in organic chemistry, synthesis, and photochemical kinetics. Broad knowledge in biochemistry, physiology, organic chemistry (synthetic and analytic), and chem-ical technology. Ten years of research experiences in renal physiology, membrane vesicle transport, protein purification, design, and synthesis of chemical compounds for purpose of membrane studies and protein/peptide modipurpose of memorane studies and protein/peptide modi-fication and reconstitution of membrane proteins into liposomes (peer-reviewed publications). Seeking a chal-lenging position in academic or industrial branch. Box 72, SCIENCE.

Physician/Scientific Writer-Editor offering comprehensive scientific writing program to support publication and funding efforts of a medical school or other biomedical research institution. Program includes expert individual manuscript consultation and "Effective Scientific Writing in Biomedicine" seminars. This program can also be integrated into an existing scientific writing department. Box 69, SCIENCE.

Scientific Data Analysis and Presentation. Semi-relatde Ph.D. (physiology), with over 30 years of experience developing and programming, both routine and novel analysis methods; many refereed publications. Lower rates for interesting projects. Box 65, SCIENCE.

### **POSITIONS OPEN**

### ACADEMIC DEAN COLLEGE OF MATHEMATICS & SCIENCE

Candidate must have an earned doctorate with credentials commensurate with an academic discipline within the college; at least 3 years of academic administrative experience at the level of department chair or equivalent; and demonstrated successful university teaching experi-ence. Send cover letter, résumé, official transcripts, and at least three letters of recommendation by 20 May 1988, to: Blanche Washington, Director, Personnel Serv-ices, Central State University, Edmond, OK 73060-0171. An Affirmative Action/Equal Opportunity Employer.

ASSISTANT PROFESSOR. Research biochemist to join an academic group at North Shore University Hospital, a teaching affiliate of Cornell University Medi-Hospital, a teaching affiliate of Cornell University Medi-cal College. Research conducted on hormonal control of vascular resistance. Expertise in receptor protein isolation and purification, post-receptor signaling systems, and/or molecular biology techniques required. Please submit letter of application with curriculum vitae, reprints or preprints of recent experimental work to: Dr. Barry M. Wilkes, Director, Research Laboratory of Nephrolo-gy and Hypertension, North Shore University Hospi-tal, 300 Community Drive, Manhasset, NY 11030. *An Eaual Obbortunity Emblower*. An Equal Opportunity Employer.

# ASSISTANT PROFESSOR NATURAL SCIENCE— GENERAL STUDIES

Applications are invited, especially from minorities and women, for a 2-year appointment starting end of August 1988. Requires doctorate in a physical science or science education. Primary instructional responsibility is to teach science courses at the undergraduate level for prospective elementary school teachers, with flexibility to teach other general education science courses. Send résumés and names of three references to: **Dr. Visho** Sharma, Chair of Faculty, College of General Studies, Western Michigan University, Kalamazoo, MI 49008, by 27 May 1988. Telephone: 616-387-5405. Affirmative Action/Equal Employment Opportunity.

### POSITIONS OPEN

# ASSISTANT PROFESSOR DEPARTMENT OF CELL BIOLOGY UNIVERSITY OF MASSACHUSETTS MEDICAL SCHOOL (UMMC)

The department invites applications for the first of several new tenure-track positions that will be available. We are seeking an individual who will establish an independent research program involving cellular and molecular approaches to problems of biological function. The department has a strong interest in the areas of cell proliferation, regulation, differentiation, and develop-ment. The successful candidate will be expected to participate in the teaching of medical or graduate courses. Generous office and laboratory space and start-up funds will be made available. A Ph.D. degree or equivalent and postdoctoral experience are required. Applicants should send curriculum vitae, statement of research objectives, and names and addresses of four individuals from whom references could be requested to: Faculty Search Committee, Department of Cell Biol-ogy, University of Massachusetts Medical School, 55 Lake Avenue North, Worcester, MA 01655. Deadline for application is 15 May 1988. UMMC is an Equal Opportunity/Affirmative Action Employer.

ASSISTANT PROFESSOR—INSECT PEST MANAGEMENT/VEGETABLES. (Extension/research). Tenure-track. Duties include extension (60%)---demonstration and implementation of insect pest man-agement programs. Research (30%)-management of major insect pests of vegetables. Teaching (10%)— seminar course in insect pest management. Full position description available. Qualifications include Ph.D. in entomology or related discipline with training in insect pest management. Forward: (i) letter describing qualifi-cations and interest, (ii) curriculum vitae, (iii) list of cations and interest, (ii) curriculum vitae, (iii) list of publications (include reprints), (iv) transcripts (post-secondary education), (v) names and addresses of three references to: R. A. Morse, Chair, Department of Entomology, Cornell University, Comstock Hall, Ithaca, NY 14853-0999. Application deadline is 1 August 1988. Cornell is an Equal Opportunity/Affirmative Action Employment Action Employer

### MARINE PLANTS

The College of Marine Studies at Lewes at the University of Delaware wishes to fill a 12-month, tenure-track position in plant molecular biology. We seek an individ-ual with research interests in the environmental factors affecting marine or marsh plants, including algae, and who will teach a graduate lecture/laboratory course in molecular biology. Submit a letter of application describing research interests and background, curriculum vitae, and three letters of recommendation to: J. S. Boyer, Search Committee Chairman, College of Marine Studies, University of Delaware, 700 Pilottown Road, Lewes, DE 19958. For full consideration, appli-

cations should be completed by 1 June 1988. The University of Delaware is an Affirmative Action/ Equal Opportunity Employer.

ASSISTANT PROFESSOR/REPRODUCTIVE PHYSIOLOGIST (emphasis on cellular mechanisms) tenure-track position to begin 1 July 1988. Position involves 70%/30% ratio of research to teaching. Research: develop graduate and research program in reproductive physiology that will attract external funding and collaborate with department colleagues in ongoing recourse in experimental endocrinology of reproduction per year, and graduate course in reproductive physiology in alternate years. Doctorate in appropriate field required with strong, productive research background, teaching experience, and commitment to excellence in teaching. Postdoctoral experience preferred. Salary commensurate with qualifications and experience. Submit letter of appli-cation (non-citizens must include current visa status), curriculum vitae and three recommendations from persons qualified to evaluate research and tacking abilities and potential by 23 May 1988 to: Dr. William A. Condon, Chair, Department of Animal and Nutritional Sciences, Kendall Hall, University of New Hampshire (UNH), Durham, NH 03824. UNH is an Affirmative Arimular and Employment Optimizing Considerations. Action/Équal Employment Opportunity Employer.

# Fuse Your Ambitions With Our Goals

Tanox Biosystems, a growing biotech company based near the Texas Medical Center, is actively recruiting innovative, dedicated scientists and biotechnologists in the following areas:

# **IgE**—Mediated Allergies

Studies of IgE and IgE receptors, basophils and mast cells, histamine release assays, non-human primate models.

# Large Scale Cell Culture

Manufacturing antibodies and cellular products under GMP requirements.

# Clinical Trials/Regulatory Affairs

Planning and coordinating clinical trials of therapeutic products.

Positions available at all levels: candidates with Ph.D., M.D., M.S., or B.S. are welcome. Those with strong experience in the specific areas are especially encouraged to apply. We offer attractive compensation and rewarding packages, including equity participation programs. *Please send C.V. to: Mr. John Blickenstaff, Director of Administration, Tanox Biosystems, Inc., 10301 Stella Link, Houston, Texas 77025.* 



TANOX BIOSYSTEMS, INC.

products go together

# Immunopharmacologist Respiratory Pharmacology

The Pharmacology Department of Smith Kline & French Laboratories, located in suburban Philadelphia, PA, is seeking an outstanding individual to fill a challenging Associate Senior Investigator position in its Respiratory Section.

The successful candidate will:

- establish an independent research program to explore the role of inflammation in bronchopulmonary diseases.
- integrate cellular, biochemical and pharmacologic methodologies to identify novel approaches to the pharmacotherapy of inflammatory disorders of the bronchopulmonary system.
- gain recognition throughout the scientific community by publishing scientific results and participating in national and international meetings.
   Condidates are required to have:
- Candidates are required to have:
- a Ph.D. in Pharmacology, Immunology, Physiology or related discipline with at least 2 years postdoctoral experience in immunopharmacology.
- a record of publication in major scientific journals.
   understanding of the roles of various inflammatory cells and mediators
- in the development of bronchopulmonary diseases is desirable. • experience with <u>in vitro</u> or <u>in vivo</u> inflammatory disease models is desir-
- able.
  experience measuring mediator release and/or the actions of mediators on target cells is desirable.

We offer an excellent compensation and benefits package as well as an attractive relocation policy. For confidential consideration, send your C.V. and names of three references to Robert F. Obst, Manager, Personnel Relations, Smith Kline & French Laboratories, Research and Development Division, P.O. Box 1539, King of Prussia, PA 19406-0939.



### THE UNIVERSITY OF MINNESOTA SENIOR FACULTY AND INSTITUTE FELLOW IN

### LARGE SCALE COMPUTING

The University of Minnesota invites applications and nominations to fill a number of senior faculty positions in large scale computing. Depending on the qualifications of the candidates, these tenured faculty positions appointed will, in addition to having regular faculty appointments, become Fellows of the Minnesota Supercomputer Institute, which is a research program of the University. The appointments will be subject to customary tenure review by the home department(s) as well as the evaluation of the all-University search committee.

The Minnesota Supercomputer Institute is the center of academic instructional and research activities in large scale computing for the University and the state. The Institute has the most extensive supercomputer facility available to academic researchers in the world, including two Cray-2s and a Cyber 205, housed in a new building with excellent workstations and a modern networking environment.

A successful candidate must have demonstrated outstanding research accomplishments and intellectual leadership in a disciplinary or interdisciplinary area of large scale computing. Recruited candidates will have substantial achievements meriting tenure in an appropriate department. Preference will be given to candidates with programs of demonstrated excellence and originality in supercomputer research, especially those which show promise to complement existing programs at the Institute.

Faculty rank and remuneration are dependent upon experience, qualifications, and accomplishments. Inquiries, nominations and applications should be directed to the Chair of the University-wide search committee. Consideration of applications will begin immediately. The search committee seeks to receive nominations and expressions of interest by the end of June 1988. Applications are due no later than 31 July 1988. Send letters of nomination and curriculum vitae with names of referees to:

Professor George L. Wilcox Chair of the Search Committee Minnesota Supercomputer Institute 1200 Washington Avenue South Minneapolis, MN 55415

The University of Minnesota is an equal opportunity educator and employer and specifically invites and encourages applications from women and minorities.

# EXPERIENCED SCIENTIST PLANT MOLECULAR BIOLOGY

The Dow Chemical Company, in Midland, Michigan, is a recognized global leader in the agricultural chemical industry. Expanded research efforts in the area of plant genetic engineering have created an immediate need within the Biotechnology Laboratory in the Central Research Department for qualified researchers in the following area:

# PLANT GENE EXPRESSION

The successful candidate will have a Ph.D. in plant molecular biology or a related discipline and at least 5 years of experience in the expression of foreign genes in plants. A strong background in one of the following plant sciences is also required: genetics, physiology, pathology, or biochemistry. Experience with plant expression vectors and plant promoters is highly desirable.

This position offers the successful candidate an opportunity to participate in scientific leadership of a developing research team. Projects are directed toward introduction of genes into crop plants, with increasing emphasis on commercially important monocots.

The above candidate must also possess strong communications skills and a desire to carry out independent research while functioning as part of an interdisciplinary research team.

The Dow Chemical Company offers a stimulating work environment and a competitive salary and benefits package.

Qualified applicants should send resume to:

Technical Recruiting Department PG-2S P.O. Box 1655 Midland, MI 48641-1655



THE DOW CHEMICAL COMPANY IS AN EQUAL OPPORTUNITY EMPLOYER



GENE-TRAK Systems is a probe-based diagnostics company dedicated to the diagnosis of infectious diseases for the food and clinical markets. We are continuing to expand our research and development efforts.

# NUCLEIC ACID ENZYMOLOGIST

Currently seeking Ph.D. scientists with relevant experience in the area of enzymology, protein purification, nucleic acid replication and knowledge of HPLC or FPLC purification methodologies. Will be responsible for planning and developing an amplification research project.

# RESEARCH SCIENTISTS

Many positions available for Molecular Biologists and Microbiologists to assist in the development and optimization of nucleic acid probe assays for the specific detection of important clinical samples. Requires a BS/MS degree in the biological sciences and at least 2 years of laboratory experience.

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 Resources Director, Dept. SG-5-6, GENE-TRAK Systems, 45 New York Ave., Framingham, MA 01701.

An equal opportunity employer



# Ph.D RESEARCH SCIENTISTS CARDIOVASCULAR PHARMACOLOGY

As a result of the recent merger of American Home Products Corporation's two pharmaceutical divisions, Wyeth Laboratories and Ayerst Laboratories, we are now one of the largest pharmaceutical companies in the world. Our continued success depends upon the talent of our research teams since it is they who bring to market the right products at the right time. We currently have openings for Ph.D. Scientists in the Cardiovascular Department of our expanding Princeton, NJ research facility.

### **MOLECULAR PHARMACOLOGY**

Ph.D. in Biochemistry or Cell Biology with 2 or more years relevant experience in the characterization and isolation of membrane receptors involved with cellular responses to cardiac and smooth muscle active hormones or transmitters. Emphasis is on the analysis of receptor function, and the biochemistry of signal transduction. Practical expertise in receptor biochemistry, second messenger assays, and cell isolation and culture techniques are essential. Candidate will interact closely with other cardiovascular pharmacologists in exploring novel approaches to drug discovery. RESPOND TO DEPT. A.

### VASCULAR PHARMACOLOGY

Ph.D. in Physiology, Pharmacology, or Biochemistry with 2 or more years of relevant experience in the use of isolated tissue for the evaluation of novel cardiovascular drugs. Practical expertise in the tracer measurement of ion fluxes and membrane transport in isolated cellular and membrane preparations is essential. Knowledge in signal transduction and second messenger mechanisms is helpful. Candidate will interact closely with cell electrophysiology and receptor biochemistry groups to explore new paths of drug discovery based on vascular and/or endothelial cell function. RES-POND TO DEPT. B.

## **MYOCARDIAL ISCHEMIA**

Ph.D. with 2-5 years experience in measuring general hemodynamics and cardiac function in dog or primate. Expertise in large animal surgery and in the preparation and study of chronically instrumented animals is essential, as is familiarity with in vivo models of myocardial ischemia and coronary thronbosis ability to measure regional and/or coronary blood flows using microsphere or other techniques also helpful. RESPOND TO DEPT. C.

## **RENAL PHARMACOLOGY/TRANSPORT**

Ph.D. with 2-5 years experience in renal pharmacology and the analysis of renal function. Candidate should possess expertise in the <u>in vitro</u> measurement of renal transport processes using isolated perfused kidney, isolated nephron or renal tubular cell suspensions. Familiarity with <u>in vivo</u> measurement of renal clearance also useful. Candidate will participate in the development of novel agents acting on kidney transport systems and in the study of renal disease. RESPOND TO DEPT. D.

## CARDIAC ELECTROPHYSIOLOGY

Ph.D. with 2-5 years experience in cardiac electrophysiologic techniques and the study of myocardial ischemia and arrhythmogenesis. The ideal candidate will have practical expertise in <u>in vivo</u> and <u>in vitro</u> electrophysiolgy, with an emphasis on antiarrhythmic drug action and mechanisms of arrhythmia. RESPOND TO DEPT. E.

We offer an excellent salary and benefits package plus opportunities for career advancement along with an ultra-modern research facility. Interested candidates please send resume and salary history indicating department of interest to:



ASSISTANT PROFESSOR OF ENTOMOLO-GY, a 9-month, tenure-track faculty position (85% research and 15% teaching) beginning 1 September 1988. Requirements: Ph.D. in entomology or related field, training or experience in insect quantitative ecology and modeling, and demonstrated ability to obtain research funding and to develop a strong research program. Must interact productively with biological scientists and graduate students. Experience in biological control and postdoctoral research desirable. Teaching responsibilities include graduate and undergraduate courses in insect ecology. Send letter of inquiry to: Dr. H. Y. Forsythe Jr., Chairman, Department of Entomology, 305 Deering Hall, University of Maine, Orono, ME 04469. Application deadline: 1 July 1988. The University of Maine is an Equal Opportunity and Affirmative Action Employer.

ASSISTANT PROFESSOR OF ONCOLOGY. Applications are invited for a position as assistant professor of oncology at the McArdle Laboratory of the University of Wisconsin–Madison. Applicants should be committed to understanding the mechanisms of neoplasia, and they should be prepared to develop a strong research program that will contribute to that goal. Applicants should also be prepared to contribute to the interactive research environment of the McArdle Laboratory. Review of the applications will begin on 1 June 1988, but applications will be accepted until the position is filled. Applicants should submit curriculum vitae, a list of publications, and a brief statement of both their prior research accomplishments and, most importantly, their future research objectives. They should also request that at least three letters of recommendation be sent to: Dr. Henry C. Pitot, Chairman and Director, Department of Oncology, McArdle Laboratory for Cancer Re search, University of Wisconsin–Madison, 450 North Randall Avenue, Madison, WI 53706.

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

ASSISTANT RESEARCH PHYSIOLOGIST in the Department of Medicine, University of California, Los Angeles to participate in research on peptidergic brain-gut interactions. The successful candidate will have a particular interest in visceral afferent pathways controlling gastric motor and secretory function and made previous contributions to this field of research. Expertise in electrophysiological recording from visceral C-fiber afferents and neurons in the central nervous system, iontophoretic or pressure injection of peptides and recording of gastroduodenal motility and transit is essential. Candidates must have a Ph.D., and at least 1 year of postdoctoral experience. Salary \$25,000, plus fringe benefits. Send curriculum vitae, list of publications, and three references to: Dr. Yvette Tache, Veterans Administration Wadsworth, CURE, Building 115, Room 117, Los Angeles, CA 90073. The University of California, Los Angeles is an Equal Opportunity/Affirmative Action Employer.

### ASSISTANT RESEARCH SCIENTIST IN MATERIALS APPLICATIONS

An assistant research scientist position is available for a materials specialist in the University of Iowa Central Electron Microscopy Facility. The responsibilities of this position include the maintenance and operation of scanning and transmission electron microscopes equipped with Kevex EDS systems, maintenance and operation of various specimen preparation equipment, training of new users including participation in teaching electron microscopy courses, the development of new techniques and procedures, and interaction with faculty members on their research projects. Previous experience with transmission and scanning electron microscopy, energy dispersive spectroscopy, wavelength dispersive spectroscopy, backscattered electron imaging, cathodoluminescence, and x-ray fluorescence is necessary. A Ph.D. in a materials science is required. Salary is appropriate to experience. Send résumé and three letters of reference to: Kenneth C. Moore, Central EM Facility, 1-327 Bowen Science Building, University of Iowa, Iowa City, IA 52242.

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

### **POSITIONS OPEN**

#### ASSISTANT PROFESSOR OF MICROBIOLOGY MICROBIAL GENETICIST

Applications are invited for a position at the level of assistant professor. The position will be filled by an individual who is capable of teaching microbial genetics. Research interests can be in any area. Development of an independent research program is imperative. Candidates must possess a Ph.D. degree, have completed postdoctoral training and possess an interest in teaching medical, graduate and allied health students.

Interested individuals should submit curriculum vitae and names of three references to: Paul F. Smith, Ph.D., Chairman, Department of Microbiology, School of Medicine, University of South Dakota, Vermillion, SD 57069. Closing date: 1 August 1988; the search will continue until position is filled. An Equal Opportunity/ Affirmative Action Employer.

ASSISTANT OR ASSOCIATE PROFESSOR. The Department of Psychiatry at the Mount Sinai School of Medicine is seeking an assistant or associate professor for a tenure-track position to work in linkage and mapping studies of human neuropsychiatric disorders. This position will complement an existing group having a strong interest in the molecular biology of neuropsychiatric disorders. The successful candidate must have evidence to extensive knowledge in using RFLP technology in linkage studies. It is expected that the individual will sustain a viable, independent research program. A joint appointment in a related department is possible. Please send curriculum vitae, a statement of research goals, and the names of three references to: Kenneth L. Davis, M.D., The Mount Sinai School of Medicine, Department of Psychiatry, Box 1230, One Gustave L. Levy Place, New York, NY 10029–6574. An Equal Opportunity Employer.

ASSISTANT OR ASSOCIATE PROFESSOR OF MEDICINE to assume major scientific responsibility for a cardiovascular molecular biology program. The candidate may be an M.D. or Ph.D. with interest and experience in molecular genetics of contractile proteins, membrane channels or membrane receptors. The candidate would be expected to establish own laboratory and interact closely with active ongoing laboratories working in biochemistry, cell physiology, and cell biology of the cardiovascular system within a research-oriented Section of Cardiology. Please send inquiries, résumé, and the names of three references to: Morton F. Arnsdorf, M.D., Chief, Section of Cardiology, University of Chicago Hospitals, Box #423, 5841 South Maryland, Chicago, IL 60637.

#### ASSOCIATE CHIEF OF STAFF FOR RESEARCH AND DEVELOPMENT VA MEDICAL CENTER—ST. LOUIS

The Associate Chief of Staff for Research and Development manages a research program encompassing all medical subspecialties, many surgical subspecialties, neurology, gerontology, behavioral sciences, cooperative and health services studies. Candidates should be nationally recognized physician-scientists, have a proven record of grant support research and have demonstrated success in an administrative role. Send curriculum vitae which includes bibliography and record of research support to:

Chairman, Search Committee (11JC) Office of the Chief of Staff VA Medical Center St. Louis, MO 63125 An Equal Opportunity Employer

BIOCHEMISTRY/MOLECLULAR BIOLOGY FACULTY POSITION. The Chemistry Department at Brigham Young University (BYU) invites applications for a full-time biochemistry faculty position. Applicants must have a Ph.D. in biochemistry or molecular biology. A background in chemistry and a proven record of productivity would be advantageous. The successful candidate must establish a competitive, funded research program and teach at the undergraduate and graduate levels. Application deadline is 31 May 1988.

Applicants should send curriculum vitae, a brief description of present and proposed research, and the names of several references to: Dr. Donald Robertson, Chairman, Search Committee, 659 WIDB; Brigham Young University, Provo, UT 84602. BYU is an Equal Opportunity Employer.

### POSITIONS OPEN

### BEHAVIORAL NEUROSCIENCE/ PHYSIOLOGICAL PSYCHOLOGY

**POSTDOCTORAL ASSOCIATE**, available 1 October 1988. Fully equipped laboratory, funded by VA research and development funds, located in a VA Medical Center with active Medical Research Program and Medical School affiliation. Current projects involve neuroanatomical, electrophysiological, and pharmacological analysis of the visceral aspects of associative learning. Also opportunity for collaboration in clinical research. Prefer individual with experience in electrophysiology and/or tract tracing techniques. Salary competitive, exceptionally good fringe benefits. Please contact: D. A. Powell, Neuroscience Research (151A), William Jennings Bryan Dorn VA Medical Center, Columbia, SC 29201. Telephone: 803-776-4000, extension 125. Equal Employment Opportunity Employer.

### STOCKTON STATE COLLEGE BIOCHEMISTRY

FACULTY POSITION in biochemistry is available for September 1988 at the assistant professor or instructor level. Ph.D. in biochemistry required for assistant professorship. All but dissertation required for instructorship. We are seeking an individual with spark who is committed to teaching, and who would like to develop an instrumentally oriented biochemistry/biotechnology course sequence. Stockton is an interdisciplinary undergraduate liberal arts college located in rural, coastal South Jersey. The college enrolls 4000 students and has an eight-person chemistry faculty. The current salary range of \$20,714 to \$28,956 will be higher due to increases in the New Jersey State Compensation Plan. Screening will begin on 1 May 1988. Send résumé and three letters of reference to: Dr. Donald Plank, Chairman; Faculty of Natural Sciences and Mathematics, Stockton State College, Pomona, NJ 08240. Stockton is an Affirmative Action/Equal Opportunity Employer. Women and minorities are encouraged to apply. R 002862.

### CELLULAR OR MOLECULAR PHYSIOLOGISTS

Junior or senior faculty positions are currently available in the Department of Physiology and Biophysics of the University of Cincinnati. Special consideration given to candidates in neuroendocrinology, muscle physiology, and biophysics of nerve/muscle membranes. Submit curriculum vitae, publication list, and summary statement of present and future research objectives to: Search Committee, Department of Physiology and Biophysics, College of Medicine, University of Cincinnati, Cincinnati, OH 45267–0576.

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

CHAIRPERSON—BIOCHEMISTRY: With the retirement of Dr. Robert B. Loftfield, the University of New Mexico School of Medicine announces the search for a Chairperson for the Department of Biochemistry. The institution is seeking a senior scientist/investigator with an established program of research; who will exhibit broad interests in biological chemistry and molecular biology; and who will encourage programs in research and teaching in a medical school which has a tradition of innovative education and interdisciplinary research. Inquiries, nominations and applications, the latter including curriculum vitae and names of three references, may be forwarded to: Dr. Robert O. Kelley, Chairperson, Search Committee for Biochemistry, Anatomy Department, University of New Mexico School of Medicine, North Campus, Albuquerque, NM 87131. Application deadline: 30 June 1988. Affirmative Action/ Equal Opportunity Employer.

#### CHAIRPERSON-MICROBIOLOGY

The Department of Microbiology of the University of Maryland at College Park (Main Campus) is seeking nominations and applications of scientists qualified to serve as departmental chairperson. The Department currently consists of 20 faculty (with several open positions) and 60 graduate students. Research strengths are in marine microbiology and molecular biology. Departmental researchers actively collaborate with scientists at the NIH, Naval Research Institute, USDA, and the University's Centers of Biotechnology. Applicants should have a Ph.D. and have demonstrated outstanding abilities in research in microbiology or related fields in molecular biology and biochemistry. Evidence of administrative ability is also required. Appointment will be made at the professor level (tenured) with appropriate salary and benefits with the earliest starting date of 1 January 1989. For best consideration curriculum vitae and the names, addresses, and telephone numbers of four references should be sent by 15 August 1988 to: Dr. Paul H. Mazzocchi, Microbiology Chair Search Committee, Department of Chemistry and Biochemistry, University of Maryland, College Park, MD 20742. The University of Maryland is an Equal Opportunity/ Affirmative Action Employer.

CHIEF, VIRAL EXANTHEMS AND HERPES-VIRUS BRANCH, Division of Viral Diseases, Center for Infectious Diseases, Centers for Disease Control (CDC), Atlanta, Georgia. The Centers for Disease Control is seeking a Chief for the Viral Exanthems and Herpesvirus Branch, Division of Viral Diseases. The Branch Chief directs and participates in comprehensive epidemiologic and laboratory programs concerning the properties, diagnosis, occurrence, and control of human nepesviruses, papillomaviruses, poxviruses, rubella, and rubeola viruses in the United States and abroad. Qualifications preferred include a doctoral degree

Qualifications preferred include a doctoral degree (M.D., Ph.D. or equivalent), major scientific accomplishments in one or more areas of relevant research, and the ability to provide administrative and scientific leadership for a multidisciplinary program employing 25 to 30 scientific and support staff.

Salary range from \$53,000 to about \$70,000 per annum, depending on qualifications and personnel system. Further information about the position can be ob-

Further information about the position can be obtained from: Larry J. Anderson, M.D., Chairman, VEHB Branch Chief Search Committee, Division of Viral Diseases, Building 7, Room 144, Centers for Disease Control, Atlanta, GA 30333.

Interested candidates may send in confidence their curriculum vitae and names of three professional references, by 15 July 1988 to:

Sharlyn L. Wilkinson Personnel Management Office, 1-1058 Centers for Disease Control 1600 Clifton Road, NE Atlanta, GA 30333

CDC is an Equal Opportunity Employer and provides a smoke-free work environment.

The Biophysical Society is sponsoring a **CONGRES-SIONAL SCIENCE FELLOW** for the 1988 to 1989 academic year. This program provides scientists the opportunity to integrate into the legislative staff of a Member of Congress, Senator or Congressional Committee. The Fellow will be able to experience how public policy is made, to contribute to public policy-making within Congress and to enhance interactions between government and the scientific community. Individual should actively participate in the Biophysical Society. The fellowship is open to individuals holding a doctorate degree in the biophysical sciences or related area, who can demonstrate exceptional scientific competence and who have strong leadership and communication skills. The Fellow will receive a stipend of \$30,000 for 1 year beginning 1 September 1988. This stipend may be complemented by additional sabbatical support from the home institution. The Biophysical Society Fellow will participate in the orientation and year-long seminar series organized by the American Association for the Advancement of Science. To apply please send curriculum vitae, a letter specifying interest in the program and three letters of support to: Biophysical Society, Congressional Science Fellowship Program, 9650 Rockville Pike, Bethesda, MD 20814. Deadline for submission is 1 June 1988.

## **PRINCIPAL/SENIOR RESEARCH SCIENTISTS**

### John Radcliffe Hospital Oxford

Imperial Cancer Research Fund invites applications for the posts of Principal and/or Senior Research Scientists in laboratories comprising about 6,000 ft<sup>2</sup> of space associated with the new ICRF Clinical Oncology Unit. The Clinical Unit is under the honorary direction of Professor Adrian Harris and the laboratories are to be located in the new Institute of Molecular Medicine (Director: Sir David Weatherall) at the John Radcliffe Hospital. The research programme of the Unit will be in the general area of cell and/or molecular biology of relevance to the understanding, diagnosis, treatment or prevention of cancer. The exact programme of work will be decided in discussion with the person appointed to the position.

Applications are invited from scientists with an established record in research who will be available to take up the position during 1989. Salary will be in the range of  $\pounds 20,000 - \pounds 30,000 +$  per annum depending on experience.

For further information contact the Director of Research (tel: 44 01 242 0200 ext 2325). Applications including a full curriculum vitae and the names and addresses of three referees should be sent by 31st May to: The Recruitment Officer, Imperial Cancer Research Fund, PO Box 123, Lincoln's Inn Fields, London WC2A 3PX, quoting ref. 153/R.

Smoking is strongly discouraged within most areas of the Fund.

IMPERIALCANCERRESEARCHFUND

# PH.D. NEUROSCIENTIST PHARMACEUTICAL RESEARCH

Parke-Davis Pharmaceutical Research Division, Warner-Lambert Company, has an immediate opening for a bench-level scientist to join the Neurosciences Section in the Department of Pharmacology.

The selected candidate will join an interdisciplinary psychopharmacology group currently developing new agents for the treatment of schizophrenia and conducting research on novel approaches to the pharmacotherapy of psychiatric disorders.

Applicants should possess the following:

- 1. A Ph.D. in a biological science
- 2.1-2 years research experience with modern techniques of psychopharmacology/molecular biology
- 3. Excellent oral and written communication skills
- 4. Publications in area of expertise

We offer excellent compensation and benefits at our modern facilities adjacent to the University of Michigan campus. Interested qualified candidates should forward curriculum vitae and salary requirements to: **S. Hultquist**, **Human Resources Representative**, **PARKE-DAVIS**, **2800 Plymouth Rd.**, **Ann Arbor**, **MI 48105**.

PARKE-DAVIS

### CURATORIAL POSITION IN ORNITHOLOGY AMERICAN MUSEUM OF NATURAL HISTORY

The Department of Ornithology invites applications from ornithologists with Ph.D.'s for a tenure-track cura-torial position. Research and training should involve evolution and systematics of birds; interest in museum specimens is desirable. The Department maintains large worldwide collections of all avian taxa. The primary responsibility of the successful applicant will be to conduct an active research program. Other responsibilities will include curation of the collection, assistance with the preparation of exhibits and with educational programs of the Museum, administration, and other Departmental duties. Rank and salary will be determined on the basis of qualifications. Full Museum benefits apply. Interested applicants must submit the following information by 1 October 1988: (i) curriculum vitae, (ii) statement of long-term research objectives, (iii) complete bibliography and sample publications, and (iv) letters of recommendation from at least three professionals acquainted with the applicant's qualifications and accomplishments. Submit to

> Dr. Francois Vuilleumier Chairman, Search Committee Department of Ornithology (S) American Museum of Natural History Central Park West at 79th Street New York, NY 10024 An Equal Opportunity Employer

DEAN/COLLEGE OF SCIENCE AND ENGI-NEERING TECHNOLOGY: The University of Arkansas at Little Rock invites applications and nomina-tions for the position of Dean, College of Science and Engineering. The Dean is the chief academic officer for the college which includes departments of biology, chemistry, computer science, earth science, electronics and incrumentation empirication the product of the science of t and instrumentation, engineering technology, mathe-matics and statistics, nursing, physics and astronomy, and a graduate institute of technology. Additional information may be obtained by contact-

ing:

## Fred Williams, Chairperson Dean's Search Committee University of Arkansas at Little Rock 2801 South University Little Rock, AR 72204

Applications will be subject to inspection under the Arkan sas Freedom of Information Act.

The University of Arkansas at Little Rock is an Affirma-tive Action/Equal Opportunity Employer and actively seeks the candidacy of minorities and women.

### DIRECTOR OF RESEARCH LABORATORY

Academically active anesthesiology department seeks a director for its investigational laboratory. The successful candidate will hold a doctoral degree, and have experience in drug assays, pharmacokinetics, and statistical analysis. Departmental research interests include clinical pharmacology, cardiovascular physiology, management of acute and chronic pain, and obstetrical anesthesia. Rank and salary commensurate with experience.

Applicants should submit their curriculum vitae, a list of publications, statement of research experience, and the names of three references to: Michael E. Goldberg, names of three references to: Michael E. Goldberg, M.D., Director of Research, Department of Anesthe-siology, Jefferson Medical College, Thomas Jefferson University, Suite 6275, 111 South 11th Street, Phila-delphia, PA 19107.

Thomas Jefferson University is an Affirmative Action/ Equal Opportunity Employer.

#### ECOSYSTEMS ECOLOGIST

Applications are invited for assistant scientist to con-tribute to a study of the effects of climatic change on tribute to a study of the effects of climatic change on terrestrial ecosystems. Ph.D. and experience with ecosys-tem-level processes, including metabolism, nutrient and water cycling, or soil/decomposition processes are re-quired. Send letter of interest, résumé, and names of three references to: G. M. Woodwell, Director, Woods Hole Research Center, P.O. Box 296, Woods Hole, MA 02543. Applications accepted until 1 June 1988. A smoke-free institution. Equal Opportunity Employer.

### **POSITIONS OPEN**

### CYTOGENETICIST

Winship Cancer Center of the Emory University School of Medicine seeks applicants for the position of cytogeneticist. The position is that of an assistant profes-sor, tenure-track, who has extensive experience in the area of human and animal cytogenetics. The individual also must be experienced in the use of transgenics and the technical manipulation of gene injection and expression in mouse embryos. The incumbent will be expected to undertake a program of research in the area of fundamental molecular genetics and to provide interaction and support for scientists who require the transgenics tech-nology for molecular biological research. In addition, the incumbent will be expected to perform a modest number of cytogenetics procedures for the human cytogenetics testing program of the Department of Pathology of Emory University School of Medicine. All applicants please send their curriculum vitae and three names of individuals who could be contacted for references to: Dr. Kenneth W. Sell, Director, Winship Cancer Center, Emory University School of Medicine, Atlanta, GA 30322. Emory University School of Medicine is an Equal Opportunity Employer.

DIABETES RESEARCH. A POSTDOCTORAL POSITION is immediately available for a 2-year appointment at Baxter Healthcare Corporation. The postdoctoral fellow will work with a multidisciplinary team investigating new therapies for Type I diabetes. Research will focus on the interaction between fetal mesenchyme or growth factors and ductal epithelium of the pancreas to evaluate the capacity for parcreatic islet regeneration. Candidates should have a Ph.D. in cell biology or developmental biology, with experience in tissue culture and histology. Experience in small animal surgery, gel electrophoresis, RIA and protein purification is desir-able. Send curriculum vitae to: Director-Human Re-sources-RLA-1N, Baxter Healthcare Corporation, Route 120 and Wilson Road, Round Lake, IL 60073. Equal Opportunity Employer.

### DIRECTOR OF RESEARCH DEPARTMENT OF OTOLARYNGOLOGY HENRY FORD HOSPITAL

The Department of Otolaryngology at Henry Ford Hospital is seeking applications for the post of Director of Research. Candidates should have a strong basic science background and a demonstrated research focus in vestibular and/or auditory system anatomy and physiolo-gy. Primary responsibilities of the position will include the development of a research program within the De-partment and the development of a residents' research training program. An established publication record and evidence of success in obtaining extramural funding is a prerequisite. Salary will be highly competitive and de-pendent upon the applicant's background and qualificapendent upon the applicant's background and qualifica-tions. Please send curriculum vitae, representative re-prints, and a letter of interest to: Gary P. Jacobson, Ph.D., Chairman, Search Committee, Department of Otolaryngology, Henry Ford Hospital, 2799 West Grand Boulevard, Detroit, MI 48202. Henry Ford Hospital is an Equal Opportunity/Affirmative

Action Employer.

Department of Genetics, Case Western Reserve University. The newly established Department of Genetics is currently recruiting FACULTY with active research programs in areas relating to the genetics of human diseases. The Department incorporates the new Center for Developmental Genetics, established with a major grant from the Lucille Markey Charitable Trust, and will coordinate activities in a number of basic science departments. We are especially interested in persons using modern genetic approaches to understand the genetic basis for human disease, or who use model systems to study clinically important problems. We encourage applications from persons with M.D. and/or Ph.D. degrees for both entry-level and senior positions in the Depart-ment. Applications from minority groups and women are especially encouraged. Please send applications and three letters of reference to: Anthony P. Mahowald, Depart-ment of Genetics, Case Western Reserve University, School of Medicine, Cleveland, OH 44106. CWRU is an Equal Opportunity Employer.

### **POSITIONS OPEN**

DEAN OF THE SCHOOL OF MEDICINE-University of California, San Francisco (UCSF)—UCSF is the only one of the nine campuses of the University of California devoted solely to the health sciences, with professional schools of dentistry, medicine, nursing and pharmacy, plus a graduate division. The School of Medi-cine has affiliated programs at over 100 medical centers and hospitals in the state. The Dean, through 25 departand nospitals in the state. The Detail, through 25 departement chairs, 8 directors of organized research units, and 11 associate deans is responsible for teaching and research programs and for allocation of the School's resources. The Dean provides leadership and direction for an academic program which includes some 650 medical and other health professional students, 1,000 plus hou-sestaff, 780 postdoctoral fellows, and 950 full-time and 3,600 volunteer faculty. Qualifications for dean include an M.D. degree and evidence of administrative and scholarly achievements in teaching and research in the health sciences field. The successful candidate must have proven leadership abilities in the administration of a major health sciences unit. Position open: 1 July 1989. Salary: Negotiable and commensurate with qualifications. Send applications or nominations with complete curriculum vitae, bibliography, and names of three refer-ences to: Ms. Susan Montrose, Search Committee, Dean, School of Medicine, Chancellor's Office, Box 0402, University of California, San Francisco, San Francisco, CA 94143. Closing date for applications: 15 July 1988. Affirmative Action/Equal Opportunity Employer.

# FACULTY POSITION IN BIOCHEMICAL—ENVIRONMENTAL TOXICOLOGY

The School of Pharmacy, University of California at San Francisco seeks an outstanding scientist to fill the position of Director of the Division of Toxicology in the Department of Pharmacy. This is a tenured, ladder-rank appointment at the full or associate professor level. The individual should have research interests that bridge the areas of biochemical and environmental toxicology. Ap-plicants should have an established reputation for excel-lence in research and teaching, with demonstrated ac-complishments in studies on the molecular mechanisms of actions of toxic xenobiotics including environmental pollutants. Primary research focus may include studies on: enzyme-mediated bioactivation of xenobiotics; genotoxic agents; gene cloning related to toxins; or chemical-induced cell injury using cell and tissue cultures. In addition to teaching and research responsibilities, the successful applicant will be in charge of the further development of an interdisciplinary graduate training program in the Division of Toxicology whose member-ship includes faculty from the Schools of Pharmacy and Medicine. The candidate selected can recruit for two junior, tenure-track positions. Applicants should have a Ph.D., M.D., or both. Interested individuals should submit curriculum vitae, names and addresses of three referees, and a statement on present and future research interests to: Alma L. Burlingame, Ph.D., Chair, Search Committee, Department of Pharmaceutical Chemistry, School of Pharmacy, University of Cali-fornia, San Francisco, CA 94143–0446. Telephone: 415-476-5641.

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

### FACULTY POSITION IN NEUROCHEMISTRY OR MOLECULAR NEUROBIOLOGY

A position is open for a tenure-track or tenured faculty appointment at the University of Southern California. Neurochemists or molecular neurobiologists, working with vertebrate or invertebrate systems, are encouraged to apply. Candidates will be expected to establish an independent research program, contribute to the teaching program of the department, and participate in the University's Program in Neural Informational and Behavioral Sciences. Please send curriculum vitae, names, and telephone numbers of three references, and a brief description of career goals and research objectives by 1 August 1988 to:

> Chair, Search Committee Section of Neurobiology Department of Biological Sciences University of Southern California Los Angeles, CA 90089-0371

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

# Why the best brains in Biology are moving to Britain

The tide has turned in the Great British Brain Drain. Instead of looking Stateside for the projects and funding their talents deserve, many ambitious biologists are now casting envious eyes at events over the other side of the Pond. In South East England.

What's drawing many of the US's most respected and highly rewarded scientists to consider a career in the UK - a move that just a few years ago few would have dreamed of making?

It's a company called Glaxo Group Research. One of Britain's most advanced research-based organisations. Glaxo's leadership in the field of pharmaceutical biological research is acknowledged in Europe and, increasingly throughout the world. It's not hard to see why.

A trip round its two main research centres at Greenford and Ware - both just a few miles outside London - is an Alice in Wonderland adventure for serious scientists. £Multi-million



investments have ensured that Glaxo Group Research is equipped with some of the most modern computercontrolled technology in the world all of it dedicated to the kind of pioneering projects that have won the Company many awards, among them the Queens Award for Industry.

At Greenford, much of the emphasis is on biochemical and microbiological approaches to the treatment of disease. There,



biologists are investigating changes within cells under attack from disease in order to define targets for drug treatment and to develop tests with which to evaluate new compounds for useful drug activity. The main biology divisions on this site include Biochemistry, Cellular and Molecular Sciences and Microbiology.

Research at Ware is primarily concerned with pharmacological approaches to the treatment of disease, by attempting to identify useful medicines acting by new or known mechanisms. Here, too, highly advanced technology is applied to the research work underway and, where specialised electronic or mechanical equipment is needed it is often designed and constructed in the Company's own laboratory workshops. The three main areas of research are in Cardiovascular, Respiratory and Neuropharmacology.

Not content to rest on its laurels, Glaxo Group Research has just announced plans for a substantial increase in R & D funding, facilities and projects to take the Company into the 1990's which will be centred on a brand new site at Stevenage, Hertfordshire.

As part of this planned expansion, two key positions have been created for which the Company is happy to consider applications from the United States:

### Section Head -Virology Department

As an experienced post-doctoral scientist currently working in viral research, you will manage a team engaged in the search for novel anti-Herpes virus agents. This will include the biochemical and in-vitro study of Herpes viruses and the use of biochemical and molecular techniques to define and evaluate novel targets for Herpes virus chemotherapy.

### Research Leader -Transgenic Research

To establish and manage a team of scientists working on projects to utilise transgenesis in the study of certain pathological states. You will also be required to interact with a group involved in molecular genetics



and scientists with expertise in many other disciplines.

Relevant original post-doctoral research experience together with a flair for innovation and some supervisory experience are important. For further details please write with brief CV to Ted Smith, Senior Personnel Officer, Glaxo Group Research Limited, Greenford Road, Greenford, Middlesex UB6 0HE, ENGLAND.



#### FACULTY POSITION IN ECOLOGY THE SCHOOL FOR FIELD STUDIES (SFS) (KENYA)

SFS seeks an ecologist for its year-round faculty, Center for Wildlife Ecology and Management (near Nairobi). Wildlife biologists, plant ecologists, and others with doctoral level field research relevant to plant-herbivore interaction and/or wildlife management invited to apply. Prior undergraduate teaching, East African familiarity. Lead wildlife ecology course; team-teach directed research. Close supervision of undergraduates in semester and month-long programs. Resident appointment starting 6 June or 1 September 1988. Competitive salary, benefits (accommodation, yearly U.S. travel etc.) Applicants should submit curriculum vitae, names, and telephone numbers of three referes to: **Dean, SFS, 376 Hale Street, Beverly, MA 01915**.

FACULTY POSITION IN PHYSIOLOGY: The Department of Physiology of the Temple University School of Medicine seeks a Ph.D. to fill a non-tenuretrack position. Individual should demonstrate ability to do protein and glucoprotein purification with special emphasis on snake venom proteins. Extensive experience required in oligosaccharide purification and structural analysis. Knowledge of recombinant DNA techniques to include composition of a DNA library from snake venom glands and gene cloning. In addition, experience in reverse phase high pressure liquid chromatographic (HPLC) and radioimmunoassay techniques are also required.

Send curriculum vitae and names of three references to: Dr. Peter R. Lynch, Temple University School of Medicine, Department of Physiology, 3420 North Broad Street, Philadelphia, PA 19140. An Equal Opportunity/Affirmative Action Employer.

HEAD, DEPARTMENT OF ENTOMOLOGY. Mississippi State University is soliciting applications for a comprehensive Department Head of Entomology to provide leadership and administration of the statewide teaching, research, and extension programs in entomology. Candidates should have demonstrated work experience in budget and personnel management and possess interpersonal communication skills to coordinate teaching, research and extension programs within the university and among a diverse group of clientele. As administrative duties allow, active participation in teaching, research and/or extension programs is encouraged. Qualifications include a doctorate in entomology or closely related field, and an established reputation for excellence in teaching, research or extension in entomology. Applications and supporting information (letter of application, personal résumé, transcripts of all university work, and addresses and telephone numbers of five professional references) or nominations should be forwarded to: Mr. Milburn Gardner, Personnel Officer, P.O. Box 5446, Mississippi State, MS 39762. Applications will be accepted until I-June 1988, or until the position is filled, whichever is later. An Affirmative Action/Equal Employment Opportunity Employer.

### HUMAN CYTOGENETICIST

The Division of Medical Genetics, Department of Pediatrics, of Emory University School of Medicine seeks a tenure- or non-tenure-track faculty member at the rank of assistant professor. The candidate should have a doctorate degree and be Board-certified or eligible in clinical cytogenetics. The successful candidate will be expected to direct a large, well-established clinical cytogennetics service, and will have an opportunity for independent or collaborative research involving human molecular cytogenetics. Candidates should send curriculum vitae, three letters of recommendation, representative reprints and a synopsis of current and future research interests to:

Louis J. Elsas, II, M.D. Emory University Pediatrics/Genetics 2040 Ridgewood Drive Atlanta, GA 30322 Application deadline is 20 May 1988. Emory University School of Medicine is an Equal Opportunity/Affirmative Action Employer

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### **POSITIONS OPEN**

FACULTY POSITION, SCIENCE/FISHERIES Full-time permanent, 9-month tenure-track. Location: Kodiak College, Kodiak, Alaska. Salary: Commensurate with experience and salary schedule in effect at the time of appointment. Duties: Instruct undergraduate courses in biology and an introductory course in one other science area. Plan curriculum. Assist in selection and orientation of part-time instructors. Coordinate courses and workshops in fisheries, aquaculture and seafood technology. Qualifications: Master's degree in biology required, marine emphasis desired; minor in at least one other science. Experience teaching at college level. Knowledge in fisheries, aquaculture or seafood technology. Ph.D. desired. Closing date: 20 May 1988, 5:00 p.m. Submit application, résumé, transcripts, and three letters of recommendation to: Personnel, Kodiak College, 177 Benny Benson Drive, Kodiak, AK 99615. Telephone: 907-486-4161. The University of Alaska is an Equal Opportunity/Affirmative Action Employer and Educational Institute. Your application may be subject to public disclosure if selected as a finalist.

### FULL-TIME ORAL AND MAXILLOFACIAL RADIOLOGIST

The Columbia University School of Dental and Oral Surgery has a unique opportunity for a full-time, Boardcertified, oral and maxillofacial radiologist with research background and experience related to bone density measurements. In conjunction with an affiliated hospital, the School seeks an individual with training in nuclear medicine. Additional experience in radiation health physics preferred. Academic rank and salary commensurate with credentials. While research activities comprise a major responsibility for this faculty position, teaching and direct patient care responsibilities are also included. Please send letter of interest and résume to: Dr. Ennio L. Uccellani, School of Dental and Oral Surgery, 630 West 168th Street, New York, NY 10032. Columbia University is an Affirmative Action/Equal Opportunity Employer.

### **GROSS ANATOMIST**

The Department of Cell Biology and Anatomy at the University of Alabama at Birmingham, invites application for a senior level position assuming a major role in teaching gross anatomy. Applicant should have training for and experience in teaching gross anatomy to medical or other health professional students. Position requires a terminal degree in biologic sciences with special emphasis on human morphology. This position requires experience and management of cadaver procurement, preparation and usage, and interaction with potential donors in the willed body program. Preparation for continued research and scholastic growth as well as the ability to develop an innovative teaching program will be examined. Applicants should send curriculum vitae and three letters of recommendation to: Dr. B. R. Brinkley, Professor and Chairman, Department of Cell Biology and Anatomy, University of Alabama at Birmingham, UAB Station, Birmingham, AL 35294. We are an Equal Opportunity/Affirmative Action Employer.

### MOLECULAR CELL BIOLOGIST SECRETION

The Department of Anatomy and Cell Biology, Medical University of South Carolina, is continuing to expand its research strength in the area of secretion. Applications are invited for a tenure-track faculty position at a senior or junior level. We are seeking an individual who will establish an independent research program and who would benefit by interaction with investigators from four other laboratories taking multidisciplinary approaches to this problem. We are particularly interested in scientists working on the regulation of gene expression or using molecular strategies to investigate intracellular trafficking, sorting or export of secreted products. However, we welcome applications from individuals using innovative approaches to study other aspects of the secretory process. Interested individuals should send curriculum vitate to:

Dr. L. Stephen Frawley Department of Anatomy and Cell Biology Medical University of South Carolina 171 Ashley Avenue Charleston, SC 29425–2204 Telephone: 803-792-3526

### **POSITIONS OPEN**

**INSTRUCTOR** needed to direct and execute development and experimental research of implantable and extractable ultrasonic sensors for postoperative monitoring. These will include sensor construction and modification, testing in mock circulatory systems (to be built) and animals, and evaluation in patients. Must have Ph.D. or equivalent in engineering with 1 year of postdoctoral training in fluid dynamics, hemodynamic measurements, ultrasonic instrumentation, ultrasonic sensor design, circulatory system modeling, animal and patient studies. Candidate will be expected to compete for extramural research support. Salary: \$26,000 per year; 40 hours per week. Apply at: The Texas Employment Commission, Houston, TX, or send résumé to: The Texas Employment Commission, TEC Building, Austin, TX 78778, J.O. #5156044. Ad paid by an Equal Employment Opportunity Employer.

Division of Clinical Pharmacology, Departments of Pharmacology and Medicine, Vanderbilt University. We are seeking an INSTRUCTOR with a Ph.D. degree in the biochemistry of the unstable metabolites of arachidonic acid who has a minimum of 1 year of experience in the application of molecular biological techniques to characterize proteins involved in eicosanoid formation and/or action. Participation in courses designed to teach molecular biology to postgraduate scientists would be required. Sex, race, religion, or national origin will not be factors in the selection process. Send applications with curriculum vitae immediately to the attention of: Ms. Fran Johnston, Vanderbilt University School of Medicine, Division of Clinical Pharmacology, Nashville, TN 37232. Vanderbilt University is an Equal Opportunity/Affirmative Action Employer.

### UNIVERSITY OF QUEENSLAND Equal Opportunity in Employment is University Policy LECTURER (FIXED TERM)— DEPARTMENT OF PHYSIOLOGY AND PHARMACOLOGY

A higher degree and/or professional qualifications are required as well as research interests and experience in the cardiovascular, respiratory, renal or gastrointestinal systems. Applicants should have demonstrated ability to contribute to the Departments' teaching responsibilities, particularly in mammalian physiology, to students in the faculties of medicine, science, veterinary science, dentistry, education, and agriculture. Appointment will be for 5 years in the first instance. Salary: \$A28,694 to \$A37,435 per annum. Closing date: 17 June 1988. Reference No: 20388.

Additional information and application forms are available from: The Director, Personnel Services, University of Queensland, St. Lucia 4067, Queensland, Australia.

### MAMMALIAN MOLECULAR GENETICIST

The Department of Biological Science of Florida State University invites applications for a 12-month nontenure-track permanent position in a biomedical technology research program related to generalized techniques for analyzing mammalian genomes. Candidates should have experience in gene mapping, cloning/manipulation of large genomic DNA segments, or DNA enzymology. Recent Ph.D. required, postdoctoral experience in these fields is helpful. Starting salary is \$30,000 to \$35,000 per 12 months, depending upon qualifications. Position available immediately; all applications must be received by 31 May 1988. Submit curriculum vitae and names and addresses of three references to: Dr. John Hozier, Department of Biological Science, NRB 312, Florida State University, Tallahassee, FL 32306–3043.

Affirmative Action/Equal Opportunity Employer

NUCLEAR MEDICINE—Georgetown University Hospital, Department of Radiology has an opening at the ASSISTANT/ASSOCIATE PROFESSOR level for an academically oriented physician with speciality training in nuclear medicine. The position involves major responsibilities in patient care and teaching and requires a strong interest in research. Interest/training in pediatric nuclear medicine would be an advantage. Preference will be given to candidates certified in diagnostic radiology. Contact: John W. Keyes, Jr., M.D., Director, Division of Nuclear Medicine, Georgetown University Hospital, 3800 Reservoir Road NW, Washington, DC 20007. Telephone: 202-784-3360.

# Fermentation Research & Process Development

Genentech, Inc., a leader in the field of biotechnology, is currently seeking a number of individuals for our Fermentation R&PD Department. This group is committed to developing and supporting microbial fermentation processes for the production of human pharmaceuticals and research materials.

# Scientist

The successful candidate will develop and scale-up fermentation systems to optimize the yield of purified proteins while providing leadership in developing basic bioengineering methodology. Requirements include a PhD in Chemical or Biochemical Engineering and a strong chemical engineering science background including solid knowledge of microbiology and microbial physiology. Experience in supervision and fermentation development are desirable.

# **Research Associate**

In this position you will design and perform experiments in E. coli physiology and screen E. coli strains with desirable characteristics. The successful candidate will possess an MS or equivalent in Microbiology and extensive knowledge/experience in E. coli physiology, microbial biochemistry and basic molecular genetics.

# Research Assistant/Associate

This position involves the development and implementation of "off-line" and "on-line" methods for monitoring and characterization of bacterial, yeast and mammalian cell fermentations. Requirements include an MS in Chemistry, Biochemistry or the equivalent, with at least 1 year of experience in HPLC of peptides, proteins, or small molecules. Other analytical experience is extremely desirable.

Genentech offers an excellent salary and benefits package coupled with the opportunity to make a significant contribution to our organization. For consideration, send your resume to Human Resources Department 1555, Genentech, Inc., 460 Point San Bruno Blvd., South San Francisco, CA 94080. An equal opportunity employer.

> Genentech, Inc. Genentech, Inc. Genentech, Inc. Genentech, Inc. Genentech, Inc.

# National Institutes of Health

## Public Health Service Department of Health and Human Services

The National Institute on Aging (NIA) invites nominations and applications for the position of **SCIENTIFIC DIRECTOR**. This is a Civil Service position in the Senior Executive Service with a salary range of \$65,994-73,400 per annum. The person selected may be eligible for Physician's Comparability pay up to \$20,000 per year. A oneyear probationary period must be served by the individual selected if not currently in the Senior Executive Service.

The Scientific Director is responsible for the planning and direction of the multi-disciplinary laboratory and clinical research programs of the Institute. The Scientific Director serves as the principal advisor to the Director of NIA on all ongoing or projected intramural research programs of the Institute and participates in the development of decisions concerning program planning, budget formulation and research allocation of the Intramural Research Program. The Scientific Director provides leadership in the overall scientific management of original research in the field of aging, and coordinates research programs to best utilize the capabilities of staff members and available research facilities.

Further information about the position and qualification requirements may be obtained by contacting Mr. Michael P. Lockard at (301) 496-5347 or (301) 550-1733. An application for Federal Employment (SF-171) accompanied by a current curriculum vitae and bibliography should be submitted to: Mr. Michael P. Lockard, National Institute on Aging, Intramural Research Program, Personnel Office, Room 1-D-09, Francis Scott Key Medical Center Complex, 4940 Eastern Avenue, Baltimore, Maryland 21224.

APPLICATIONS MUST BE POSTMARKED NO LATER THAN MAY 31, 1988.

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

NIH IS AN EQUAL OPPORTUNITY EMPLOYER.

### **BIOTECHNOLOGY R&D OPPORTUNITIES**

Environmental Diagnostics, Inc., a rapidly expanding biotechnology company, is moving aggressively to meet R&D challenges in the development of its patented immunodiagnostic products. You will have an opportunity to work with and contribute to a team of industry experienced scientists. We seek outstanding technical persons for the following positions:

### **Research Scientists**

The successful candidate(s) will have a MS or Ph.D. in immunology, microbiology or biochemistry. Proficiency in the development of rapid solid phase immunoassay systems is required along with 2-5 years of industrial experience

### **Research Associates**

Incumbent(s) will have a BS or MS in biochemistry or a related science, experience with immunoassay of haptens, and 2-5 years of academic and/ or industrial experience.

### **Research Technicians/Assistants**

Research technicians/assistants with a BS in biological science and proficiency in basic laboratory techniques including immunoassays are desired

EDI, as an emerging biotechnology company, provides a challenging and creative work environment. We offer competitive salary and benefits as well as an incentive stock option program. Please send your resume and cover letter to:

# 5

## ENVIRONMENTAL DIAGNOSTICS, INC. 2990 Anthony Road

Burlington, NC 27215 Attn: Heather Hand-Ruger Director of Administration

# **APPLICATION SCIENTIST**

## Main Responsibilities:

Training of and technical support to users of a microscope basedmedical image analysis systems.

Must have experience and knowledge in the use of computers (preferably IBM PC) and good background in biology and pathology. Some understanding of imaging science preferred. Excellent interpersonal sklls required. Extensive travel.

Negotiable starting salary depending on qualifications. Graduate degree (MSc or PhD) preferred. Please send your resume in confidence to:

### Yvonne V. Isaacs Personnel Department

**CELL ANALYSIS SYSTEMS** 

261 Eisenhower Lane South

Lombard, IL 60148

AN EQUAL OPPORTUNITY EMPLOYER

# 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 ongo-ing departmental activities. Current research within the department includes childre of crewth forcher, recenters 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 poly-peptides 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

FACULTY POSITIONS

MOLECULAR AND CELL BIOLOGY

The Institution is strongly committed to both basic and clinical research and includes other basic science depart-ments 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.

# **Forest Scientist**

AEOE

Project Scientist will work as a member of the Forest Team to quantify forest ecosystem processes, to identify and communicate emerging forest environmental issues, to develop research goals for the Team, and implement steps to achieve those goals.

Applicants should have a PhD in Forestry or related science with emphasis on quantitative skills, or an MS in Forestry with 4-6 years of experience in research. Substantial knowledge of forest ecosystems is required while experience in implementing research programs and writing scientific evaluations of forest environmental issues are desirable. Excellent communication skills are essential, and the applicant must enjoy writing.

Applicants should submit a professional curriculum vitae and the names, addresses and telephone numbers of three references to the Human Resources Department by May 20, 1988. Please cite reference number 4520-031/D88 in your correspondence. The projected starting date is August 1, 1988.

NORTHROP SERVICES, INC. 200 SW 35th Street, Corvallis, OR 97333 Northrop Services, Inc. is an Equal Opportunity Employer

# **UNIVERSITY OF GENEVA** FACULTY OF SCIENCE

Applications are invited for one or several full professorships in cell biology

These professorships will be available in a new Department of Cell Biology at the University of Geneva. This department will be accommodated in a Biology building currently under construction.

The successful candidates will be expected to participate in both undergraduate and graduate teaching, and to establish a strong independent research program. Applications are particularly invited from candidates whose areas of research interests include: Control of proliferation and development, cellular interaction and communication, intracellular traffic, compartmental interactions, organelle biogenesis, cell motility and cytoarchitecture. However, outstanding biologists whose research interests are outside of these areas will also be considered. The teaching will be in French and the applicants must be prepared to undertake an effort to become fluent in a reasonable time. The position is available October 1989, negotiable.

Applications should be sent by June 30, 1988 to: Secrétariat de la Faculté des Sciences, 20, quai Ernest-Ansermet, 1211 Genève 4, Switzerland, where inquiries can also be addressed.



## SENIOR RESEARCH FELLOW -CLINICAL CHEMIST

Merck Sharp & Dohme Research Laboratories is currently seeking a Clinical Chemist to supervise and operate a small clinical chemistry laboratory to support Phase I and II studies in humans. The candidate will not routinely measure blood levels of drugs but will determine concentrations of biomolecules in tissues and body fluids. Occasional animal experimentation may be necessary. Responsibilities include the analysis of samples using HPLC, immunoassays, and other modern analytical techniques. The position requires a Ph.D. in clinical chemistry (or analytical or biochemistry with appropriate experience) with post-doctoral training and several years of experience greatly preferred. Interest and experience in drug development is highly desirable.

Merck Sharp & Dohme Research Laboratories are located in Rahway, New Jersey approximately 20 miles south of New York City. Our salaries, benefits, and growth potential are excellent.

Interested candidates should submit their curriculum vitae and salary requirements to:

John R. Taylor (BL1 - 1)

Merck Sharp & Dohme Research Laboratories P.O. Box 2000 (WBD - 268) Rahway, New Jersey 07065 Equal Oppty. Employer, M/F/V/H



### SCIENTIFIC DIRECTOR ARMED FORCES RADIOBIOLOGY RESEARCH INSTITUTE

AFRRI is a Defense Nuclear Agency laboratory located in Bethesda, MD performing radiobiological research for the Department of Defense in the four scientific departments of Behavioral Sciences, Experimental Hematology, Physiology and Radiation Biochemistry. In response to research requirements of the military services, the Scientific Director formulates the direction of radiobiology research programs and ensures that results are provided to the requesting service. AFRRI invites applications for the position of Scientific Director to manage the execution and overall technical content of the AFRRI scientific radiobiological research program.

The successful candidate will have an earned medical or doctorate degree in the field of radiation biology, health physics, physics, biology or other life science field, demonstrated managerial ability to organize large multidisciplinary reseach programs and supervise high quality scientific personnel, and a record of high professional stature and research publications.

The AFRRI Scientific Director is a position within the Federal Senior Executive Service with a salary negotiable between \$65,994 and \$77,500 and eligibility for bonuses. The position requires access to classified Department of Defense information and the selectee will be subject to a background investigation prior to granting of a security clearance. All qualified candidates will receive consideration without regard to race, color, religion, sex, age, national origin or handicap.

Applicants must submit a Personal Qualifications Statement (Standard Form 171) to:

Defense Nuclear Agency ATTN: CVHR 6801 Telegraph Road Alexandria, VA 22310-3398

For information contact Dee Zehring at (703) 325-1108. Applications must be received by 10 June 1988. Refer to Vacancy Announcement No. MSVA # 19/88.

# NUTRITION

The National Research Council is seeking a Senior Program Officer and a Staff Scientist for its FOOD AND NUTRITION BOARD.

### Senior Program Officer International Nutrition

Will assist an expert panel in providing guidance on scientific issues relevant to programs, policies, and research in international nutrition, including Vitamin A supplementation, nutrition and diarrheal diseases, and growth monitoring. Responsibilities include data collection, analysis, preparation of background papers, organizing and managing task forces, maintaining contacts and seeking input from numerous segments of the international nutrition community, and managing other administrative and scientific aspects of the study, including preparation of reports. Applicant should have a Ph.D. or equivalent in nutrition or related field. at

least 5 years of related experience, and excellent writing skills. Please refer to position #455.024.

### Staff Scientist Maternal and Child Nutrition

Will assist an expert panel in developing recommendations for nutritional management during pregnancy and lactation. Includes preparation of reports, data collection, analysis, and preparation of background papers, organizing and managing task forces, maintaining contacts and seeking input from numerous segments of the nutrition community, and managing the other administrative and scientific aspects of the study. Requires a Ph.D. or equivalent in nutrition or an M.S. in nutrition with a doctorate in a related field and at least two years of related experience in maternal and child nutrition and good writing skills. Please refer to position #455.032

The NRC offers a starting salary based on experience, plus an excellent benefits package including paid relocation to Washington, D.C. area. Please reply in confidence to: NRC/FNB, Staff Officer Positions, 2101 Constitution Avenue, N.W., Washington, D.C. 20418.

EOE.



# SCIENTIST PHARMACEUTICAL RESEARCH

Due to continued expansion, Parke-Davis Pharmaceutical Research Division, Warner-Lambert Company, has an immediate opening for a Scientist in the Pharmacokinetics/Drug Metabolism Department.

The successful candidate will develop, validate and implement immunoassays of drugs in biological fluids. Principle responsibilities include: preparation of drug derivatives and conjugation to immunogenic carrier proteins, immunization of rabbits and preparation of radioiodinated drug labels. Using developed reagents, the candidate will then validate and run immunoassays including data collection and documentation.

The successful candidate will possess:

- MS degree with 3-5 years experience in immunoassay development or;
- · Ph.D. with relevant experience in chemistry or immunoassay
- · Good oral & written skills
- Computer familiarity
- · Experience in enzyme immunoassays and protein chemistry desirable

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

"Equal Opportunity In Action"



### MOLECULAR GENETICS TENURE-TRACK FACULTY POSITION AVAILABLE

The Division of Reproductive Genetics, Department of Obstetrics and Gynecology, in collaboration with the Department of Microbiology and Immunology invites applications for a junior or senior-level, tenure-track position focusing on medical genetics. Senior candidates should have a strong record of research accomplishment with sustained program growth and development. Junior candidates will be expected to develop a strong, indepen-dent research program with long-term growth potential. The faculty member will be responsible for developing and directing a Molecular Genetics Laboratory for select-ed prenatal and genetic carrier diagnostic services. Teached prenatal and genetic carrier diagnostic services. Leach-ing responsibilities, which emphasize quality rather than quantity, include postdoctoral fellows in clinical as well as basic science disciplines, graduate students, and medi-cal students. Strong ties exist with pediatric genetics, including the disciplines of cytogenetics, inborn errors of metabolism, and population genetics. At the University of Tennessee/University Physicians Foundation Inc. a large Carter of Evenlance grant has

Foundation, Inc., a large Center of Excellence grant has resulted in establishment of a Molecular Resource Center within the Department of Microbiology and Immunolo-gy featuring state-of-the-art facilities for: DNA cloning and sequencing, oligonucleotide synthesis, peptide synand sequencing, oligonucleotide synthesis, peptide synthesis, hybridoma antibody production, amino acid anal-ysis, protein sequencing, and flow cytometry. Funds for the initiation of research programs are available and salary is highly competitive. Applications should consist of curriculum vitae, copies of several recent publications, a brief statement of future research goals, and three letters of reference to be sent to: Sherman Elias, M.D., Director, Division of Reproductive Genetics, Profes-sor of Obstetrics and Gynecology, University of Tennessee, Memphis/University Physicians Foundation, Inc., 853 Jefferson Avenue, Room E102, Memphis, TN 38163. The University of Tennessee/University Physi-cians Foundation, Inc. is an Affirmative Action/Equal Opportunity Employer.

### NEUROBIOLOGIST

The Department of Oral Biology and the Dental Research Institute of the University of Minnesota invites applications for a tenure-track faculty position to pursue independent research and collaboration with department and DRI investigators. Applicants with outstanding programs or promise in any area of neurobiology are encouraged to apply. Candidate must have a D.D.S. degree with 5 years of research experience, or a Ph.D. and postdoctoral experience. Excellent laboratory facili-ties and start-up funds are available. Applicants should submit curriculum vitae, a statement of professional goals, and the names of three references by 30 June 1988 to: Dr. Burton Shapiro, Chairperson, Neurobiologist Search Committee, School of Dentistry, 17-226 Moos Tower, University of Minnesota, Minneapolis, MN 55455. The University of Minnesota is an Equal Opportunity Educator and Employer and specifically invites and encourages applications from women and minorities.

# PART-TIME LECTURER— PHARMACOLOGY UNIVERSITY OF WISCONSIN–MADISON

The University of Wisconsin-Madison School of Pharmacy has an opening for a 50% time lecturer to participate in its instruction in pharmacology and toxi-cology. Salary will be dependent upon the candidate's qualifications. Interested parties should send a complete résumé and the names of three references as soon as résumé and the names of three references as soon as possible to: Dr. R. E. Peterson, School of Pharmacy, University of Wisconsin, 425 North Charter Street, Madison, WI 53706. The University of Wisconsin is an Equal Opportunity/Affirmative Action Employer.

PHARMACOLOGIST/NEUROPHARMACOL-OGIST: Assistant professor (non-tenure)/instructor/ postdoctoral fellow to join major neuroscience labora-tory with interest/experience in receptors, second mestory with interest/experience in receptors, second mes-sengers in CNS related to autonomic regulation. In vivo/ in vitro, classical bioassay, and/or autoradiography tech-niques useful. Strong interaction with biochemists, and molecular and cell biologists. Send curriculum vitae and bibliography to: D. J. Reis/M. P. Meeley, Laboratory of Neurobiology, Cornell University Medical Col-lege, 411 East 69th Street, New York, NY 10021. Equal Opportunity Employer/Affirmative Action/M/F/H/V.

### **POSITIONS OPEN**

## DEPARTMENT OF BIOLOGICAL CHEMISTRY AND MOLECULAR PHARMACOLOGY HARVARD MEDICAL SCHOOL

NUCLEAR MAGNETIC RESONANCE (NMR) MANAGER: Will operate and maintain Varian 500-MHz and 300-MHz high resolution spectrometers, 2D NMR acquisition software linked to SUN network. NMR manager will join a major new structural biology program supporting the varying needs of several research groups. Must have in-depth experience in NMR hardware and software and an interest in biological applica-tions of NMR techniques. Ph.D. desirable. Salary negotiable

PEPTIDE SYNTHESIS TECHNICIAN: Will operate core production facility engaged in production and purification of oligonucleotides and peptides. B.S., M.S. and/or experience in HPLC or solid-phase synthesis chemistry. Must be reliable and interested in growth. Salary attractive.

Send inquiries to:

Department Chairman Attention: Recruitment Harvard Medical School Department of BCMP LHRRB-301 45 Shattuck Street Boston, MA 02115

### PHARMACOLOGIST

The Department of Pharmacology, Dalhousie Univerwith invites applications for a tenure-track faculty position at the assistant professor level. Applicants should have a Ph.D. or equivalent degree, plus some postdoctoral experience. Successful candidates will be expected to participate in undergraduate and graduate teaching and to maintain an independent research program. Prefer-ter and the source to prefer the program. ence will be given to applicants with experience in cardiovascular, biochemical, or molecular pharmacology; however, outstanding applicants in other areas are enrowever, ourstanding applicants in onlier areas are en-couraged to apply. Curriculum vitae, a bir areas are en-research interests, and three letters of reference (direct from referees) should be sent to: Dr. Kenneth W. Renton, Professor and Head, Department of Phar-macology, Dalhousie University, Halifax, Nova Sco-tia, Canada, B3H 4H7. Dalhousie University is an Equal Outpartmined Afficientia Action Employee. Opportunity/Affirmative Action Employer. In accordance with Canadian Immigration regulations this advertisement is directed in the first instance to Canadian citizens and permanent residents of Canada.

### OPEN POSITIONS IN PLANT MOLECULAR BIOLOGY UNIVERSITY OF TALCA, CHILE

The University of Talca has open positions for full professors to teach and lead high quality research groups in the following areas: PLANT TISSUE CULTURE. Including isolation

of protoplast, transformation, callus induction, plant regeneration, and in vitro selection of species of agro-

nomical and forestry importance. CELLULAR AND MOLECULAR PLANT BI-OLOGY. Including plant physiology, manipulation of nucleic acids, identification, isolation, expression and regulation for genes in plant systems. PLANT BIOCHEMISTRY. Chemistry of proteins,

lant enzymology, and plant hormones. PLANT GENETIC ENGINEERING. Molecular

genetic, molecular cloning, design, and manipulation of vectors for transformation of species of economical im-

PHYTOPATHOLOGY. Basic and molecular properties of fungi, bacteria and viruses. PLANT BIOORGANIC CHEMISTRY. Charac-

teristics of organic molecules involved in the function of plant tissues and their relationship with the ecosystem.

plaint dissues and their relationship with the ecosystem. Qualifications. A Ph.D. with postdoctoral experience in USA or Europe is required for all posts. Preference will be given to Chilean or Spanish-speaking candidates. The University of Talca will provide the scientists selected with instrumentation, technical personnel, grants for research and the best salary offered by Chilean universities. universities.

Applications must be sent to: University of Talca, Dirección de Investigación, Casilla 747, Talca, Chile.

### **POSITIONS OPEN**

### PHARMACOLOGIST

Northeastern University College of Pharmacy and Allied Health Professions, is seeking applicants for a full-time tenure-track position at the level of assistant profes-sor of pharmacology. Candidates will be expected to bring or establish an independent extramurally funded research program in their area of interest as well as teach pharmacology to graduate and undergraduate pharmacy students. Desirable areas of expertise include but are not restricted to: molecular, cardiovascular, biochemical, and neuropharmacology. Teaching experience is preferred. Qualifications required are Ph.D. in pharmacology with Qualifications required are Ph.D. in pharmacology with 2 years of postdoctoral experience. A pharmacy back-ground is preferred. Applicants should send curriculum vitae, including relevant reprints and names of three references, to the following address by 20 June 1988. Dr. Robert A. Schatz, Search Committee Chairman, Section of Pharmacology, Mugar Hall, Northeastern University, 360 Huntington Avenue, Boston, MA 02115. Northeastern is an Equal Opportunity/Affirmative Action Educational Institution and Employer.

### POSTDOCTORAL ASSOCIATE

A position is available immediately to study biochemical adaptations in insects to toxic chemicals. The work requires experience in enzyme biochemistry and analytical chemistry, and interest in working with insects. Send curriculum vitae and names of three references to: Dr. Lena B. Brattsten, Rutgers University/Cook College, Department of Entomology, J. B. Smith Hall, New Brunswick, NJ 08903.

### POSTDOCTORAL FELLOW

Postdoctoral fellowships at MIT/Harvard Medical Postdoctoral fellowships at MI1/Harvard Medical Area. Projects on (i) design of enzyme reactors for extracorporeal treatment of disease and (ii) peptide syn-thesis of lipoprotein analogs and structure: function studies in vitro and in vivo. Doctorate in chemistry or biochemistry required. Send résumé to: Dr. Robert S. Lees, Professor of Cardiovascular Disease, MIT, 77 Massachusetts Avenue, Building 26-131, Cambridge, MA 02139. MIT is a non-smoking environment. MIT is a Mirmatine Action/Environment.

MIT is an Affirmative Action/Equal Opportunity Employer.

### POSTDOCTORAL FELLOW

Postdoctoral fellowship available immediately for an individual to undertake research within a project investigating the structure and regulation of human glutamate dehydrogenase and its involvement in neurodegenerative disorders. Potential candidates require a strong background disorders. Potential candidates require a strong background in the field of protein purification and biochemistry and/or gene cloning. Salary on the scale of \$18,000 to \$26,000 per annum plus benefits commensurate with qualifications. Location: New York City. Applications including curricu-lum vitae should be sent to Dr. Plaitakis, Neurology Department, Box 1137, The Mount Sinai School of Medicine, One Gustave L. Levy Place, New York, NY 10029–6574. Telephone: 212-241-7310 or 212-831-1473. An Equal Opportunity Employer.

POSTDOCTORAL FELLOW IN ONCOLOGY/ BIOCHEMISTRY, Oregon Health Sciences University. Available 1 July 1988. To study role of glutathione drug resistance. Qualifications: Ph.D. or M.D. with previous experience in molecular biology and/or enzy-mology. Please contact: William D. Henner, M.D., Ph.D., Associate Professor, Division of Hematology/ Oncology, Oregon Health Sciences University, 3181 SW Sam Jackson Park Road, Portland, OR 97201. Telephone: 503-279-8443.

# POSTDOCTORAL FELLOW SIGNAL TRANSDUCTION

A position is available in a well-funded laboratory that is expanding its commitment to the biochemistry and cell is expanding its commitment to the biochemistry and cell biology of hormone action. Ongoing research focuses on the role of phospholipase C in the regulation of cell growth and function. Candidates with a Ph.D. or M.D. degree interested in multidisciplinary training in this area should submit their curriculum vitae, reprints and names of three references to: Dr. Charles O. Rock, Biochem-istry Department, St. Jude Children's Research Hos-pital, 332 North Lauderdale, Memphis, TN 38101. An Equal Opportunity/Affirmative Action Employer.

LOYOLA UNIVERSITY OF CHICAGO SCHOOL OF MEDICINE POSTDOCTORAL FELLOW/ RESEARCH ASSOCIATE DEPARTMENT OF PHARMACOLOGY

A postdoctoral fellow/research associate position is available to join a project studying various aspects of the aging brain, with specific emphasis on the development of cognition enhancing (nootropic) agents. Both in vivo and in vitro studies are being conducted, with particular focus on central neurotransmitter function, second messenger systems, and phospholipid metabolism and turn-

This position is within the framework of a strong collaborative academic/industrial venture, originated in 1983. The post is available immediately, and will be funded for at least 2 years, with an option for extension in time. The appointee will work with an experienced full-time research assistant. The research will be conduct-ed in an academic laboratory at the Medical Campus of Loyola University. Salary is highly competitive, and based upon the experience of the candidate. Excellent

benefits package. Interested candidates should send curriculum vitae and the names and addresses of at least two referees to: Dr. Israel Hanin, Chairman, Department of Pharmacolo-gy, Loyola University of Chicago School of Medicine, Room 3621, Building 102, 2160 South First Avenue, Maywood, IL 60153. Further details can be obtained by telephoning: Dr. Hanin at 312-531-3201/3262. The Loyola University of Chicago School of Medicine is an Affirmative Action/Equal Opportunity Employer.

POSTDOCTORAL FELLOWSHIP for molecular neurobiologist to join a multidisciplinary group interest-ed in viral and immune-mediated demyelination. Experience in membrane and myelin chemistry desirable. Position opened immediately, funded for at least 4 years. Contact: Mauro C. Dal Canto, M.D., Department of Pathology (Neuropathology), Northwestern Univer-sity Medical School, 303 East Chicago Avenue, Chicago, IL 60611.

POSTDOCTORAL FELLOWSHIP available for studies on the molecular basis of cell differentiation. Limited to those with recent doctorate. Prefer background in molecular biology. Send curriculum vitae and letters of reference to:

Frank E. Stockdale, M.D., Ph.D. Stanford School of Medicine, M211 Stanford, CA 94305–5306

POSTDOCTORAL POSITION available to work on characterization of growth factor inhibitors. Research will involve protein chemistry, cell physiology, and molecular biology. Background in protein/peptide biochem-istry preferred. Send curriculum vitae and names of three references to: Dr. Lawrence S. Phillips, Emory University School of Medicine, 69 Butler Street, SE, Atlanta, GA 30303.

**POSTDOCTORAL POSITION** available immediately to participate in studies on hormonal and developmental regulation of gene expression in heart and skeletal muscles (J. Biol. Chem. 262, 13316; Proc. Natl. Acad. Sci. USA 87, 3122). Recent Ph.D. in biochemistry, microbiology, pharmacology, or a related field with strong molecular biology research background is preferred. Opportunity to develop independent project. Salary nego-tiable. Send curriculum vitae together with names of three references to: Eugene Morkin, M.D., Director, University Heart Center, University of Arizona Health Sciences Center, Tucson, AZ 85724. An Equal Opportunity Affirmative Action Employer. Closing date for applications is 27 May 1988.

POSTDOCTORAL POSITION—MOLECU-LAR BIOLOGY OF HYPERTENSION. Require-ments are Ph.D. or M.D. with experience in molecular-genetic techniques. Techniques to include cloning, DED Determine the second genetic techniques. Techniques to include cioning, RFLP studies, protein purification and sequencing. Sala-ry negotiable. Submit curriculum vitae and statement of interest to: William A. Pettinger, M.D., Professor, Department of Pharmacology, University of Texas Southwestern Medical Center, Dallas, TX 75235. *Faual Opportunity/A firmative Action Institution.* Equal Opportunity/Affirmative Action Institution

Research Scientists

# **Discover Schering-Plough's Responsive Research Environment**

Schering-Plough is a research-driven pacesetter in the development and application of novel therapeutic entities. As an integral part of our multidisciplinary research group, you will be given the project responsibility, support and recognition to explore your ideas and contribute to new drug discoveries. We have immediate opportunities for motivated, eminently qualified professionals in the following areas:

## □ Biotechnology Assays

SECTION LEADER—You will be responsible for designing and implementing program strategies; and for research, development and supervision of assays for new cytokines, lymphokines and growth factors. Will prepare technical sections of INDs and NDAs. Requires PhD with minimum 5 years' post-doctoral experience developing biological/immunochemical assays. Prior supervisory experience and strong publication record or history of industrial accomplishment are important.

PRINCIPAL SCIENTISTS—You will have hands-on responsibility for evaluation and development of new approaches in furthering our study of lymphokines and immuno-modulating agents. Will also supervise junior scientists performing immunochemical assays, direct research and solve problems as they arise. Requires an Immunologist/Immunochemist with a PhD and minimum 3 years' experience developing and applying immunochemical/immunobiological assays. Cell culture experience essential.

### □ Molecular Biology

SENIOR SCIENTIST-You will be part of a multidisciplinary team involved in structure-function studies of lymphokines and the cloning of various lymphokine receptors. This position requires a PhD with 0-3 years' post-doctoral experience. Experience must include a strong background in gene regulation and expression of heterologous genes in mammallian cells; DNA cloning; and site-specific mutagenesis.

### □ Inflammatory/Allergy Research

PRINCIPAL SCIENTIST—You will conduct and supervise research critical to the development of novel therapeutic agents for treatment of rheumatoid arthritis and other chronic inflammatory diseases. Requires PhD with minimum 3 years' training or experience in inflammation research. Experience with in vivo models of inflammation would be ideal.

POSTDOCTORAL FELLOW-Position for recent PhD with outstanding academic credentials. You must have a strong interest in investigating regulations of phospholipid/arachidonic acid metabolism in cells relevant to allergic and inflammatory disorders. Starting salary for this appointment is \$41,000.

We offer competitive salary and benefits. Please send detailed resume, indicating position of interest, to: Mr. Louis DeMartino, Schering Research, 60 Orange Street, Bloomfield, NJ 07003. We are an equal opportunity employer.



6 MAY 1988

## Senior Scientist

Kendall healthcare products, a subsidiary of Colgate-Palmolive is using their vast resources to continue their commitment to quality R&D. You can benefit from this unique dedication by joining the staff at our new laboratory wing of our company headquarters in Mansfield, Massachusetts. We currently seek a top level Scientist with excellent communication skills to help us maintain our leadership position in venous disease and thromboembolism. You will join key clinical investigators in setting up exploratory hemodynamics programs. You will learn to be an expert internal consultant on venous diseases and hemodynamic functional physiology, assist in the translation of experimental or clinical results to business and design objectives, and participate in the design of product changes and new products in the hemodynamic area. You will also develop R&D programs to understand the effects of compression, compliance | sizing in functionality of compression devices and work closely with other in-house Scientists and widely respected Consulting Physicians. To qualify, you must have a PhD, Biomedical Engineering or Physiology preferred, and experience in the treatment of venous diseases. An MS will be considered with strong venous diseases hackground.

Kendall offers a competitive salary and extensive benefits program including a Savings and Investment program. Interested candidates should send resumes to R. Simons, Human Resources Department, The Kendall Healthcare Products Company, 15 Hampshire St., Mansfield MA 02048. Principals only, no phone calls please. An equal opportunity/affirmative action employer.

# **KENDALL** HEALTHCARE PRODUCTS COMPANY

STRONG TRADITIONS/NEW VISIONS

A Subsidiary of Colgate-Palmolive

# PROFESSOR OF BIOLOGY, UNIVERSITY OF GENEVA FACULTY OF SCIENCES

Applications are invited for a full professorship\_in biology. Candidates are expected to participate in both undergraduate and graduate teaching and to establish a strong independent research program in the general fields of embryology and developmental biology or genetic of higher organisms; however outstanding biologists whose research interests are outside of these areas will also be considered. The teaching will be in French and the applicants must be prepared to undertake an effort to become fluent in a reasonable time. The position is available October 1989, negotiable.

Applications should be sent by June 30, 1988 to: Secrétariat de la Faculté des Sciences, 20, quai Ernest-Ansermet, 1211 Genève 4, Switzerland, where inquiries also can be addressed.

## ORGANIC CHEMIST/ RADIOCHEMIST

Merck Sharp & Dohme Research Laboratories, world-renowned for conducting excellent basic research and discovering new therapeutic pharmaceutical drug compounds, are currently seeking an organic chemist/radiochemist for their Research Imaging Group.

Duties for this position will involve the development and use of gamma and positron emitting radiotracers for use in PET and SPECT imaging studies.

A Ph.D. degree in radiochemical synthesis, a BS/MS degree and 3-5 years experience, or the equivalent in radiochemical synthesis of gamma emitting radiotracers is required. In addition, broad knowledge of organic synthetic methods and characterization techniques using UV/Vis, IR, NMR and HPLC is essential.

Excellent salary and benefits accompany this position at our modern research facilities located 25 miles northwest of Philadelphia.

Please send resume and the names of three references to:

Michele A. Dauber (W42-2)

Merck Sharp & Dohme Research Laboratories West Point, PA 19486 EEO/AA/VH/EMPLOYER

Merck & Co., Inc.

## BIOTECHNOLOGY/ DIAGNOSTICS RESEARCH & DEVELOPMENT

At the Baxter Healthcare Corporation, Pandex Division, our breakthroughs in innovative immunoassay technology have put us at the forefront of this field while helping drive our substantial rate of growth. Creative and independent Scientists at the Ph.D, MS and BS level are now needed to support our expanding biotechnology efforts in the following areas:

- BIOPROCESSING
- MOLECULAR BIOLOGY
- RETROVIROLOGY/VIROLOGY
- IMMUNOLOGY/IMMUNOCHEMISTRY
- IMMUNOASSAY DEVELOPMENT
- MICROBIOLOGY

At Pandex you'll find a unique scientific environment supported by the Fortune 75 Baxter, yet within an atmosphere where you'll play a key and independent project role while being recognized for your contribution. Our organization is located in an attractive suburban area 30 miles north of Chicago and we offer excellent compensation. For confidential consideration, please send resume to: Anne McNicholl, Personnel Director, Baxter Healthcare Corporation, Pandex Division, 909 Orchard Street, Mundelein, IL 60060. Equal Opportunity Employer.



# Section Head Molecular Sciences

# Beckenham, Kent £19-30K

- The Wellcome Foundation Ltd.
- Major International
- **Pharmaceutical Group**
- Research Centre at Beckenham
- Annual Turnover >£1,130m
- An Equal Opportunity Employer



The newly established Department of Molecular Sciences is dedicated to the discovery of new and novel agents for the treatment of major virus diseases and cancer.

As part of our plans for this new expanding department, we are now seeking an experienced molecular biologist presently engaged in research preferably on cellular or viral oncogenes to head our Molecular Biology Section.

You will manage a group of 15 PhD and graduate scientific staff dedicated to the application of molecular biological techniques focussed towards the discovery of drugs against the retroviruses and cancer.

A proven track record of originality and innovation in academic or industrial research, and excellent leadership skills are essential requirements for this senior position.

An attractive salary will be negotiated according to experience supported by an excellent benefits package, including 5 weeks' holiday (increasing to 6 weeks after 5 years service) pension and life assurance schemes, first class sports and social club facilities, assistance with relocation expenses and, dependent on entry level, a Company car.

Interested candidates should send full c.v. to Miss S. J. McKinlay, Personnel Officer, The Wellcome Research Laboratories, Langley Court, Beckenham, Kent BR3 3BS, quoting reference number 156.

Candidates wishing to discuss this appointment or to obtain further information should contact Dr. G. Darby (Head of Molecular Sciences) Tel: 01-658 2211, Ext. 5187.

# Postdoctoral Scientist Tumor Angiogenesis

The Upjohn Company, a leader in the research and development of pharmaceuticals, is seeking a highly motivated individual to perform basic, independent research on processes involved in tumor angiogenesis. Aspects of the work involve the isolation of the subpopulation(s) of microvascular endothelial cells involved in neovascularization and characterization of the distinct functional properties of these cells. The successful applicant will also have an opportunity to investigate their own interests related to the neovascularization of tumors. Interactions with other Upjohn scientists interested in endothelial cell and tumor cell biology are available, and will be encouraged to provide strong opportunities for career growth and expansion of skills. The presentation of research results at meetings and the timely publication of work will be expected.

Individuals with a Ph.D. or equivalent degree in anatomy, cell biology, pathology, or physiology or

a related field, and 0-2 years of postdoctoral research experience will be considered for this position. The duration of the position will be two years. This opportunity will be especially beneficial to the individual who wishes to pursue basic research in the well-equipped laboratories at Upjohn, while at the same time gaining work experience in the pharmaceutical industry.

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 yearround sports and recreation. Upjohn offers a competitive salary and comprehensive benefits. 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 22907-HA when calling. An Equal Opportunity Employer M/F.

Our Committment to Scientific Excellence Continues...



**POSTDOCTORAL POSITION**—Immediate opening—Requires Ph.D. with experience in cellular and molecular biology to participate in research using monoclonal antibody, cDNA expression clones, fluorescence microscopy and microinjection techniques to study structure and function of cytoskeletal proteins in normal and transformed cells. Send curriculum vitae and names of three references to: Dr. Jim J.-C. Lin, Department of Biology, University of Iowa, Iowa City, IA 52242. An Equal Opportunity/Affirmative Action Employer.

### UNIVERSITY OF CALIFORNIA— RIVERSIDE POSTDOCTORAL POSITION

Postdoctoral position available immediately to study the membrane proteins of malaria-infected red cells as they relate to antigenic variation. Projects involve the preparation of monoclonal antibodies, protein purification, peptide mapping, and immunolocalization. Applicants should have a recent Ph.D. with a background in protein chemistry, hybridoma methodology, and membrane isolation.

Salary commensurate with education and experience. Applicants should send their curriculum vitae, statement of research interest, and arrange for three letters of reference to be sent to:

#### Professor Irwin Sherman 1140 Batchelor Hall University of California Riverside, CA 92521

UCR is an Equal Opportunity Employer/Affirmative Action Employer and minority and female candidates are encouraged to apply.

POSTDOCTORAL POSITION available immediately to study adrenergic regulation of neuronal angiotensin system. Ph.D. with training in neurochemistry preferred. Send curriculum vitae and names of three references to: Professor Mohan K. Raizada, Department of Physiology, Box J-274, University of Florida, Gainesville, FL 32610. Telephone: 904-392-3791. Equal Opportunity Employer/Affirmative Action Employer.

POSTDOCTORAL POSITION available now for biophysical studies of membranes. We are studying the effects of the lipid and ionic environment on the structure and function of bacteriorhodopsin, using solid-state NMR and optical spectroscopy. Experience required in at least one of: membrane protein or lipid biochemistry; state-of-the-art NMR spectroscopy; or optical studies of proteins. Experience with bacteriorhodopsin and with solid-state NMR desirable but not required. Send curriculum vitae and three names or letters of reference to: Dr. Barbara Lewis, Department of Chemistry, University of Wisconsin, 1101 University Avenue, Madison, WI 53706. University of Wisconsin-Madison is an Equal Employment/Affirmative Action Employer.

POSTDOCTORAL POSITION available immediately for a recent Ph.D. to study the molecular biology of atrial natriuretic peptides and their receptors. A background in molecular biology is essential. Send curriculum vitae, and names of at least three references to: Dr. T. G. Flynn, Department of Biochemistry, Botterell Hall, Queen's University, Kingston, Ontario, Canada, K7L 3N6. This advertisement is directed in the first instance to Canadian citizens and permanent residents, in accordance with Canadian immigration requirements.

### POSTDOCTORAL POSITIONS IN DEVELOPMENTAL GENETICS

To isolate and characterize genes that control sperm development and fertilization in the nematode *Caenorhabditis elegans*. Studies will include the cloning of genes identified mutationally and analysis of tissue-specific gene regulation and function by DNA transformation with modified genes. Candidates should have experience in biochemistry or molecular biology. Positions are available September, 1988 in the Department of Molecular and Cellular Biology, University of Arizona, Tucson, Arizona. Please send curriculum vitae, reprints, and have three letters of recommendation sent to: Dr. Samuel Ward, Department of Embryology, Carnegie Institution of Washington, 115 West University Parkway, Baltimore, MD 21210. Closing date will be 1 July 1988. The University of Arizona is an Equal Opportunity/ Affirmative Action Employer. Women and minorities are encouraged to apply. POSTDOCTORAL POSITIONS available to study cell cycle control of DNA replication and cellular aging in yeast. Research involves techniques in molecular and yeast genetics, and includes analysis of protein-DNA interactions, protein phosphorylation and gene expression. Send curriculum vitae, including bibliography, and names, addresses and telephone numbers of three references to: Dr. S. Michal Jazwinski, Department of Biochemistry and Molecular Biology, Louisiana State University Medical Center (LSUMC), 1901 Perdido Street, New Orleans, LA 70112. LSU/MC is an Equal Employment Opportunity/Affirmative Action Employer.

**POSTDOCTORAL POSITIONS** are available to study Ca<sup>2+</sup>. and cAMP-mediated signal-transduction mechanisms involved in the regulation of ion transport in epithelial tissues. Successful applicants will join a multidisciplinary research program applying electrophysiological, biochemical and molecular techniques to identify the regulatory reactions responsible for impaired chloride and sodium transport in cystic fibrosis. Postdoctoral associates in this program have the potential for appointment to research faculty positions. Individuals with an M.D. or Ph.D. in physiology, biochemistry, cell biology, or a related discipline are invited to submit a letter of application, curriculum vitae, relevant publications, and names of three references to: Dr. Raymond A. Frizzell, Department of Physiology and Biophysics and Cystic Fibrosis Research Center, University of Alabama at Birmingham, Birmingham, AL 35294. UAB is an Affirmative Action/Equal Opportunity Employer.

POSTDOCTORAL POSITIONS in the area of biomolecular structure determination by high-field NMR spectroscopy. Current equipment includes two supercon NMR spectrometers (Bruker WH-400 and CXP-200) an iron magnet system (HX-90). A 600-MHz (AM-600) spectroscopy magnet system will be installed during the summer at the NMR Facility. Computer programming experience is a definite asset. Send a résumé and three letters of recommendation to: Dr. N. Rama Krishna, Director, NMR Core Facility, CHS-B31, University of Alabama at Birmingham, Birmingham, AL 35294. Equal Opportunity/Affirmative Action Employer.

**POSTDOCTORAL POSITIONS** available immediately to study (i) cytochrome P-450 and peroxidasemediated xenobiotic metabolism in skin; (ii) modulation of P-450 expression during skin differentiation; and (iii) expression and regulation of xanthine oxidase in skin and liver by interferons and tumor promoters. Salary commensurate with experience. Send curriculum vitae and three letters of reference to: Dr. John Reiners, Jr., University of Texas System Cancer Center, Science Park-Research Division, Smithville, TX 78957. An Equal Opportunity/Affirmative Action Employer.

**POSTDOCTORAL POSITIONS** available for recent Ph.D.s to participate in an active research program on the regulation of DNA repair in human cells. Current research efforts focus on the expression of DNA repair enzymes in the cell cycle and structural analysis of eukaryotic multienzyme DNA repair complexes. Submit curriculum vitae and the names of two references to: Dr. Michael A. Sirover, Fels Research Institute, Temple University School of Medicine, 3420 North Broad Street, Philadelphia, PA 19140. Equal Opportunity/ Affirmative Action Employer.

POSTDOCTORAL POSITIONS available to join an NIH-funded, highly competitive laboratory working on molecular aspects of Herpes simplex virus latency and pathogenesis. Investigation focuses on studying the genes involved in the regulation of HSV-1 latency and reactivation and elucidating their modes of action. Other research projects include (i) baculovirus expression of HSV-1 glycoproteins and (ii) HSV-1 vaccine studies. Starting dates: immediately and summer/fall of 1988. Candidates should have a Ph.D. in the area of biological science; emphasis in molecular biology and/or virology preferred but not essential. Highly competitive salary commensurate with experience and productivity. Twoor 3-year appointments are available. Submit curriculum vitae, and names, addresses, and telephone numbers of three individuals to be contacted as references to: Steven L. Wechsler, Ph.D., Virology Research Lab, Cedars-Sinai Medical Center/UCLA School of Medicine, Halper Building, Room 111, 8700 Beverly Boulevard, Los Angeles, CA 90048.

### **POSITIONS OPEN**

POSTDOCTORAL POSITIONS on NIH Training Program to study the mechanisms of action of reproductive hormones. Areas of research include: Mechanism of action of gonadal steroids, regulation of gene expression by steroids and growth factors, steroid receptors, regulation of intracellular calcium, structure and function of gonadotropins, regulation of cAMP production. Participating faculty: M. J. Getz, D. J. McCormick, J. T. Penniston, P. C. Roche, R. J. Ryan, T. C. Spelsberg, D. O. Toft, and E. D. Wieben. Please submit curriculum vita and names of three references to: Dr. David O. Toft, Department of Biochemistry and Molecular Biology, Mayo Medical School, Rochester, MN 55905. An Equal Opportunity/Affirmative Action Institution.

**POSTDOCTORAL POSITIONS** available immediately to characterize human and simian immunodeficiency virus infections in chimpanzees and various monkey species in a laboratory well-established in the field of animal models for AIDS. Opportunities exist to study mechanisms of pathogenesis, molecular and biologic properties of viruses isolated from naturally and experimentally infected animals, immunologic responses to HIV and SIV of infected animals and responses of animals to therapeutic drugs and vaccines. A background in molecular biology, virology, and/or immunology and highly motivated individuals are sought. Support available for at least 2 years with salary negotiable, based on experience. Send curriculum vitae and names of three references to: Dr. Harold McClure, Yerkes Regional **Primate Research Center, Emory University, Atlanta, GA 30322.** An Equal Opportunity/Affirmative Action Employer.

POSTDOCTORAL RESEARCH ASSOCIATE. Perform laboratory tests to develop techniques for detecting genes associated with human genetic disorders. Isolate and characterize genes and their products from human X chromosomes, using nucleic acid hybridization. Identify mutations associated with cancer and genetic disorders. Study tissue culture, DNA transfection and DNA cloning. Prepare cDNA library. Must have Ph.D. in microbiology, molecular biology, or molecular genetics. No specific experience required. Requires detailed knowledge of mammalian molecular genetics, molecular oncology, oncogenes, molecular cloning, DNA transfection, DNA cloning, nucleic acid and reaction kinetics, as evidenced by independent doctoral research or at least one doctoral level course in the discipline. Requires strong background in chemical reaction kinetics and advanced calculus. Flexible hours: 40 hours, \$19,000 per annum. Please send résumé to: Job Service Technical Unit, Connecticut Department of Labor, 200 Folly Brook Boulevard, Wethersfield, CT 06109. Refer to Job Order #3014961.

### POSTDOCTORAL RESEARCH ASSOCIATE BIOMEDICAL ENGINEERING LABORATORY RICE UNIVERSITY

There is a postdoctoral research position open in the Biomedical Engineering Laboratory of Rice University. The Biomedical Engineering Laboratory is a well-established research facility for the purpose of promoting interdisciplinary research involving personnel of Rice University and those of the Texas Medical Center. The laboratory has excellent equipment—including a variety of modern biorheological equipment—and has an experienced staff in addition to a number of predoctoral students and postdoctoral research associates.

students and postdoctoral research associates. Candidates should have training in engineering, biophysics, physiology, or related fields and have an interest in the microcirculation. The opening is in an established research program on oxygen transport in the microcirculation. The research involves use of an in vitro artificial capillary system for studying oxygen transport processes under controlled, measured conditions.

The stipend will be \$20,000 to \$25,000 annually, depending on qualifications. *Rice University is an Affirmative-Action/Equal-Opportunity Employer*. Interested parties should write or call:

J. D. Hellums Dean of Engineering Rice University P.O. Box 1892 Houston, TX 77251 Telephone: 713-527-4009

SCIENCE, VOL. 240

**POSTDOCTORAL RESEARCH ASSOCIATE** positions available in application of techniques of molecular endocrinology to problems related to the biochemistry of reproduction. Current project areas include receptor purification and characterization, synthesis of peptides having functional properties, isolation of naturally occurring gonadal paracrine factors, structure-function studies on glycoprotein hormones, and studies on signal transduction and mechanism of hormone action using cultured cell systems as well as in vivo models. Salaries are negotiable and depend on qualifications and experiences. Send curriculum vitae and names of three references to: Dr. Leo E. Reichert, Jr., Department of Biochemistry, Albany Medical College, Albany, NY 12208.

An Affirmative Action/Equal Employment Opportunity Employer.

**POSTDOCTORAL RESEARCH ASSOCIATE** needed. Electrodeposition and characterization of compound semiconductor films on metallic and non-metallic substrates. Conducting in-depth research utilizing photoelectrochemical, impedance spectroscopy, Fourier transform-infrared, auger electron spectroscopy, X-ray diffraction, electron diffraction and conductivity measurement techniques. Forty hours per week, 8:00 a.m. to 5:00 p.m., \$18,000 per year, one and one half of regular pay for overtime. Ph.D. degree in metals science and engineering or metals/materials science engineering required. Six months of experience in related occupation as graduate assistant at university required. Must be able to use computerized electrochemical photoelectrochemical, spectro-electrochemical, electron, and x-ray diffraction techniques. Apply at: The Texas Employment Commission, Fort Worth, Texas, or send résumé to: The **Texas Employment Commission, TEC Building,** Austin, TX 78778, J.O. #4793680. Ad paid by an *Equal Employment Opportunity Employer*.

### POSTDOCTORAL RESEARCH ASSOCIATE NEUROPHARMACOLOGY

Ph.D. in neuropharmacology or related discipline. Research will focus on the molecular and neurochemical mechanisms of action of ethanol's acute and chronic behavioral effects using in vivo and in vitro models. Prior experience with behavioral, membrane biophysical and/ or neurochemical techniques required. Salary negotiable. Send curriculum vitae, statement of research interests, and the names and addresses of three references before 1 July 1988 to: Ronald L. Alkana, Ph.D., Institute for Toxicology, School of Pharmacy, University of Southern California, 1985 Zonal Avenue, Los Angeles, CA 90033. Affirmative Action/Equal Opportunity Employer.

#### POSTDOCTORAL RESEARCH ASSOCIATES

Positions for NCI postdoctoral training program in molecular and cellular mechanisms of carcinogenesis are available at The University of Texas System Cancer Center (UTSCC)—Science Park. Research programs focus on the following areas: somatic cell genetics, DNA repair and mutagenesis, carcinogen metabolism and adduct formation, tumor promotion, mechanisms of lymphomagenesis, normal and tumor cell differentiation, biochemical genetics, growth factors, and retroviruses. Applicants must be U.S. citizens or permanent residents, and have a Ph.D., M.D., or D.V.M. degree. For application forms contact: Dr. Thomas J. Slaga, Director, UTSCC, Science Park–Research Division, P.O. Box 389, Smithville, TX 78957. Telephone: 512-237-2403. An Equal Opportunity/Affirmative Action Employer.

**POSTDOCTORAL RESEARCH POSITION** available in the laboratory of **Dr. Martin Nemer**, for a developmental biologist and/or molecular biologist. Our research on the sea urchin embryo explores the relationship between developmental processes and the regulated expression of specific genes. The structures of metallothionein and tubulin genes are being analyzed and their gene-fragments transferred to study expression under various conditions of cellular differentiations. Position available 1 July 1988. Interested candidates should send résumé and three letters of reference to: **Director of Personnel**, **Fox Chase Cancer Center**, 7701 **Burholme Avenue**, **Philadelphia**, **PA 19111**. *We are an Afirmative Action/Equal Opportunity Employer*.

# Laboratory Animal Research & Development

Genentech, Inc., a leader in the field of biotechnology, is currently seeking the following scientific professionals.

# Laboratory Animal Veterinarian

An individual is sought to perform clinical duties and participate in the ongoing development and management of animal facilities supporting a wide variety of research development projects. Responsibilities include planning and design of new facilities, consultation and collaboration with Genentech scientists, and maintenance of strong programs in animal care and support consistent with NIH, USDA and AAALAC guidelines.

Minimum qualifications include a DVM/VMD degree. ACLAM board certification or eligibility and the ability to work with all levels of animal users. Training or demonstrated interest in one or more of the following specialty areas is desirable: clinical pathology, experimental surgery, genetics, toxicology, or animal model development/ comparative medicine.

# Histopathologist

We are also seeking a Pathologist with advanced training and experience in histopathology. Responsibilities include participating in the design and interpretation of efficacy and toxicology studies related to the development of a variety of recombinant products. Opportunity is also available to collaborate on a number of research projects related to pathogenic mechanisms.

The position requires demonstrated skills in diagnostic and descriptive pathology at gross and microscopic levels with the opportunity to perform ultrastructural investigations as well. Excellent communication skills are a requisite. Candidates should have a DVM/VMD with ACVP board certification. An advanced degree is desirable. Although not a requirement, the ideal candidate will have a minimum of two years' experience in toxicologic or laboratory animal pathology. Training or demonstrated interest in one or more of the following specialty areas is desirable: immuno or enzyme histochemistry, ultrastructural pathology, morphometry, animal model development, or clinical pathology.

Genentech offers an excellent salary and benefits package coupled with the opportunity to make a significant contribution to our organization. For consideration, send a letter describing interests and qualifications, curriculum vitae, and names of three references to: Eric Mankuta, Human Resources Department 0506, Genentech, Inc., 460 Point San Bruno Blvd., South San Francisco, CA 94080. An equal opportunity employer.

> Genentech, Inc. Genentech, Inc. Genentech, Inc. Genentech, Inc. Genentech, Inc.



### CHAIRMAN Department of Human Genetics

The University of Pennsylvania School of Medicine is seeking applicants for the position of Professor and Chairman of the Department of Human Genetics.

Application is invited from individuals with outstanding achievement in research, demonstrated leadership ability, and appreciation for the continuing role of a department of genetics and molecular biology in educating both medical and graduate students. We are seeking candidates from a broad spectrum of disciplines and departments related to genetics.

The University is an equal opportunity, affirmative action employer. Women and minority candidates are encouraged to apply. Interested applicants should send curricula

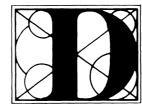
interested applicants s

Nicholas A. Kefalides, M.D., Ph.D. Chairman, Human Genetics Search Committee Professor Department of Medicing



Search Committee Professor, Department of Medicine University City Science Center 3624 Market Street Philadelphia, PA 19104

# **Postdoctoral Scientist**



What will you

**iscover** when you join Lederle?

You'll discover that scientists in our Medical Research Division are actively engaged in projects relating to the genetics and physiology of commercially important microorganisms. Currently, we are seeking an individual to join an established group in our Fermentation Development Department working on the isolation and characterization of genes involved in antibiotic biosynthesis in Streptomyces.

To qualify for this appointment you should have a recent PhD in microbiology or molecular biology. This position is for a one-year period with the option to renew for one additional year upon mutual agreement.

Lederle Laboratories is located in Rockland County, NY, one half-hour from New York City. We offer competitive salaries, a superior benefits package, and a stimulating scientific atmosphere. Please send curriculum vitae along with at least two letters of recommendation, to: Ms. Maureen Quigley, Professional Employment Representative, Lederle Laboratories, Medical Research Division, American Cyanamid Company, Pearl River, NY 10965. An equal opportunity employer m/f.



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# SCIENTISTS DIAGNOSTIC RESEARCH

The Diagnostic Research & Development Division of Carter-Wallace, Inc., has immediate openings for qualified Research and Development Scientists. Individuals should have a strong career interest in participating as team members performing basic and applied research leading to the development of in vitro diagnostic tests.

## SENIOR SCIENTISTS

These senior level positions require individuals who possess a Ph.D. in Microbiology, Biochemistry, Molecular Biology or Immunochemistry. Opportunities exist in the areas of Immunoassay Systems and in our OTC Immunodiagnostics Group for qualified Scientists who desire to work "hands on" with a group of professionals developing diagnostic tests. At least 2-5 years postdoctoral/industry experience required and applicants should have knowledge of HPLC, Protein Chemistry, ELISA Methodologies and Conjugate Preparation.

## **ASSOCIATE SCIENTISTS**

Candidates for these positions will possess a BS or MS in Biology, Microbiology or Biochemistry. Previous experience in culturing infectious organisms, producing antigens and antibodies. Immunoassay development, an expertise in hybridoma technology, or knowledge of HPLC, Protein Chemistry, ELISA Methodologies and Conjugate Preparation is required.

We offer competitive salaries and an excellent benefits package. For consideration, please send your resume in confidence to: **Mr. Glenn Gnirrep**,



Personnel Manager, Carter Wallace, Inc. Post Office Box 1366, Cranbury, NJ 08512. Carter Wallace is an Equal Opportunity Employer.

# BUILDING A NEW LAB?

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SCIENCE MAGAZINE NEW LAB SERVICE DEPT. 1515 BROADWAY NEW YORK, N.Y. 10036 Agricultural Research Service United States Department of Agriculture

The AGRICULTURAL RESEARCH SERVICE is seeking innovative scientists for challenging positions in biochemistry and biophysics research at the Northern Regional Research Center, Peoria, IL. Two positions are available immediately as part of an expanding team investigating microbial and enzymatic interactions with carbohydrate polymers:

**ENZYMOLOGIST** – develop enzyme systems with altered substrate and /or product specificities. (Position No. 1W2561); and

**BIOCHEMIST/BIOPHYSICIST** - study microbial metabolism using state of the art spectroscopic techniques such as FTIR, photoacoustic spectroscopy and NMR. (Position No. 1W6065).

Positions are Research Associates with initial appointments of 2 years. Recent PhD (or equivalent) required. Salary \$27,716 - \$33,218 (GS-11/12). The Northern Regional Research Center is a well-equipped, major research facility with more than 350 scientists and staff. For additional information, contact J. Michael Could, USDA/ARS/NRRC, 1815 N. University St., Peoria, Illinois 61604. Applications should be sent to Helen Sweeney, Personnel Assistant, at the same address (telephone: 309/685-4011). Applications in response to this ad should be marked 8N018. Please indicate the position for which you are applying.

USDA is an Equal Opportunity Employer

Sepracor Inc., a technology leader in the field of advanced separations, is initiating the development of bio-active membrane products for medical uses. We are forming a team of outstanding innovative scientists to focus on selective *in-vitro* manipulations of subpopulations of human cells.

**Hematologist, M.D. or Ph.D.,** to develop the technology of hematopoietic stem cell purification for autografting from marrow or blood, and to develop novel blood cell fraction preparation techniques for use in transfusion medicine.

**Immunologist, Ph.D.,** to select and evaluate monoclonal antibodies to human hematopoietic cell surface antigens for cell separation techniques.

**Immunochemist, Ph.D.**, to develop technologies to link antibodies to bio-active membranes for the recovery of viable human cells.

**Bioengineer, Ph.D.,** to select materials and to design disposable apparatus for cell purification systems using human blood, bone marrow, and related tissues.

These positions require 2-5 years of relevant postdoctoral experience. Through its Scientific Advisory Board, Sepracor maintains close ties to Dana-Farber Cancer Institute, M.I.T., and the University of Pennsylvania. We are located about 35 miles west of Boston, and 10 miles east of the University of Massachusetts Medical School. Please send resume to: Ms. Frances Sharp, Human Resources Administrator, Sepracor Inc., 33 Locke Drive, Marlborough, MA 01752. An Equal Opportunity Employer M/F.



**RESEARCH SCIENTIST** BIOCHEMIST

G.D. Searle is a worldwide leader in the pharmaceutical industry. An outstanding opportunity exists for a qualified individual in our Research and Development Division located in the northern suburbs of Chicago.

The preferred candidate would be a biochemist with training/experience in thrombosis and hemostasis, with a demonstrated record of achievement, in the areas of platelet adhesion and/or coagulation factor biochemistry. The selected individual will have a Ph.D. with postdoc. and 0-3 years of experience with a good publication record in the field. The position has supervisory responsibility and requires strong interaction with members of the team.

Searle offers an excellent salary, high visibility, and good upward mobility. Qualified candidates please forward your resume in strict confidence to **Professional Recruiting, Dept. DW11, G.D.** Searle, Research and Development A-1, **4901 Searle Parkway, Skokie, IL 60077.** An Equal Opportunity Employer.



Biogen is a leading Biotechnology company, located in Kendall Square, Cambridge, MA. We have the following immediate opening:

# **BIOASSAY SCIENTIST**

This position is in the QA/Bioassay group, a part of our Pharmaceutical Development Division. The qualified candidate will report directly to the Bioassay Manager; responsibilities are varied, and include:

- conducting immunoassays and bioassays in support of product development work
- developing, testing, and validating new assays
- developing BASIC and SAS programs to analyze and report assay results
   participating in Product Team meetings

A Ph.D. in Immunology or Cell Biology and at least 1 year experience in conducting/ developing assays, or an MS and 4-6 years experience required. Relevant experience includes immunoassays, particularly ELISAs, and in vitro bioassays involving mammalian cell lines. Experience in computerized statistical analysis of data is highly desirable. Biogen offers an excellent compensation

and benefits package, including health and dental insurance, tuition reimbursement, and help with relocation. Please send your resume to Department PDD-SC-5/88, Human Resources.

BIOGEN, 14 Cambridge Center, Cambridge, MA 02142

An Equal Opportunity Employer



POSTDOCTORAL RESEARCH FELLOWSHIP IN THE NEUROSCIENCES-One position available immediately in small laboratory group focused on complementary studies to understand mechanisms of brain damage pertinent to human neurodegenerative disorders. Applicant may join ongoing research or devel-op own project within the general focus of the labora-tory. Current research includes the use of tissue culture, molecular biology and animal models of brain damage. Applications entertained from individuals from diverse disciplines. Experience in neuroscience research not an absolute requirement. We are more interested in your talent and work ethic. Send curriculum vitae to: Martin R. Cohen, M.D., Chief Ensor Research Laboratory, K. Conen, M.D., Chief Ensor Research Laboratory, WSHPI, University of South Carolina, Department of Neuropsychiatry and Behavioral Science, P.O. Box 202, Columbia, SC 29202, or telephone: 803-734-7102. Equal Opportunity Employer.

**POSTDOCTORAL RESEARCH POSITION** (\$23,000 per year) to characterize the process by which amplified DNA is incorporated into and excised from chromosomal loci in drug-resistant cells. The candidate should have a Ph.D. degree in the biological sciences and 1 year of experience in cell culture, comparative cytogeretics, chromosomal banding techniques, in situ hybrid-ization, and production and screening of cDNA libraries. The candidate will also present and discuss research results at local and national meetings and prepare data for publication in medical and scientific journals. Applications directed to: Jack Hilzheim, Department of Em-ployment Security, 1309 Poplar Avenue, Memphis, TN 38104. Equal Opportunity Employer.

**POSTDOCTORAL SCIENTISTS.** Merck Sharp and Dohme Research Laboratories is currently seeking postdoctoral scientists for positions in the Department of Pharmacology to perform research in a multidisciplinary group investigating the biochemistry, molecular biology, electrophysiology and pharmacology of ion channels electrophysiology, and pharmacology of ion channels, applied to the cardiovascular system. A Ph.D. in pharma-cology, molecular biology, biochemistry, or the equivalent is required.

Excellent salary and benefits accompany these posi-tions at our modern facilities located 25 miles northwest of Philadephia. Interested applicants are invited to sub mit their résumés to: Manager, Research Personnel, W42-2, Merck Sharp and Dohme Research Labora-tories, West Point, PA 19486. Equal Employment Opportunity/Affirmative Action Employer.

Attention: A **POSTGRADUATE RESEARCH PSYCHOLOGIST** (postdoctoral) position is available for 3 years, to work on the relation of extrastriate neuronal activity to attention tasks in awake macaques. Applicants should have experience in neurophysiology, especially extracellular single-unit recording, and an in-terest in psychological processes. Must have a Ph.D. in psychology or brain-related subject, skill in electronics/ computing desirable. Salary based on University of California scale. Send curriculum vitae and names of three refer-ences to: G. C. Baylis, Attention: Department of Psychology C-009, University of California, San Diego, La Jolla, CA 92093. Telephone 619-534-2822, by 1 June 1988. Affirmative Action/Equal Opportunity Employer.

**RESEARCH ASSISTANT** position available imme-diately in a molecular immunology laboratory. Job re-quires facility with basic biochemical procedures and some laboratory management skills. Significant prior aboratory experience required, preferably in the area of molecular cloning, DNA sequencing, protein purifica-tion, and tissue culture. Send résumé to: Dr. A. Both-well, Howard Hughes Medical Institute, Yale Medi-cal School, 310 Cedar Street, New Haven, CT 06510. Equal Opportunity Employer.

**RESEARCH ASSOCIATE** position available immediately to study brainstem control of breathing. Ph.D. and experience in mammalian CNS extracellular record-ing required. Studies will use advanced multi-neuron recording and computational laboratories to analyze neural network dynamics. Salary range: \$18,000 to \$22,500. Application deadline: 1 July 1988. Send curriculum vitae and three letters of reference to: Dr. Bruce G. Lindsey, Department of Physiology and Biophysics, University of South Florida Medical Center, Tampa, FL 33612. An Equal Opportunity/Affirmative Action Employer

### **POSITIONS OPEN**

### **RESEARCH ASSOCIATE/** NUTRITION STUDY CORNELL UNIVERSITY

Cornell University is seeking qualified candidates for two research associate positions involving oversight of daily management and operations for nutrition surveillance studies in Africa. Responsibilities include: supervi-sion of field staff in data collection and processing as well as participation in data analysis and dissemination of results; maintenance of good relations between project staff and host country officials and residents; and general field office administration including local personnel, fi-nancial accounting, and procurement. The successful candidate will possess a Ph.D. in a related area and demonstrated research experience under similar condi-tions. These positions will involve an initial posting in Africa for approximately 2 years, with follow-up work in the U.S. for 1 to 2 years. Send letter of application, curriculum vitae, and three references to: Per Pinstrup-Andersen, Director/CNSP, Division of Nutritional Sciences, Savage Hall, Cornell University, Ithaca, NY 14853. Equal Opportunity Employment/Affirmative Action

**RESEARCH ASSOCIATE** to study plant hormone action. Ph.D. with postdoctoral training in plant homonic ogy/biochemistry. Experience required in TLC, LC, GC-MS, electrophoresis and immunoassay; enzyme purifica-tion and assay; organic synthesis and nmr; radiolabeled compounds; computer programming and interfacing with laboratory equipment; ethylene biology. Forty hours per week; \$1429 per month; near Portland, Oregon. Submit résumé to: Employment Division, Attention: Job Order No. 2120414; 875 Union Street NE, Room 201; Salem, OR 97311.

**RESEARCH ASSOCIATE**—for studies of synthesis, packaging and membrane expression of complement receptor/adherence proteins in human neutrophils and mycloid cell lines. Experience with immunoassays, monoclonal antibodies and/or cell fractionation and membrane protein biochemistry techniques desirable. Salary/benefits dependent on qualifications. Send curriculum vitae and references to:

Melvin Berger, M.D., Ph.D. Division of Immunology Department of Pediatrics Case Western Reserve University 2109 Adelbert Road Cleveland, OH 44106

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DEPARTMENT OF AGRICULTURE (USDA) AGRICULTURAL RESEARCH SERVICE

(ARS) RESEARCH CHEMIST (ELECTROCHEMISTRY) Eastern Regional Research Center Wyndmoor, Pennsylvania

ARS is seeking a scientist to perform research to develop new electrochemical methods to detect low levels (ppb-ppt) of drug residues in meats or in the physiological fluids from animals. The objective of the research is to provide USDA's regulatory agencies with more rapid and cost-effective methodology. Publications are encouraged and opportunities exist for collaborative research with other Center scientists. The candidate must be skillful in modern techniques of electroanalytical chemistry with accomplishment in one or more of the following: capillary zone electrophoresis, biosensors, electrochemical detectors. Ph.D. is desirable. Must be U.S. citizen. Salary is commensurate with experience (\$27,000 to \$43,000). For information on the research program and/or position, contact: Robert A. Barford at 215-233-6634. For information on application proce-dures/forms contact: Mr. Lee Triplett 301-344-1863, by 1 June 1988. Applications in response to this adver-tisement should be marked 8NA0818 and must be received by 14 June 1988.

An Equal Opportunity Employer Women and minorities are encouraged to apply

### POSITIONS OPEN

### **RESEARCH COORDINATOR**

The National Zoological Park, Smithsonian Institution, seeks a biologist to administer and coordinate zoological research projects at the Conservation and Research Center, Front Royal, Virginia, and conduct original investigations related to ongoing research and conservation programs. Captive animal and wildlife re-search is undertaken at the center by National Zoological Park staff, and undergraduate, graduate, and postdoctor-al students advised by National Zoological Park scien-tists. Duties will involve about 75% program manage-ment and development, and 25% independent or collaborative research. Candidates should have a Ph.D. or D.V.M., and have demonstrated research productivity in vertebrate biology, reproductive physiology, nutrition, veterinary medicine, animal behavior, or ecology. Preferred candidates will have microcomputer, statistical, and limited programming proficiency, and demonstrated abilities in communication, supervision, and program planning and execution. Grade level and salary will be commensurate with education and experience, and will likely range from GS-12 to GS-13 (\$33,000 to \$40,000 per annum). Applications must include an SF-171 (Perper annum). Applications must include an SF-171 (Per-sonal Qualifications Statement), curriculum vitae, state-ment of research/career goals, abstracts of three signifi-cant publications, and the names and addresses of three references; and should be addressed to: Smithsonian Institution, Employment Office, 88-36-F, Washing-ton, DC 20560. Deadline is 25 May 1988. (Address inquiries to: Dr. C. Wemmer, Conservation and Re-search Center, Front Royal, VA 22630. The Smithson-ian Institution is an Faud Obstructive Employer. Aublicaian Institution is an Equal Opportunity Employer. Applica-tions from qualified minority and female candidates are actively solicited.

First referrals and selection may be made as early as 2 May 1988.

# THE UNIVERSITY OF CALGARY RESEARCH FACULTY APPOINTMENTS IN PSYCHIATRY

The Department of Psychiatry and the Behavioral Sciences Research Group of the Faculty of Medicine, The University of Calgary, are establishing a program, both at the basic science and at the clinical levels, for the investigation of psychiatric disorders. Applications are investigation of psychiatric disorders. Applications are invited from medical scientists with training in psycho-pharmacology, neurochemistry, animal behavior, and clinical investigations in psychiatry. Program funding will be on a competitive basis from the Alberta Heritage Foundation for Medical Research. Appointments will be made at the appropriate academic rock in the Faculty of Medicine.

rank in the Faculty of Medicine. In accordance with Canadian immigration requirements,

priority will be given to Canadian citizens and permanent residents of Canada.

Deadline for receipt of applications is 1 August 1988. Interested candidates should send curriculum vitae, a brief description of field of interest, and the names of three referees to:

Dr. N. el-Guebaly, Professor and Head, Depart-ment of Psychiatry, The University of Calgary, 1403– 29 Street NW, Calgary, Alberta, Canada T2N 2T9.

# RESEARCH, NUCLEAR FACILITY POLICY

The National Research Council is seeking an individ-ual to serve as ASSISTANT STUDY DIRECTOR for a national science policy study. Responsibilities include coordinating with a panel of experts, planning agenda items, participating in technical meetings, reviewing and analyzing sensitive technical documents and data, site visits, assisting in writing drafts and portions of the final report, monitoring budgets, and supervising staff. Re-quires M.A./M.S. or equivalent, with at least 4 years of experience. Excellent oral and written communication skills required. Experience related to safety, technical, and environmental issues associated with the operation of nuclear facilities is desirable. American citizenship Interested applicants should send a résumé, writing sample, and salary requirements in confidence to:

National Research Council NAS-281 2101 Constitution Avenue, N.W. Washington, DC 20418 Equal Opportunity Employer.

SCIENCE, VOL. 240

### RESEARCH, SCIENCE POLICY STUDY

The Institute of Medicine (IOM) of The National Academy of Sciences has an opening for a staff officer in the Division of Health Sciences Policy for a new study on Policies for Allocation of Research Funds in the Health Sciences. Will assist the director by participating in the organization of meetings, preparation of resource documents, drafting portions of study report, etc. Requires Ph.D. or equivalent in biomedical science or political or social science and at least 4 years of experience in laboratory research, administration, or policy analysis relevant to understanding research resource needs. Also requires good organizational skills, good oral and written communication skills, ability to work with committee members and other staff, and ability to meet deadlines. Knowledge of federal and other data sources on health sciences research highly desirable. This is an 18-month appointment. Send curriculum vitae and salary require-

> IOM (Attention: AKF) Division of Health Sciences Policy 2101 Constitution Avenue, N.W. Washington, DC 20418 Equal Opportunity Employer

#### RESEARCH SCIENTIST MAMMALIAN CELL CULTURE

This position is in an interdisciplinary group with research activities in cardiovascular physiology, cell biology, hemodynamics, and related areas. Experience in mammalian cell culture required and in hemodynamic studies desired. Qualifications include a Ph.D. and the ability to work independently. The person selected will have the opportunity to initiate new research areas, to work with graduate students, and to teach on a limited basis. Level of appointment and salary dependent on qualifications. Starting date negotiable. Send curriculum vitae and names and addresses of three references to: Dr. Robert M. Nerem, Bioengineering Center, Georgia Institute of Technology, Atlanta, GA 30332–0405. Telephone: 404-894-2768. Georgia Tech is an Equal Opportunity Employer.

The Narragansett Bay Project, a member of the National Estuaries Program, has a vacancy for a **SENIOR SCIENTIST** with primary responsibility for synthesis of biogeochemical data collected from Narragansett Bay. Applicant should have a Ph.D. in analyzing complex data sets and proven writing ability. Salary: \$30,000 to \$35,000. Send curriculum virae, names of references and writing samples by 20 May 1988 to:

#### Project Manager Narragansett Bay Project 291 Promenade Street Providence, RI 02908–5767

**TOXICOLOGIST PHARMACOLOGIST** to be supervisor and assistant director of university-based clinical analytic laboratory in mid-Atlantic region. Position carries faculty appointment at instructor or assistant professor level depending upon qualifications. Expertise in GC, GC/MS, HPLC necessary. *The institution is an Affirmative Action/Equal Opportunity Employer*. Please address inquiries to: **Box 61, SCIENCE**.

### UROLOGY FACULTY POSITION

The Department of Urology, Tulane University School of Medicine in New Orleans is seeking an individual with research interests in reproductive biology. The candidate should have training in all aspects of clinical andrology (computerized semen analysis, immunologic studies and hormonal assays). A Ph.D. scientist is needed with an interest in reproductive biology and immunology. The candidate should be prepared to participate in resident teaching, assist in research projects, and should be capable of interdigitating research efforts with clinical faculty, as well as working independently on related basic projects.

Send curriculum vitae and bibliography to: Wayne J. G. Hellstrom, M.D. Department of Urology Tulane University School of Medicine 1430 Tulane Avenue New Orleans, LA 70112 An Equal Opportunity Employer

### Maryland Biotechnology Institute Center for Agricultural Biotechnology and Department of Animal Sciences

## MOLECULAR/CELL BIOLOGIST UNIVERSITY OF MARYLAND, COLLEGE PARK

The Center for Agricultural Biotechnology and the Dept. of Animal Sciences, University of Maryland, College Park, invite applications and nominations for a tenure track position at any rank commensurate with experience. The Center is a component part of the newly initiated Maryland Biotechnology Institute. The appointee will hold a position in the Center and a joint appointment with laboratory facilities in the Dept. of Animal Sciences. The Department has 21 faculty and offers B.S., M.S. and Ph.D. degrees. Mammary gland biology is a major area of department research activity. An outstanding individual with credentials and interests in Regulation of Gene Expression during Animal Growth and Development and related aspects of molecular biology is particularly sought. The successful candidate will be expected to develop a vigorous, independent extramurally-funded research program, direct research in one of the several graduate programs in life sciences and participate in the teaching program of the Department. Minimum qualifications for the position are a doctorate in Molecular/ Cell Biology or a related area and clear evidence of excellence as demonstrated by publication record. Postdoctoral experience is preferred. Candidates for appointment at a higher rank must currently have an ongoing, externally-funded research program and an established record of productivity and sustained creativity as shown by grant support and research accomplishments. Generous start-up and supplemental funds from various intramural programs are available. Ample opportunities are available for collaboration with molecular/cell biologists at the N.I.H. and the Beltsville Agricultural Research Center, U.S.D.A. in close proximity to the College Park campus. Applications and nominations including Curriculum Vitae, brief statements of research accomplishments and a proposed research program, pertinent reprints and names and addresses of three references, should be sent by July 1, 1988 to:

Dr. Ian H. Mather, Chairman, Molecular Biology Search Committee c/o Center for Agricultural Biotechnology H. J. Patterson Hall University of Maryland College Park, Maryland 20742, U.S.A.

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### PHARMACEUTICALS

# Merck Sharp & Dohme

Merck Sharp & Dohme, a recognized leader in biological and pharmaceutical manufacturing, is currently offering excellent career opportunities in the area of assay development for quality control of biotechnology products. These opportunities are located at its West Point site which is located in suburban Philadelphia.

The positions involve development and validation of new assay methodologies for monitoring manufacturing processes and for final product testing of vaccines, growth factors and other biotechnoloy products.

Successful candidates will have demonstrated excellent technical training, interpersonal skills, initiative, motivation and an interest in applied biotechnology.

• MOLECULAR BIOLOGY - Ph.D in Molecular Biology or Microbiology with 1-5 years of experience in several of the following areas: molecular biology, protein chemistry, monoclonal antibody techniques, immunochemistry, or genetics and physiology of yeast, E. COLI, or mammalian cells.

• MICROBIOLOGY - B.S./M.S. in Microbiology or Biochemistry with 2-5 years of independent research and development experience involving techniques of molecular biology, liquid chromatography (including HPLC), electrophoresis, immunoassay development, mammalian cell culture and use of computers in data collection and analysis.

Merck Sharp & Dohme offers an excellent salary and benefits program in a working environment of scientific challenge and career enrichment.

> Please forward resume and salary requirements in confidence to: Mr. Duane Holland

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TENURE-TRACK BIOCHEMISTRY AND OR-GANIC OR INORGANIC FACULTY positions available at assistant professor level effective August 1988. Ph.D. or equivalent in chemistry, biochemistry, or closely allied field and effective communication skills required. Graduate and undergraduate teaching and capability to establish an active research program required. Department grants B.S. and M.S. (approval for Ph.D. being pursued). Areas of research open. Send curriculum vitae, transcripts, and three letters of recommendation to: David C. Hilderbrand, Head, Department of Chemistry, P.O. Box 2202, South Dakota State University (SDSU), Brookings, SD 57007 by 25 May 1988. SDSU is an Equal Employment Opportunity/Affirmative Action Employer.

VEGETABLE CROP SYSTEMS ECOLOGISTS. Two 11-month career-track, joint appointments between Cooperative Extension and the Agricultural Experiment Station available at assistant/associate/ or full ranks. Individuals will develop research and extension programs that will evaluate current agricultural practices and develop new approaches in vegetable crop production to maximize resource use efficiency and minimize long-term environmental impacts. Both individuals will have teaching and extension responsibilities and will be expected to advise and train graduate students and farm advisors. Affirmative action responsibilities include development of programs to encourage greater participation of women and minorities. A Ph.D. in vegetable crops, systems ecology, or related field and experience commensurate with level of appointment. To apply, contact: S. R. Grattan or C. Shennan co-chairs of search committees, University of California, Davis, CA 95616. Telephone: 916-752-1130/7566.

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### ASSISTANTSHIPS

### BIOLOGY GRADUATE ASSISTANTSHIPS

Ph.D. program characterized by close faculty-student interaction has assistantships available for qualified students. All students supported with 12-month stipends of approximately \$9,300, plus tuition waiver and dependency allowances. Active research programs in cell and developmental biology, developmental genetics, evolution and quantitative genetics, comparative physiology, and neurophysiology and behavior. Contact: Peggy Miano, Graduate Admissions, Department of Biology, Wesleyan University, Middletown, CT 06457. Telephone: 203-347-9411, X2656.

### **GRADUATE TRAINING**

**POSTDOCTORAL RESEARCH TRAINING FELLOWSHIPS** in endocrinology, metabolism, and diabetes for M.D. or Ph.D. graduates are available at Emory University School of Medicine utilizing ten training faculty in six basic and clinical departments. Must be U.S. national or permanent resident. M.D. applicants must have U.S. residency experience. Send curriculum vitae, statement of research and career objectives, and two letters of reference to: Lawrence S. Phillips, M.D., **Program Director**, Emory University School of Medicine, 69 Butler Street, S.E., Atlanta, GA 30303. *An Equal Opportunity Employer*.

### GRANTS



The American Health Assistance Foundation is accepting 2-year **GRANT** applications for Alzheimer's disease research with a maximum of \$100,000 renewable. Deadline: 30 October 1988. For further information, please write to:

> American Health Assistance Foundation c/o Mrs. Charlene S. Lehman 15825 Shady Grove Road, Suite 140 Rockville, MD 20850

### GRANTS



The American Health Assistance Foundation is accepting **GRANT** applications for coronary heart disease research up to \$25,000. Deadline: 30 November 1988. For further information, please write to:

American Health Assistance Foundation c/o Mrs. Charlene S. Lehman 15825 Shady Grove Road, Suite 140 Rockville, MD 20850



The American Health Assistance Foundation is accepting **GRANT** applications for National Glaucoma Research up to \$25,000. Deadline: 30 November 1988. For further information, please write to:

American Health Assistance Foundation c/o Mrs. Charlene S. Lehman 15825 Shady Grove Road, Suite 140 Rockville, MD 20850

### **TRAINING PROGRAM**

#### POSTDOCTORAL TRAINING PROGRAM IN THE CELLULAR/MOLECULAR BIOLOGY OF AGING

Positions are available for postdoctoral trainees (Ph.D. and/or M.D.) to obtain 2 years of specialized training in the methods and models of research on aging. This program is directed by a consortium which includes the University of Pennsylvania/Wistar Institute (Drs. V. Cristofalo, D. Kritchevsky, E. Levine), Temple University (Drs. R. Baserga, N. Duker, A. Schwartz), the Medical College of Pennsylvania (Dr. J. Roberts) and Merck Sharp and Dohme Research Laboratories (Drs. M. Bradley and W. Nichols). Research emphases include: cell cycle kinetics/dynamics; growth factor regulatory mechanisms; growth regulatory genes; cellular transformation and immortalization; regulation of gene expression; DNA repair; cytogenetics; nutrition; vascular cell physiology; cardiovascular physiology/pharmacology; and DHEA action in aging and cancer. Applicants must meet NRSA United States citizenship or residency requirements. Addreses applications (curriculum vitae, three letters of reference, and graduate school transcript) to: Vincent J. Cristofalo, Ph.D., Diretor, University of Pennsylvania, Center for the Study of Aging, 3906 Spruce Street, Philadelphia, PA 19104.

#### POSTDOCTORAL RESEARCH TRAINING PROGRAM IN MOLECULAR GENETICS UNIVERSITY OF PENNSYLVANIA SCHOOL OF MEDICINE

We are actively seeking applications for a new postdoctoral program in molecular genetics designed to prepare physicians for careers in basic research. The program provides three uninterrupted years of research training in modern molecular genetics including regulation of gene expression, medical and population genetics, growth factor and receptor biology, molecular cytogenetics, developmental genetics and oncogenesis. Fellows also participate in courses and seminars in the Molecular Biology Graduate Group. Primary consideration is given to M.D. applicants but qualified applicants with the Ph.D. or D.V.M. degree will be seriously considered.

Graduate Group. Primary consideration is given to M.D. applicants but qualified applicants with the Ph.D. or D.V.M. degree will be seriously considered. For information, write to: Dr. Robert Nussbaum, Department of Human Genetics, University of Pennsylvania, 196 John Morgan Building, Philadelphia, PA 19104-6072.

Applications should include an up-to-date curriculum vitae, a one-page personal statement outlining research and career goals, and two letters of recommendation. The University of Pennsylvania is committed to Affirmative Action in training qualified minority and women candidates.

### TRAINING PROGRAM

#### DARTMOUTH MEDICAL SCHOOL PHARMACOLOGY/TOXICOLOGY TRAINING PROGRAM

Funds are available to support qualified individuals for training at the predoctoral level in pharmacology and toxicology and postdoctoral level in toxicology. Faculty participating in the program are in the departments of pharmacology and toxicology, anatomy, biochemistry, pathology, and chemistry. Research interests of the faculty include the areas of molecular carcinogenesis, xenobiotic metabolism, nutritional toxicology, renal toxicology, neuropharmacology, toxicology of cyanocompounds, heavy metal teratology, and immunopeptide chemistry. For more information and research directory, contact: Chairman, Pharmacology and Toxicology Training Program, Department of Pharmacology and Toxicology, Dartmouth Medical School, Hanover, NH 03756. Dartmouth is an Equal Opportunity, Affirmative Action Institution.

### MARKETPLACE

### FUNDING FOR NEUROSCIENTISTS

Neural Systems provides venture capitalization for researchers in medicine and engineering. Areas of interest include electroencephalography and electrophysiology, neuromagnetism, vent-related potentials (P300), audition and polygraphy. Researchers who have projects relating to non-invasive monitors of brain function and who wish to discuss commercial medical applications are invited to respond, in writing, to:

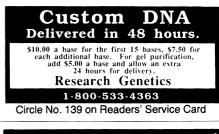
> William Pickard Neural Systems, Inc. P.O. Box 6429 Stanford, California 94305

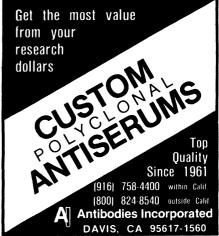
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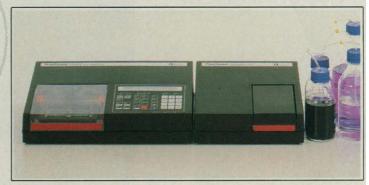
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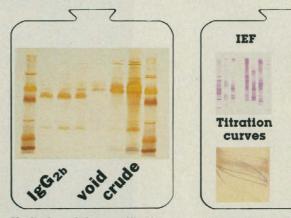
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