

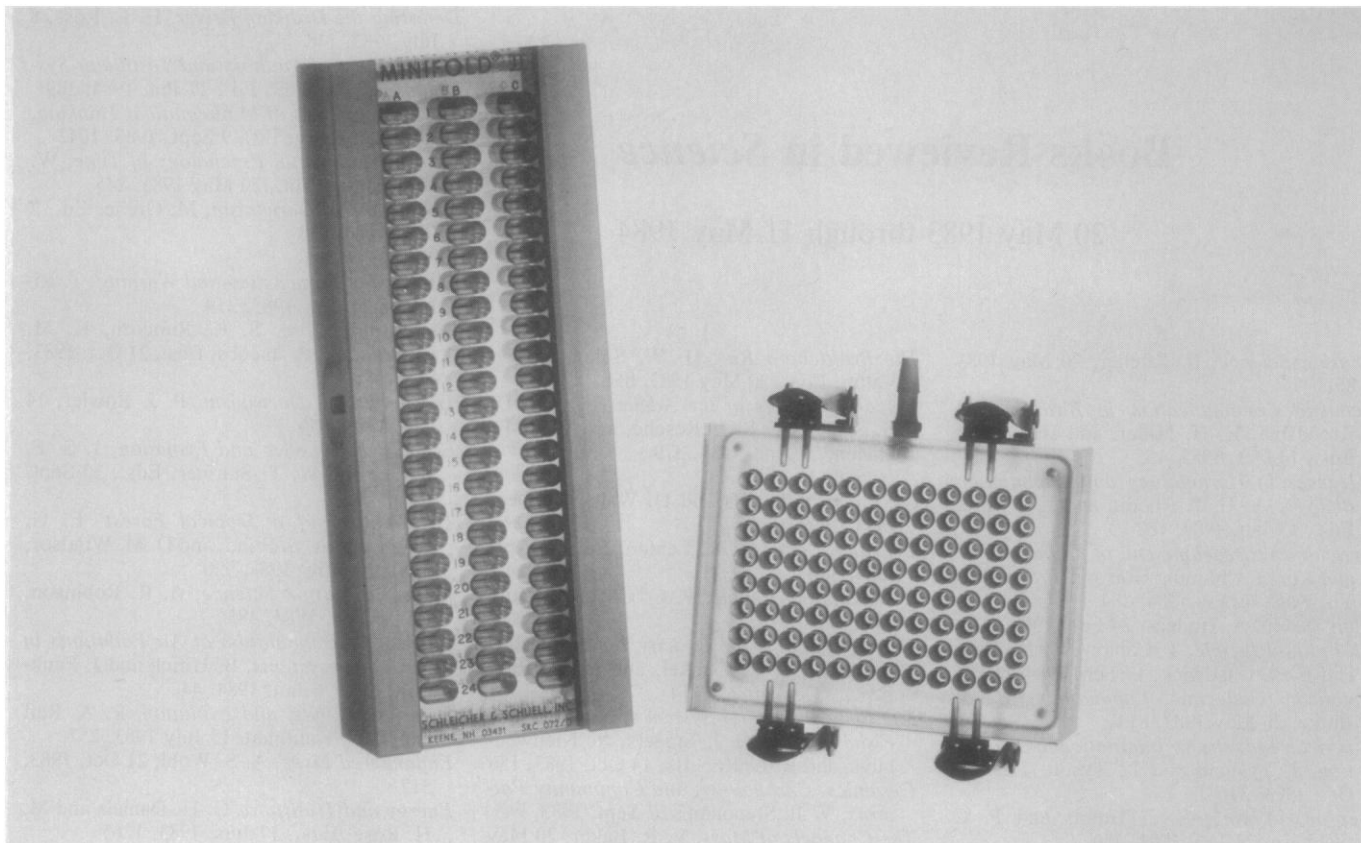
one aspect of the economic foundations that underpinned the rise and florescence of Maya civilization this book is in more than one way fundamental.

NORMAN HAMMOND

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- Alzheimer's Disease.** Barry Reisberg, Ed. Free Press (Macmillan), New York, and Collier Macmillan, London, 1983. xx, 475 pp., illus. \$45.
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- Acoustic Communication in Birds*, D. D. Kroodsma, E. H. Miller, and H. Ouellet, Eds., 14 Oct. 1983, 155
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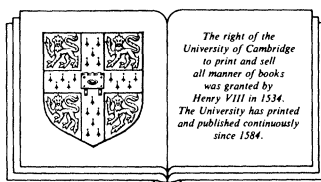
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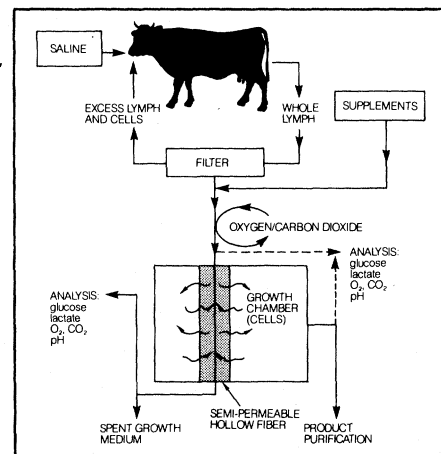
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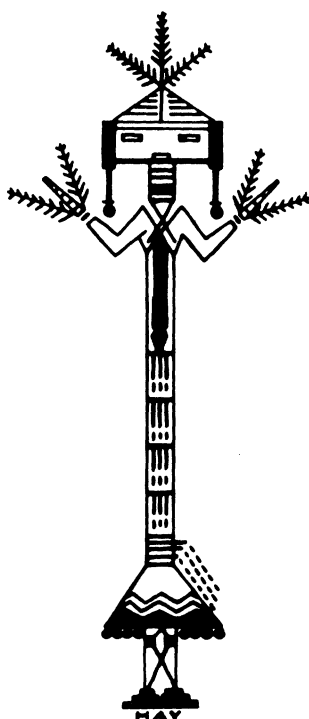
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*The University of Pittsburgh is an Equal Opportunity/Affirmative Action Employer.*

The Department of Psychology, Columbia University, anticipates a 2- or possibly 3-year term appointment preferably at the **ASSISTANT PROFESSOR** level beginning September 1984. We seek an outstanding teacher and scholar of demonstrated ability, who is capable of teaching a large undergraduate lecture course in physiological psychology. Our preference is for a specialization in sensory, but we will consider applicants in other areas whose presence would enhance our graduate and undergraduate programs. Candidates should send a copy of their curriculum vitae and the names of three individuals who are willing to write letters of recommendation to: **Personnel Search Committee (Physiological Search), Department of Psychology, Box 29 Schermerhorn Hall, Columbia University, New York, N.Y. 10027.** Columbia University is an Affirmative Action/Equal Opportunity Employer.

Stanford University, Department of Electrical Engineering, plans to make a **FACULTY APPOINTMENT** to an outstanding individual who will develop a program of teaching and research in information systems, especially at the interface of systems, statistical signal processing, and VLSI design. The position is envisioned to be for a tenure-track assistant professor, but the appointment will be made at the level appropriate to the best candidate for the position. To apply, please send a résumé, transcript, and names and addresses of three references to the chairman of the search committee: **Professor Gene F. Franklin, Stanford University, Electrical Engineering Department, Durand Number 131, Stanford, Calif. 94305.** Stanford University is an Equal Opportunity/Affirmative Action Employer.

**FACULTY POSITION,** organic and biochemistry, tenure-track assistant professor level, fall 1984. Duties include: organic, biochemistry, general chemistry lecture/laboratory courses, 12 to 14 contact hours per week (9 months). Research opportunities with graduate and undergraduate students in NIH supported program. Ph.D. required. Incarnate Word College (IWC) is a Catholic liberal arts college enrolling 1400 students near downtown San Antonio. Send curriculum vitae and three letters of reference to: **R. L. Kopec, Incarnate Word College, 4301 Broadway, San Antonio, Texas 78209.** Deadline: 1 June. IWC is an Equal Opportunity/Affirmative Action Employer.

#### MOLECULAR BIOLOGIST—SC/L2/84/1

ILRAD wishes to recruit a senior scientist to lead its molecular biology programme in theileriosis, trypanosomiasis, and bovine lymphocyte antigens. The research group includes three to four postdoctoral fellows with senior technical support. ILRAD has a mandate to devise improved control measures for animal diseases and the molecular biology programme plays an important role in the multidisciplinary effort. ILRAD is fully funded by an international group of donor agencies and is equipped to the highest standards.

Current research topics include genetic mechanisms controlling antigenic variation in salivarian trypanosomes, identification of gene sequences which identify species, sub-species and serodemes of trypanosomes, identification of genes coding for protective antigens of trypanosoma and theileria parasites, and analysis of genetic changes in host and parasite associated with lymphocyte proliferation induced by parasitic infection.

Candidates should have a good research record in molecular biology, a minimum of 7 years of research experience since obtaining Ph.D., and proven ability to head a research group.

This position is an international staff position and salary will be paid in U.S. dollars. Initial salary level will be determined by qualification and experience. Moving, housing, commutation, and education allowances are paid, and there are medical and retirement benefits. Applications should include current curriculum vitae and the names and addresses of three referees. Applications, citing the reference number, should be sent by 30 June 1984 to:

Chief Personnel Officer  
ILRAD  
P.O. Box 30709  
Nairobi  
Kenya

### R&D MICROBIOLOGIST— ANTIBIOTICS

Our rapidly growing antibiotic research and development group in Stuart Pharmaceuticals, Div. of ICI Americas Inc., a leading drug manufacturer, has an immediate opening for a R&D microbiologist.

The position requires an MS in microbiology with a minimum of 1-2 yrs. or BS in microbiology with a minimum of 3 years experience in the development and evaluation of new antibiotic agents. The person should have strong background in clinical microbiology, in-vitro evaluation, bio-assay and susceptibility testing technology. Working knowledge and/or background in in-vivo evaluations; mode of action, development of resistance and laboratory computer applications is highly desirable. Good report writing and oral communications is a must for this position.

We offer excellent starting salary, unique opportunities for career recognition and advancement and a comprehensive benefits program.



P. J. Peters  
Employee Relations  
**STUART PHARMACEUTICALS**  
Division of ICI Americas Inc.  
Wilmington, DE 19897  
An Equal Opportunity Employer M/F

## ECOGEN

Ecogen Inc. is a newly established biotechnology company formed to develop novel biopesticides for agriculture, forestry, human health, and household/consumer uses. Based in Princeton, New Jersey, the company is seeking broadly trained Ph.D.'s beginning in July 1984 for its professional scientific staff in the following areas:

- **MOLECULAR GENETICS**—Two or three positions for individuals trained in some combination of Bacillus genetics/physiology, DNA cloning and sequencing, gene regulation, and microbial ecology.
- **PROTEIN CHEMISTRY/IMMUNOLOGY**—Expertise in protein sequencing or subunit structure, immunological methodologies (Elisa, monoclonals, rocket, and so forth).
- **FERMENTATION ENGINEERING**—Background in bacterial fermentation process, batch and continuous culture, scale-up.
- **INSECT PHYSIOLOGY/BIOCHEMISTRY**—Training and experience in insect physiology/biochemistry, membrane biochemistry, tissue culture, Na/K pump mechanisms, electron microscopy, mechanisms of toxin action.
- **FUNGAL GENETICS**—Experience in genetics/physiology of fungi, preferably those of plant or insect pathogenic activities.

Send résumé to: Dr. Bruce C. Carlton, c/o Ecogen Inc., Building 60, 1101 State Road, Princeton, N.J. 08540.

#### SABBATICAL LEAVE CANDIDATES

##### W. F. JAMES CHAIR OF STUDIES IN PURE AND APPLIED SCIENCES ST. FRANCIS XAVIER UNIVERSITY

St. Francis Xavier University invites applications from candidates considering sabbatical leave in 1985-1986 for tenure in its W. F. James Chair of Studies in Pure and Applied Science. Eligible departments are Biology, Chemistry, Geology, Mathematics, Physics, and Psychology.

It is expected that the holder of the chair will have an established record as a recognized scholar in one of the above disciplines. The individual's educational background, professional qualifications, and work experience are expected to be commensurate with that normally required for a senior academic appointment at a university.

In addition to pursuing his/her normal research activities, the incumbent is expected to interact extensively with faculty and senior students, teach a maximum of one course or seminar, plus present a maximum of three public general lectures a year.

Cognizant of the nature of the position, the university has set the stipend level to provide for full salary replacement, based on actual salary at the time of application. The department in which the incumbent is located will have access to research support for the incumbent. The appointment will begin 1 July 1985 or 1 September 1985. However, applications are also invited from candidates proposing to spend one term or other fractions of a year in the chair.

Applications should be mailed prior to 15 August 1984 to:

Dr. J. J. MacDonald  
Executive Vice President  
St. Francis Xavier University  
Antigonish, Nova Scotia, Canada B2G 1C0

## THE FOUNDATION FOR SUCCESS

If you'd like to step into the future with a stable and growing company, consider Collagen Corporation, a premier biomedical innovator. When we say we've laid the foundation for success, we mean it is there for our people as well as for our company. Our advancement opportunities, salaries and benefits, and steady growth are proof of that.

### Research Scientist

We are seeking an individual to work with our scientists to initiate and direct research on isolation and characterization of biologically active proteins from bone and cartilage. You will work with other biochemists, immunologists, and physiologists, on the mechanisms of bone growth and repair.

A PhD is required, along with at least two years' post-doctoral experience in protein purification. In addition, publication record and the demonstrated ability to utilize contemporary protein purification techniques are needed. Background in connective tissue biology is desirable.

The position offers an ideal opportunity for recognition and career growth in the biomedical industry. In addition we offer a competitive benefits package, including a stock purchase plan.

### Share Our Future

Collagen Corporation's strong future is assured by our solid foundation for success. To share our future, please send your resume and a brief description of your research interests to: Dr. Saeid Seyedin, Dept. of Biochemistry, Box 202, Collagen Corporation, 2500 Faber Place, Palo Alto, CA 94303. We are an equal opportunity employer.

**Collagen Corporation**





## POSITIONS OPEN

### CHAIR

#### Department of the History and Philosophy of Health Sciences

Applications are invited from individuals with broad experience and demonstrated ability in the history of health sciences to chair an established medical school department with a continuing Ph.D. program in this subject. Expertise in philosophy, ethics, a health profession, or another related field is also desirable for the department's charge which is to integrate humanistic studies with the teaching, research, and service functions of this health science campus (including Schools of Dentistry, Medicine, Nursing, Pharmacy, a Graduate Division, as well as associated research institutes, hospitals, and clinics). Interested individuals should send their curriculum vitae to: **Laurence J. Marton, M.D., Search Committee Chairman, Room L 518, University of California, San Francisco, Calif. 94143. The University of California, San Francisco, is an Equal Opportunity/Affirmative Action Employer. Women and minorities are encouraged to apply.**

### ENVIRONMENTAL SCIENTISTS AND ENGINEERS

**DYNAMAC CORPORATION** has immediate requirements for senior and junior level scientists and engineers with experience in hazardous waste and materials.

Applicants should have a background in hazardous materials handling, storing, packing, shipping, spill control, disposal, and/or remedial action.

To apply, please send résumé in confidence to:

**Personnel Department  
Dynamac Corporation  
11140 Rockville Pike  
Rockville, Md. 20852**

**FACULTY POSITIONS IN BIOMEDICAL ENGINEERING, BOSTON UNIVERSITY COLLEGE OF ENGINEERING**, at the assistant/associate/full professor levels in expanding Department of Biomedical Engineering for September 1984 or January 1985. Applicants should have an earned doctorate, be committed to quality teaching at both undergraduate and graduate levels, and have the desire to develop strong research programs. Collaboration with the Boston University School of Medicine or other engineering departments may be facilitated through a joint faculty appointment. Candidates with backgrounds in image processing, computer science, chemical engineering, mechanical design, electronics, computer engineering, biomechanics and materials, or robotics are especially welcome. Opportunities for part-time (adjunct) faculty positions and for collaborative arrangements with nearby institutions involved in biomedical research and development are also available. Candidates should send résumé, list of publications, names and addresses of five references, and a brief statement of teaching and research interests to: **Dr. Eugene Smithberg, Chairman, Engineering Search Committee, College of Engineering, Boston University, 110 Cummington Street, Boston, Mass. 02215. Boston University is an Equal Opportunity/Affirmative Action Employer.**

### FACULTY POSITION IN PHARMACOLOGY UNIVERSITY OF CALIFORNIA, IRVINE

Applications are invited for a tenured or tenure-track faculty position in pharmacology. We are especially interested in candidates with a background in cardiovascular pharmacology, but qualified candidates in any area of molecular pharmacology will be considered. A Ph.D. in pharmacology or related area, or an M.D., is required. Level of appointment and salary will be commensurate with achievement and experience. Curriculum vitae, references, and a summary of research interests should be sent before 30 June 1984 to:

**Dr. Larry Stein, Chairman  
Department of Pharmacology  
College of Medicine  
University of California  
Irvine, California 92717**

*The University of California is an Affirmative Action Employer.*

**NEUROPHYSIOLOGIST.** Opening for candidate with M.S./B.S., background in neurophysiology or neurobiology, and experience in electrophysiological techniques, including evoked potential studies. Must be interested in using techniques for clinical problems. Send résumé to: **Paul Bustion, M.D., 2101 Jackson Street, Suite 009, Anderson, Indiana 46014.**

## POSITIONS OPEN

### FACULTY POSITION IN PATHOLOGY

The Uniformed Services University School of Medicine invites applications for a tenure-track faculty appointment in the Department of Pathology at the level of associate professor or assistant professor. The level of appointment and salary will be commensurate with training and experience. The appointment will commence 1 October 1984. Candidates should have M.D., Ph.D., or related professional degrees, appropriate postdoctoral training or experience, teaching abilities, and demonstrated excellence in research. Interested candidates should submit curriculum vitae, bibliography, and names of three professional references by 15 June 1984 to: **Dr. Robert M. Friedman, Chairman, Department of Pathology, c/o Civilian Personnel, Uniformed Services University of the Health Sciences, 4301 Jones Bridge Road, Bethesda, Md. 20814. The Uniformed Services University is an Equal Opportunity/Affirmative Action Employer.**

## ICHTHYOLOGY

The Department of Ichthyology of The American Museum of Natural History has an opening for a museum technician to assist in the management, preparation, and maintenance of collections and facilities, and to handle related duties as assigned. Some experience and/or knowledge of scientific collections and equipment, and an orientation to detail are the qualifications this candidate should possess.

The current starting salary is \$14,683 per annum. Benefits include 4 weeks vacation, major medical/dental, and tuition assistance. For consideration, please forward your résumé to: **Jerome Williams, Personnel Department, THE AMERICAN MUSEUM OF NATURAL HISTORY, Central Park West and 79th Street, New York, N.Y. 10024.**

*An Equal Opportunity/Affirmative Action Employer, M/F/H*

**INSTRUCTOR** to teach clinical biochemistry and associated laboratories in a college medical technology program. Ph.D. in chemistry or related field preferred. Previous work or educational experience in clinical chemistry is highly desirable. Apply by 15 June 1984 to: **Dr. Donald Theriault, Affirmative Action Officer, Oretch Branch Post Office, Oregon Institute of Technology, Klamath Falls, Ore. 97601; telephone: 503-882-6321, extension 282. An Equal Opportunity Employer.**

### MOLECULAR BIOLOGIST

The Center for Ulcer Research and Education (CURE) of the University of California, Los Angeles, School of Medicine, currently has an opening for a molecular biologist. We are interested in candidates with strong credentials in molecular biology and will give preference to those with interest in membrane structure or peptides with experience in cloning and sequencing. Position and salary are negotiable based upon experience and qualifications. Interested persons should send curriculum vitae, brief description of research interests, and the names of three references to: **Dr. Nicholas Brecha, CURE, VA Center/Wadsworth, Building 115, Room 203, Los Angeles, California 90073. The University of California is an Equal Opportunity/Affirmative Action Employer. Minority and women candidates are urged to apply.**

### MOLECULAR BIOLOGIST

We have an opening for a molecular biologist who has skill and experience in developing instrumentation for protein and nucleic acid chemistry. We should like applicants to have a Ph.D., recent laboratory experience, and a proven record of accomplishment. Familiarity with Hofer instruments would be helpful.

**HOEFER SCIENTIFIC INSTRUMENTS** is a leading designer and manufacturer of instrumentation for biochemical research. We offer excellent working conditions and generous employee benefits. We are located in San Francisco. To apply, please send your résumé and a cover letter to: **Dr. David Hawley, HOEFER SCIENTIFIC INSTRUMENTS, P.O. Box 77387, San Francisco, Calif. 94107.**

## POSITIONS OPEN

### HAGEDORN RESEARCH LABORATORY

#### Molecular Biology of Diabetes

The Hagedorn Research Laboratory has a scientist position available to conduct an active and innovative research program in the etiology and pathogenesis of insulin-dependent diabetes, a disorder associated with autoimmune phenomena.

Responsibilities include the direction of graduate students and junior visiting scientists. Applicants should have training and strong interest and capacity to pursue research into eukaryotic gene expression with molecular cloning techniques. The position is a 3-year appointment with possibilities for renewal.

Send curriculum vitae, name of three references, and a statement of research interest to:

**The Directors of Research  
Ake Lernmark and Bruno Hansen  
Hagedorn Research Laboratory  
Niels Steensensvej 6  
DK-2820 Gentofte  
Denmark**

The Hagedorn Research Laboratory is together with the Steno Memorial Hospital a WHO collaborating centre for research and training in the pathogenesis of diabetes.

**MOLECULAR BIOLOGIST** position for research scientist/assistant professor of medicine to participate in ongoing projects and develop independent research using recombinant DNA technology. Ph.D. in biochemistry, molecular biology, or related area required. Postdoctoral experience preferred. Send résumé, description of research interests, and three letters of reference by 15 June 1984 to: **Dr. Ron MacQuarrie, Department of Chemistry, University of Missouri-Kansas City, Kansas City, Missouri 64110. The University of Missouri is an Equal Opportunity/Affirmative Action Employer.**

**MOLECULAR BIOLOGIST:** Tenure-track position, assistant professor, starting September 1984. Ph.D. degree with teaching and research experience in recombinant DNA and hybridoma technology. Prefer applicants with related postdoctoral experience. Successful candidate will direct undergraduate program in biotechnology, teach courses related to the program, and supervise undergraduate research. Salary competitive. Applications close 1 June 1984. Submit résumé, three letters of reference, and official transcripts to: **Dr. Marion Kayhart, Chairperson, Department of Biology, Cedar Crest College, 30th and Walnut, Allentown, Pa. 18104.**

### MOLECULAR GENETICS/BIOCHEMISTRY

**MEHARRY MEDICAL COLLEGE** is making a concerted effort in at least three departments to strengthen the area of molecular biology/genetics. The Department of Biochemistry invites applications for faculty (assistant/associate professor) positions in these areas. Preference will be given to applicants with expertise in regulation of gene expression who plan to study or are studying contemporary problems in eukaryotic molecular genetics, using recombinant DNA and/or monoclonal antibody techniques. Applicants should have broad training in biochemistry and molecular biology and will be expected to maintain and/or develop a funded research program of high quality and to participate in the graduate and professional school teaching programs of the Department of Biochemistry. Applicants should send curriculum vitae, names of four individuals who may be contacted for reference, and a summary of research interests or on-going project to: **Ifeanyi J. Arinze, Ph.D., Chairman, Department of Biochemistry, Meharry Medical College, Nashville, Tenn. 37208. Meharry Medical College is an Equal Opportunity/Affirmative Action Employer.**

### PHYSICAL BIOCHEMISTRY

The Department of Biochemistry has a tenure-track position available at the assistant or associate professor level. Applicants should have broad training in biochemistry and will be expected to maintain and/or develop a funded research program of high quality and to participate in the graduate and professional school teaching programs of the Department of Biochemistry. Applicants should send curriculum vitae, names of four individuals who may be contacted for reference, and a summary of research interests or on-going project to: **Ifeanyi J. Arinze, Ph.D., Chairman, Department of Biochemistry, Meharry Medical College, Nashville, Tenn. 37208. Meharry Medical College is an Equal Opportunity/Affirmative Action Employer.**

# CSIRO

AUSTRALIA

CHIEF OF THE DIVISION  
DIVISION OF WILDLIFE AND  
RANGELANDS RESEARCH

INSTITUTE OF BIOLOGICAL RESOURCES  
CANBERRA, ACT

Applications are invited for the position of Chief, Division of Wildlife and Rangelands Research, from scientists who have an outstanding record of personal research achievement and leadership in an appropriate field of biological science.

CSIRO conducts scientific and technological research in laboratories located throughout Australia and employs about 7,500 staff, of whom 2,900 are professional scientists.

The organization's research activities are grouped into five institutes: Animal and Food Sciences, Biological Resources, Energy and Earth Resources, Industrial Technology, and Physical Sciences. The Division of Wildlife and Rangelands Research is one of the divisions of the Institute of Biological Resources. Also in the institute are the Divisions of Entomology, Forest Research, Horticultural Research, the Centre for Irrigation Research, and the Divisions of Plant Industry, Soils, Tropical Crops and Pastures, and Water and Land Resources.

The Division of Wildlife and Rangelands Research has its headquarters in Canberra, ACT, and laboratories at Darwin and Alice Springs, Northern Territory; Deniliquin, New South Wales; and Helena Valley, Western Australia. The total divisional staff of 204 includes 52 research scientists and 26 other professional staff.

The division studies the ecology of animal and plant populations and processes controlling their stability, diversity, productivity, and value to Australia in relation to their management and conservation. The division's interests cover a wide range of Australia's ecosystems. Amalgamation of the Wildlife and Rangelands groups in 1982 gives the division a special interest in rangelands research.

A chief of a division is responsible for the leadership, development, scientific direction, and integration of the division's research programs, and is encouraged to promote active collaboration with other divisions, research bodies, and agencies working in associated areas.

The salary for the position of chief is negotiable, but will not be less than A\$55,050 per annum. In addition, the position attracts an expenses of office allowance of A\$1,250 per annum.

Appointment to the organization is for an indefinite period and Australian government superannuation benefits are available. The position of chief is offered for a negotiable term typically of 5 to 7 years, with subsequent options for a further term, if mutually desired.

Further information on the division and its research is contained in a booklet available on request from the Secretary (Personnel) or the Secretary, Institute of Biological Resources at the address below. Dr. M. G. Pitman, O.B.E., Sc.D., F.A.A., director of the Institute of Biological Resources, would be pleased to discuss the position with potential applicants. He would also be pleased to receive advice concerning this appointment from people with a particular interest in it. He may be contacted at the address below.

Applications stating full personal and professional details, listing the names of at least three professional referees, and quoting reference Number A5692, should be directed to:

**The Secretary (Personnel)**  
**CSIRO Australia**  
**P.O. Box 225**  
**Dickson, ACT 2602**  
**Australia**

By 15 June 1984.

*CSIRO IS AN EQUAL OPPORTUNITY EMPLOYER*

## International Symposium on MONOCLONAL ANTIBODIES: BIOLOGICAL AND CLINICAL APPLICATIONS

Florence, Palazzo dei Congressi  
October 16–19, 1984

**Scientific Secretariat:** A. Pinchera—  
G. Doria—F. Dammacco—A. Bargellesi

The meeting is intended to cover three broad areas of biological and clinical applications of monoclonal antibodies: Markers of the Immune System; Hormonal Receptors and Related Autoimmune Disorders; Experimental and Clinical Oncology.

The Scientific Program will consist of Invited Lectures and Poster Sessions. A limited number of Posters will be selected for oral presentation.

**Invited Speakers:** L. Adorini (Italy), R. C. Bast (USA), C. A. Bona (USA), M. I. Colnaghi (Italy), P. Comoglio (Italy), G. Corte (Italy), S. Dower (USA), P. A. W. Edwards (U.K.), A. Falaschi (Italy), I. D. Goldfine (USA), M. F. Greaves (U.K.), G. L. Greene (USA), C. Grossi (Italy), S. Hakomori (USA), L. D. Kohn (USA), J. Lindstrom (USA), R. G. Lynch (USA), J. P. Mach (Switzerland), S. L. Morrison (USA), K. Rajewski (FRG), M. D. Scharff (USA), R. H. Schwartz (USA), J. Strominger (USA), J. Schlessinger (Israel), T. Tada (Japan), I. S. Trowbridge (USA), P. E. Thorpe (U.K.), J. C. Venter (USA), T. A. Waldmann (USA), L. N. Warner (USA).

The deadline for submission of Abstracts is June 15, 1984.

For further information write to the **Organizing Secretariat:** Organizzazione Internazionale Congressi (O.I.C.), Via Gustavo Modena 19, 50121 Florence (Italy). Tel. (055) 53962-571082—Telex 570243 OICCONGRE

## POSITIONS OPEN

### MOLECULAR GENETICIST— FACULTY POSITION

To join regional medical genetics unit for a research and teaching role. Participation in interdepartmental graduate program. The successful candidate should have a Ph.D. or M.D. degree and will be expected to establish an independent research program and supervise laboratory diagnosis of molecular genetic disorders. Deadline for application: 1 July 1984. Please send curriculum vitae and names of three references to:

**Dr. Wayne H. Finley**  
Laboratory of Medical Genetics  
University of Alabama in Birmingham  
University Station  
Birmingham, Ala. 35294

*The University of Alabama in Birmingham is an Equal Opportunity/Affirmative Action Employer.*

**NEUROLOGIST** with training in behavior and higher cortical function is sought by Tulane University School of Medicine, Department of Psychiatry and Neurology. There are excellent opportunities for research and leadership in a combined training program. Applications and curriculum vitae must be received by 30 June 1984. Mail to: **Joseph B. Green, M.D., Chairman, Department of Psychiatry and Neurology, Tulane Medical School, 1430 Tulane Avenue, New Orleans, La. 70112.** *An Affirmative Action/Equal Opportunity Employer. Qualified women and minority candidates are encouraged to apply.*

### NMR INSTRUMENTATION SPECIALIST DUKE UNIVERSITY MEDICAL CENTER

Position available in the Diagnostic Physics Section of the Radiology Department for instrumentation support of nuclear magnetic resonance imaging and spectroscopy. Successful candidate must have knowledge of the physics of NMR, digital systems, and programming details. He/she will work with state-of-the-art equipment developing an instrument for animal imaging and spectroscopy. Master's degree desired but will consider bachelor's degree in engineering, physics, or related field. Salary commensurate with experience. Send curriculum vitae to: **Dr. G. Allan Johnson, Director of Diagnostic Physics, Box 3332, Duke University Medical Center, Durham, N.C. 27710.** *Equal Opportunity Employer.*

The **DEPARTMENT OF PHARMACOLOGY**, Baylor College of Medicine, invites applications for two available positions to work in the areas of the regulation of ribosomal gene expression or the structure and regulation of eukaryotic topoisomerases. Experience in protein chemistry and/or recombinant DNA research is desirable. Please send curriculum vitae and three letters of reference to: **Dr. Lawrence Rothblum or Dr. Egon Durban, Department of Pharmacology, Baylor College of Medicine, One Baylor Plaza, Houston, Texas 77030.** *Baylor College of Medicine is an Equal Opportunity Employer.*

### POSTDOCTORAL POSITIONS AVAILABLE

In the laboratories of a group of investigators interested in understanding biological regulatory processes at a molecular level.

**Melanie H. Cobb, Ph.D.** Mechanisms of insulin action; roles of protein kinases.

**Alfred G. Gilman, M.D., Ph.D.** Role of G proteins in the regulation of adenylate cyclase.

**Joel M. Goodman, Ph.D.** Yeast peroxisomes as a model of protein sorting and organellar biogenesis.

**David Jameson, Ph.D.** Energetics and dynamics of protein-protein and protein-ligand interactions.

**James Kenyon, Ph.D.** Regulation of ion channels in cardiac cells.

**Marc C. Mumby, Ph.D.** Monoclonal antibodies as probes of protein phosphorylation/dephosphorylation in cardiac muscle.

**Elliott M. Ross, Ph.D.** Effector protein interactions in reconstituted liposomes; adenylate cyclase regulation.

**Paul C. Sternweis, Ph.D.** Characterization and reconstitution of hormone receptors and related GTP-binding proteins.

**James T. Stull, Ph.D.** Biochemical mechanisms regulating muscle contraction, myosin phosphorylation and calmodulin-dependent myosin light chain kinase.

Contact: **Postdoctoral Training Program, Department of Pharmacology, University of Texas Health Science Center, 5323 Harry Hines Boulevard, Dallas, Texas 75235.** *An Equal Opportunity Employer.*

## POSITIONS OPEN

**PHOSPHOINOSITIDE METABOLISM: POSTDOCTORAL POSITION** starting summer-fall 1984. Innovative, independent, recent Ph.D. in biochemistry with experience in lipid chemistry preferred. Our laboratory has been investigating the involvement of PI metabolism in calcium gating. Minimum salary: \$16,000. Send résumé to: **Dr. S. E. Rittenhouse, Hematology Research MRB 216, Harvard Medical School, 75 Francis Street, Boston, Mass. 02115.**

**POSTDOCTORAL POSITION** for Ph.D. in chemistry or biochemistry to investigate properties of carbonic anhydrase in algae and their role in transport and accumulation of inorganic carbon. Experience with NMR and kinetics preferred. Send résumé and names of three references to: **Dr. D. N. Silverman, J-267 J. H. Miller Health Center, University of Florida, Gainesville, Florida 32610.**

**POSTDOCTORAL POSITION** available now to study gene expression and differentiation in cultured epithelial cells [*J. Cell Biol.* 97, 686 (1983); *Cancer Res.* 43, 3203 (1983); *Carcinogenesis* 5, 367 (1984)]. Recent Ph.D. in molecular biology, biochemistry, or related field and interest in recombinant DNA or protein chemistry preferred. Résumé and names of three references to: **Dr. R. H. Rice, Harvard School of Public Health, 665 Huntington Avenue, Boston, Mass. 02115.** *An Equal Opportunity Employer.*

**POSTDOCTORAL POSITION.** Research in biosynthesis of plant terpenoids; with emphasis on enzymology/bioorganic chemistry. Salary commensurate with background and experience. Send complete résumé with names of three references to: **Rodney Croteau, Institute of Biological Chemistry, Washington State University (WSU), Pullman, Wash. 99164-6340.** *WSU is an Equal Opportunity/Affirmative Action Employer.*

**POSTDOCTORAL POSITION**—The Dana-Farber Cancer Institute is seeking to fill one research position at the postdoctoral level to study molecular aspects of chemotherapeutic drug action. Experience with the purification and analysis of nucleic acids is necessary. A joint appointment will be held in an appropriate department of Harvard Medical School. Send curriculum vitae and names of three references to: **Dr. Donald Kufe, Laboratory of Clinical Pharmacology, DANA-FARBER CANCER INSTITUTE, 44 Binney Street, Boston, Mass. 02115.** *An Affirmative Action/Equal Opportunity Employer.*

**POSTDOCTORAL POSITION** available 1 July 1984 for a Ph.D. trained in one of the following disciplines: biochemistry, microbiology, molecular biology, or biochemical pharmacology. The fellow will pursue the cloning, structure, and regulation of the mammalian gene(s) encoding DNA polymerase alpha. Experience with immunologic techniques, tissue culture, and recombinant DNA technology—including cDNA cloning of low abundance mRNA—is preferred. Salary will be competitive and commensurate with experience. Send curriculum vitae and three references to:

**Dr. Neal C. Brown, Professor and Chairman**  
Department of Pharmacology  
University of Massachusetts Medical School (UMMS)  
55 Lake Avenue North  
Worcester, Mass. 01605

*UMMS is an Affirmative Action/Equal Opportunity Employer.*

**POSTDOCTORAL RESEARCH ASSOCIATE** position available immediately to study xenobiotic metabolism in diabetes: cytochrome P-450 isolation, characterization sequence analysis, in vitro protein synthesis, and hormonal regulation. Salary: \$16,000. Recent Ph.D. recipients with experience in protein characterization/synthesis regulation and/or immunochemical techniques should contact: **David E. Cook, Ph.D. (telephone: 402-559-4417), Department of Biochemistry, University of Nebraska Medical Center, Omaha, Neb. 68105.** *An Equal Opportunity Employer, M/F/H/V.*

**POSTDOCTORAL/RESEARCH ASSOCIATE** to study growth dependent properties of lysosomes and endosomes in cultured cells using a unique class of compounds (lysosomotropic detergents) as probes [described in *JCB* 97, 1841 (1983)]. Project will include isolation and characterization of mammalian cell mutants. Contact at ASBC Meeting, St. Louis, Missouri, 3 to 7 June 1984, or address inquiries to: **Dr. John Lenard, University of Medicine and Dentistry of New Jersey-Rutgers Medical School, P.O. Box 101, Piscataway, N.J. 08854.**

## POSITIONS OPEN

**POSTDOCTORAL POSITIONS IN BIOCHEMICAL PHARMACOLOGY—TOXICOLOGY.** Well-equipped training facility. Research in regulation of heme biosynthesis, steroidogenesis and drug metabolism in the liver and endocrine organs by drugs, toxicants, and hormones. Send curriculum vitae and three letters of reference to: **Dr. W. N. Piper, Department of Pharmacology, University of Nebraska Medical Center, Omaha, Nebraska 68105.** *An Affirmative Action/Equal Opportunity Employer.*

**POSTDOCTORAL POSITION** available immediately to investigate patterns of keratinocyte proliferation and differentiation in vitro. Previous experience of tissue culture and/or methods of cell cycle analysis desirable. Please send curriculum vitae and two references to: **Dr. Ian C. Mackenzie, Dows Institute for Dental Research, Dental Science Building, The University of Iowa, Iowa City, Iowa 52242.** *Affirmative Action/Equal Opportunity Employer.*

### POSTDOCTORAL RESEARCH ASSOCIATE

Biochemist to participate in studies on molecular mechanisms and control of cytochrome P-450 enzymes involved in steroid hormone biosynthesis. Experience in enzymology or protein chemistry desirable. Address inquiries to: **Dr. Larry E. Vickery, Department of Physiology and Biophysics, College of Medicine, University of California, Irvine, Calif. 92717.**

**POSTDOCTORAL/RESEARCH ASSOCIATE** position available 1 July 1984, for studies on post-synthetic processing of plasma protein and hepatocytes. Project is concerned with analysis of mRNA levels protein modifications (for example, glycosylation and proteolysis) and subunits assembly. Background in biochemistry and molecular biology as well as some training in cell culture are desirable. Applicant will join an active research program in hormonal control of plasma protein production. Send curriculum vitae and letters of reference to: **Dr. Gerd Grieninger, Head, Laboratory of Plasma Protein Regulation, Kimball Research Institute, The New York Blood Center, 310 East 67 Street, New York, N.Y. 10021.** *An Equal Opportunity Employer.*

### THE UNIVERSITY OF TEXAS AT DALLAS GRADUATE PROGRAM IN ENVIRONMENTAL SCIENCES

The University of Texas at Dallas seeks to fill the tenured position of **Program Head in Environmental Sciences**. Applicants with the rank of associate or full professor, or their equivalent, in one of the following areas of specialization will be considered: environmental biology or chemistry, environmental engineering, or energy and natural resources. Preference will be given to applicants with demonstrated excellence in teaching and research with interdisciplinary experience, administrative capabilities, and a proven record in obtaining extramural funding.

The Environmental Sciences Program is a graduate level interdisciplinary program offering opportunities leading to the M.S. or Ph.D. degree.

*Indication of ethnicity and sex for Affirmative Action statistical purposes is requested but not required.* To apply, send a cover letter outlining your academic interests and experience, the names of at least five professional references, and current curriculum vitae to:

**Academic Search Number 266**  
The University of Texas at Dallas  
P.O. Box 830688  
Richardson, Texas 75083-0688

Application deadline: 1 November 1984.

*The University of Texas at Dallas is an Affirmative Action/Equal Opportunity Employer.*

The Thrombosis Research Center of Temple University invites applications for **RESEARCH ASSISTANT PROFESSOR**. Position is available immediately for person with own funding (salary and supplies) to study the role of myosin light chain phosphorylation in regulation of venous smooth muscle contraction. Applicant must have Ph.D., 2 to 3 years of postdoctoral experience, and proven ability to attract outside research support. A background in smooth muscle biochemistry and physiology is required along with extensive experience with in vitro smooth muscle tensiometry, mechanics, and two-dimensional gel electrophoretic techniques (IEF/SDS-PAGE). Send curriculum vitae, bibliography, and references to: **Thrombosis Research Center, 3400 North Broad Street, Philadelphia, Pa. 19140.** Telephone: 215-221-4418. *An Equal Opportunity/Affirmative Action Employer.*



## POSTDOCTORAL FELLOW/ SCIENTIST

**Oncogen**, founded in 1983 by Syntex Corporation and Genetic Systems Corporation to perform research aimed at the development of cancer diagnostic and therapeutic products, is seeking an individual to join the Molecular Biology group. The project, supported by a three-year grant from the National Institutes of Health, involves cloning and expression of a human tumor-associated antigen for evaluation as a vaccine. Candidates should have a Ph.D. with experience in molecular cloning, protein chemistry or immunology.

This challenging position offers a stimulating research environment, an excellent salary of \$21,000+ and commensurate benefits.

Qualified candidates should send their curriculum vitae and names of references to Anne Marie Moses, Personnel Manager.



**ONCOGEN**

3005 First Avenue  
Seattle, WA 98121

*An Equal Opportunity Employer*

# aquatic toxicologist

FMC CORPORATION's Chemical R & D Center, located in Princeton, NJ, has an exceptional position available for an individual to carry out Aquatic Toxicology Testing of pesticides and industrial chemicals.

Major position responsibilities will include establishing an Aquatic Toxicology Laboratory capability, writing protocols and SOPs plus culturing organisms. You'll also be setting up and conducting acute early life stage and chronic tests with fish and invertebrates, processing data and writing reports.

Major position requirements must include a BS/MS Degree in Aquatic Toxicology, Aquatic Biology/Ecology, Marine Biology or a related field. A minimum of 2 years' current experience in aquatic toxicology including the culturing and maintaining of aquatic organisms; a knowledge of current toxicology test procedures (e.g., ASTM, EPA); the operation of flow-through equipment; a familiarity with GLPs and evaluating data from acute and chronic tests is required.

FMC CORPORATION offers excellent compensation commensurate with your background and education, a full range of corporate benefits and real advancement potential within an exciting and challenging work environment. Applicants should send a letter and resume, with salary history, to: **Employment Supervisor, FMC CORPORATION, Chemical R & D Center, Box 8, Princeton, NJ 08540.** An Equal Opportunity Employer, M/F.

**FMC**

## NATIONAL INSTITUTES OF HEALTH NATIONAL CANCER INSTITUTE CLINICAL PHARMACOLOGY BRANCH

### POSTDOCTORAL FELLOWSHIP AVAILABLE

The major focus is on oxygen radical mediated cell injury. Project available on either mechanisms of radical generation or enzymatic defenses against oxygen radicals. Experience preferred in either protein purification or drug metabolism. The major focus of the laboratory revolves around the cancer drug adriamycin. Send curriculum vitae to:

**Dr. Charles E. Myers, M.D.**  
Building 10, Room 6N119  
National Institutes of Health  
Bethesda, MD 20205

*AN EQUAL OPPORTUNITY EMPLOYER*

# RESEARCH SCIENTIST

The Bristol-Myers Pharmaceutical Research and Development Division has an excellent opportunity for a Research Scientist to join the Genetic Toxicology Section of its Pathology and Toxicology Department.

Successful candidate will be expected to take a leadership role in the development of new IN VIVO/IN VITRO genotoxicity assays; and will be responsible for the development and supervision of mammalian cell gene mutation testing to assess pharmaceutical compounds for their mutagenic potential. This will involve study design, performance, evaluation and reporting.

To qualify, you will need a PhD in Biology, Genetics or related field, with postdoctoral or industrial experience preferred. Strong background in cell biology, tissue culture and mammalian cell metabolism a must.

We offer an excellent starting salary, full ranging benefits and an exceptional opportunity for professional achievement. For prompt, confidential consideration, forward your resume with salary history and requirement, to: **EMPLOYMENT RECRUITER**



**BRISTOL-MYERS COMPANY  
RESEARCH AND DEVELOPMENT DIVISION**

P.O. Box 4755, Syracuse, New York 13221

*An equal opportunity employer M/F*

## SENIOR RESEARCH BIOCHEMIST

An opening in our Molecular Biochemistry Group offers a challenging career opportunity for a qualified professional at the doctorate level. The ideal applicant must have 3 to 5 years of postdoctoral experience in biochemistry with knowledge of neurochemistry, receptor-ligand binding, and receptor mediated events. The candidate will be expected to work as part of a therapeutic team to develop drugs for the central nervous system.

An additional position is anticipated at the B.S. level requiring 1 to 2 years of experience working with arachidonic acid metabolites and physical methods of their detection.

Approval is expected later in the year for a doctoral position in our Microbiology Group requiring extensive experience in immunology and background in biochemistry and/or cell biology. Knowledge and interest in developing assays for detection of immune modulators and experience in cell culture, immunoassay, immunochemical techniques, and protein chemistry are desired.

Excellent benefits, pleasant working environment, and competitive salary commensurate with experience and background complement these professionally demanding opportunities. A. H. Robins is headquartered in a southern metropolitan atmosphere within convenient driving distance to Washington, D.C., the seashore, and the mountains.

Please send résumé in confidence to, or see our representative at the FASEB meeting in St. Louis, 4 to 6 June 1984:

**Manager, Personnel R&D Division**  
**A. H. Robins Company**  
1211 Sherwood Avenue  
Richmond, Virginia 23220  
*Equal Opportunity Employer, M/F*

## SENIOR SCIENTIST Institute for Advanced Biomedical Research

### Oregon Health Sciences University Portland, Oregon

The Oregon Health Sciences University announces the opening of three to four intermediate to senior level scientist positions to staff its new Institute for Advanced Biomedical Research. The Institute will be characterized by an emphasis on the techniques of molecular biology, immunocytochemistry, and protein chemistry applied to the nervous and endocrine systems. Dr. Edward Herbert, director of the Institute, is seeking an early expression of interest from notable scientists with demonstrated excellence in investigation in these general areas.

The facility housing the Institute is expected to be available for occupancy by mid-1986. It is an 80,000-square-foot facility to be fitted with the most modern equipment available. It is located on the campus of Oregon's academic health center in Portland. Applications are being taken now for one intermediate to senior level scientist position in the area of structure and immunocytochemistry of neuropeptides, until 30 June 1984. Recruitment for other senior level positions will be received but not processed actively at this time.

Requirements for the positions include terminal degree, with appropriate postdoctoral emphasis, a productive publication record, a commitment to excellence in biomedical sciences, and demonstrated potential for highest level achievement.

Indications of interest or applications should be sent to:

**Dr. Edward Herbert, Director (L101)**  
**Institute for Advanced Biomedical Research**  
**Oregon Health Sciences University**  
3181 Southwest Sam Jackson Park Road  
Portland, Oregon 97201

*The Oregon Health Sciences University is an Equal Opportunity Employer.*

## POSITIONS OPEN

**RESEARCH ASSISTANT/ASSOCIATE** position open immediately with a developmental biology group investigating gene expression and its regulation in the early mammalian trophoblast cell. In depth experience in recombinant DNA methodology is required. Salary negotiable; excellent fringe benefits. Send curriculum vitae and references to: **Dr. Cole Manes, Center for Neurologic Study, 11211 Sorrento Valley Road, Suite H, San Diego, Calif. 92121.**

### LA TROBE UNIVERSITY MELBOURNE, AUSTRALIA

#### ACIAR RESEARCH ASSOCIATE

The School of Biological Sciences, Department of Biochemistry, invites applications for the above position. The position is supported by a grant from the Australian Centre for International Agricultural Research for work on utilization of fibrous agricultural residues as ruminant feeds. Research to be conducted under the direction of Professor B. A. Stone in collaboration with a group led by Professor A. R. Egan at Melbourne University and groups in Thailand and the Philippines.

Applicants should have experience with modern methods of cell wall chemistry and physical chemistry, including mass spectrometric and NMR techniques for the characterisation of polysaccharides and lignins.

Appointment for 1 year in the first instance. Assistance towards travel will be available. Enquiries to: **Professor B. A. Stone.**

Closing date: 4 June 1984; reference number A0/006/000. Salaries: research assistant, A\$17,815 to A\$20,164; research associate at the rate of A\$20,164.

Applications marked "Confidential," quoting reference number, and including three referees and curriculum vitae should be sent to: **The Staff Officer, La Trobe University, Bundoora, Victoria, 3083, Australia.**

**RESEARCH ASSOCIATE** position available with the following requirements: Ph.D. in analytical chemistry specializing in mass spectrometry and associated methodology with extensive theoretical and instrumental experience (two or more years) with stable isotopes, FAB, GC-MC chemical ionization, collision activation, linked field scan, high and low resolution MS, and structure elucidation of compounds; laboratory management; computer techniques; trace analysis; publications in the fields listed. Please send curriculum vitae and three reference letters by 1 June 1984 to: **Director, Stout Neuroscience Laboratory, University of Tennessee Center for the Health Sciences (UTCHS), 956 Court Avenue, Memphis, Tenn. 38163.** Salary range: \$20,000 to 22,000 per annum. *UTCHS is an Equal Opportunity Employer.*

**RESEARCH ASSOCIATE** position available immediately for Ph.D. with experience in DNA cloning. Project concerns the structure, evolution, and regulation of expression of malaria genes. Send résumé and references to:

**Dr. Araxie Kilejian**  
**The Public Health Research Institute**  
455 First Avenue  
New York, N.Y. 10016

#### RESEARCH/INSTRUCTOR FELLOWSHIP IN EVOLUTIONARY BIOLOGY

The Biology Department at Rice University announces the creation of the Huxley Research Instructorship in Biology in honor of Julian Huxley, first member of the department, on the occasion of the dedication of the Huxley Archives at Rice. This is a 1-year appointment, renewable for a second year, for teaching and research in evolutionary biology. The candidate will be expected to have recently completed a Ph.D. Possible areas of interest will include evolution of sociality in insects, plant ecology, biochemical evolution, physiological adaptation, population dynamics, or other topics which complement present faculty interests. Duties will include an opportunity to do some teaching related to one's specialty and collaborative research with faculty in the department. Stipend is \$18,000 per year. The position carries allowances for research and travel to one national meeting. Applications, including curriculum vitae, a summary of research and teaching interests, and at least three letters of reference, are to be sent to: **Dr. Ronald L. Sass, Department of Biology, Rice University, Houston, Texas 77251; telephone: 713-527-4066.** Application deadline is 1 July 1984. *Rice University is an Equal Opportunity/Affirmative Action Employer.*

## POSITIONS OPEN

### HARVARD UNIVERSITY MEDICAL AREA MASS SPECTROMETRY FACILITY

Applications for research positions in mass spectrometry (research associates, electronics technician) are invited. New centralized facility, equipped with the latest instrumentation, has been organized to support the pursuit of molecular structure in medical research. Fundamental problems related to metabolic profiling, oligosaccharide sequencing intermixed with the structural determination of inhibitors and activators are common. Problems utilizing GLC and HPLC interfacing with specific interests in DCI and FAB generated ions at high mass along with analyzer manipulations (that is, CA, MIKE, and so forth) will be investigated. Inquiries should be sent to: **Dr. Vernon N. Reinhold, Harvard University School of Public Health, Department of Nutrition, 665 Huntington Avenue, Boston, Mass. 02115.**

Position available: The Department of Urology at the College of Physicians and Surgeons of Columbia University has secured funding for the **MICHAEL CHERNOW RESEARCH SCHOLAR** position in cancer research. Candidates should be qualified in molecular biology as applied to urologic oncogenesis and should have demonstrated capacity for independent investigation. Candidates must achieve joint appointment in an appropriate basic science department in the University at the level of assistant or associate professor. Send curriculum vitae and letters of reference to: **Carl A. Olsson, M.D., Professor and Chairman, Department of Urology, Box 44, College of Physicians & Surgeons, 630 West 168 Street, New York, N.Y. 10032.** *Columbia University is an Affirmative Action/Equal Opportunity Employer.*

### RESEARCH SCIENTIST BIOCHEMIST/PHYSIOLOGIST

The Gillette Company, an international consumer products firm engaged in the development, manufacture, and sale of blades and razors, toiletries and cosmetics, writing instruments, and Braun electric shavers and small appliances, has an opening for a research scientist in the biochemistry research group of its Gillette Research Institute (GRI) located in Rockville, Maryland.

Position requires recent Ph.D. in biochemistry or physiology with a background and interest in cellular metabolism. Experience in protein isolation and enzymology desirable.

In addition to an exceptional opportunity for recognition and growth, GRI offers a competitive benefits/compensation package. Applicants should submit résumé to:

**A. J. Gass**  
**Personnel Supervisor**  
**Gillette Research Institute**  
1413 Research Boulevard  
Rockville, Maryland 20850  
*Equal Opportunity Employer*



**The Gillette Company**

**RESEARCH SCIENTIST IN CHEMICAL CARCINOGENESIS:** Areas of research include metabolism of nitrogen-heterocyclic polynuclear aromatic hydrocarbons, their interaction with DNA, and microsomal enzyme induction. Ph.D. in biochemical pharmacology, toxicology, or biochemistry required; related experience preferable. Candidate will work in collaboration with organic chemists involved in the synthesis of potential metabolites of the carcinogens. Position provides opportunity for developing programs of candidate's interest. Send résumé and three references to: **Dr. Harish C. Sikka, Director, Great Lakes Laboratory, State University of New York College at Buffalo, 1300 Elmwood Avenue, NS-261, Buffalo, N.Y. 14222.**

**SENIOR FACULTY POSITION.** Mental Retardation Research Center, University of California, Los Angeles (UCLA). A hard-money opening exists for Coordinator of the Developmental Biology Group of the UCLA Mental Retardation Research Center. Candidates with very strong backgrounds in developmental biology of the central nervous system, including genetics, molecular biology, immunology, or pharmacology, are invited to apply. Appointment will be made at the senior professor level. Very competitive compensation dependent upon clinical qualification, if any. Excellent laboratory facilities. Write: **N. A. Buchwald, Director, Mental Retardation Research Center, 760 Westwood Plaza, Los Angeles, Calif. 90024.** *UCLA is an Equal Opportunity/Affirmative Action Employer.*

## PROTEIN BIOCHEMIST

Leading pharmaceutical company located in Radnor, Pa. has an opening for a Protein Biochemist in its Biological Section of Research and Development.

The successful candidate will have a Ph.D. in molecular biology or biochemistry, with a minimum of two years post-doctoral research experience. Expertise in purification and characterization of protein antigens is essential; microsequencing experience is desirable. Responsibilities will include analysis and purification of anti-venin antibodies and the study of the biological effects of globulins and globulin fractions.

Qualified applicants should forward resume including salary history to Personnel Manager. Refer to job #35.

**Wyeth Laboratories, Inc.**



P.O. BOX 8299  
Philadelphia, PA 19101

TM

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## Research Chemist Fermentation Development

BEHRING DIAGNOSTICS, based in San Diego, is a major supplier of clinical chemistry reagents, immunodiagnostics and research biochemicals throughout the world.

We are seeking an experienced research chemist who will be the principle investigator for complex projects in fermentation development in Microbiology R & D. Should have a Ph.D. in microbiology or related area with emphasis in microbial physiology and/or biochemistry and a knowledge of fermentation science; or an M.S. with same emphasis and 3-5 years experience. Should be augmented with working knowledge of contemporary techniques and instrumentation.

Our company offers good, competitive salaries and excellent benefits. Interested and qualified candidates are invited to submit resume with salary history by June 1, to EMPLOYMENT MANAGER:

**Calbiochem-Behring**

(Now renamed)

**Behring Diagnostics**

Division of American Hoechst Corporation  
P.O. Box 12087, San Diego, CA 92037

Equal Opportunity Employer

**Hoechst**

# Assistant Director, Antibiotics Discovery and Biotechnology

The Natural Products Pharmacology Department of Smith Kline & French Laboratories, is seeking an experienced scientist to join our biotechnology group that is establishing new technologies and new facilities for developing new therapeutic products from microbial and animal cell systems. This person will provide leadership in the discrimination, isolation, and purification program for natural products.

The primary responsibilities of the group are to develop procedures for the:

- biological, physical and chemical discrimination of biologically active agents.
- isolation of natural products from fermentation broths for activity and structural characterization.
- purification of new product leads for *in vitro* and *in vivo* testing, preclinical evaluations and clinical trials.

The successful candidate will also supervise a skilled group of scientists and technicians, and maintain active interactions with the scientific community inside and outside SK&F.

Candidates are required to have:

- a Ph.D. in Chemistry or Natural Products Chemistry with a minimum of 5 years post-doctoral experience in industry or academia.
- thorough training and experience in the isolation and characterization of microbial products such as antibacterials, antifungals, antineoplastic agents and immunoregulatory substances.
- experience with HPLC, TLC, ion exchange, solvent extraction, adsorption and other separation methods.
- a sound publication record in leading journals and a national reputation for the required research skills.
- excellent communication, leadership and interpersonal skills.

Smith Kline and French Laboratories, located in suburban Philadelphia, offers an excellent benefits and compensation program including an attractive relocation package. For confidential consideration, send your C.V. and names of three references to: Mr. Walter B. Flagg, SmithKline Beckman Corporation, 1552 Spring Garden Street, Philadelphia, PA 19101. We are an equal opportunity employer, M/F/H/V.

**SK&F**  
A SmithKline Beckman Company

## POSITIONS OPEN

**RESEARCH ASSOCIATE** at the postdoctoral level to join research group studying biochemical genetics of blood pressure regulation. Applicants must have a Ph.D. in a biomedical science (biochemistry, pharmacology, genetics, physiology, and so forth) or an M.D., D.V.M., and so forth, and be citizens or permanent residents of the United States. Send curriculum vitae to: **Dr. John Rapp, Department of Medicine, Medical College of Ohio, C.S. 10008, Toledo, Ohio 43699.** *Equal Opportunity Employer, M/F.*

**RESEARCH TECHNOLOGIST SUPERVISOR.** Applications are solicited for an instrumentation associate to maintain, operate, and supervise modern scientific instrumentation including FTNMR, FTIR, SEM-x-ray dispersion, XRF, XRD, GC, IC, and UV-Vis. Possibility of independent or cooperative research. Advanced degree in an instrument oriented field with repair experience preferred. Send detailed résumé to: **Western Washington University, Personnel Services, Old Main 370, Bellingham, Wash. 98225,** by Friday 29 June 1984. *Equal Opportunity Employer.*

### SKIN RESEARCH DEPARTMENT HEAD PRINCIPAL SCIENTIST

The Gillette Research Institute, a division of The Gillette Company, has a career opportunity for an established researcher, ten or more years beyond doctorate with recognized accomplishment and broad experience in skin-related research. Cell structure-function relationships or tissue histochemistry experience preferred. Must have ability to transfer new scientific findings and methodologies to applied research environment.

Primary responsibility will be to lead and develop research programs leading to a new generation of skin products on the basis of recent and anticipated advances in biological sciences. Will also maintain productive liaison with academia and other researchers in allied fields.

The Gillette Company is a leading worldwide manufacturer of consumer products including personal care and shaving products and writing instruments. In addition to a challenging work environment and an exceptional opportunity for recognition and growth, we offer a competitive salary and benefits package. Applicants should submit résumés to: **A. J. Gass, Personnel Supervisor, Gillette Research Institute, 1413 Research Boulevard, Rockville, Maryland 20850.**

*Equal Opportunity Employer*



The Gillette Company

**STAFF SCIENTIST, LAWRENCE BERKELEY LABORATORY,** 1-year appointment subject to renewal. Bioorganic chemist or biochemist with strong organic chemistry background. To study isoprenoid biosynthesis in plants and algae. Ability to supervise research at graduate and undergraduate levels is essential. Prefer a Ph.D. in biochemistry/organic chemistry. Please specify **Job Number A/2678.** Send two copies of résumé to: **Lawrence Berkeley Laboratory, One Cyclotron Road, Employment Office 90-1042, Berkeley, Calif. 94720.** *An Equal Opportunity Employer, M/F/H.*

**VETERINARY EPIDEMIOLOGIST/MICROBIOLOGIST** for research and teaching. Opportunities for advancement and tenure consideration after appropriate service. Rank is open; salary is competitive and dependent upon qualifications. Requirements: D.V.M., Ph.D. preferred with experience and training in veterinary epidemiology and microbiology. Candidates with the Ph.D. degree and appropriate experience and training will be considered. An opportunity for an industrious scientist to join a progressive interdisciplinary department. Contact: **Richard B. Wescott, Chairman, Department of Veterinary Microbiology and Pathology, Washington State University, Pullman, Wash. 99164-7040,** by 1 August 1984. *Washington State University is an Equal Opportunity/Affirmative Action Employer. In order to assist our efforts to meet Affirmative Action goals, minority, handicapped, and women candidates are encouraged to identify themselves as such in their applications.*

## REQUEST FOR PROPOSALS

The EPA/NCSSU Acid Deposition Program, a cooperative research program between the U.S. Environmental Protection Agency (EPA) and North Carolina State University (NCSSU), is seeking proposals for research on the effects of acid deposition on aquatic and terrestrial ecosystems—specifically, projects related to experimental acidification of a whole-lake ecosystem in northern New England and a feasibility study for watershed acidification experiment(s). For submission details, send a self-addressed envelope to: **EPA/NCSSU Acid Deposition Program, 1509 Varsity Drive, Raleigh, N.C. 27606.** Deadline for requesting information is 5 June 1984. Please specify research area of interest.

## CONFERENCE

### MANGANESE IN METABOLISM AND ENZYME FUNCTION

7 to 10 October 1984, Penn State University  
Lecture sessions on: Mn(II) nutrition and transport, enzymology and metabolic pathways, and biophysical probes. Plus poster sessions in all these areas. Send inquiries to:

**Dr. F. C. Wedler**  
Althouse Laboratory  
Penn State University  
University Park, Pa. 16802

## FELLOWSHIPS

### LUCILLE P. MARKEY PREDOCTORAL FELLOWSHIPS \$9,000 to \$12,000 plus tuition and fees

Two fellowships are available in 1984 in the Department of Physiology and Biophysics and two in the Department of Pharmacology, at the University of Miami School of Medicine, for Ph.D. studies in the following fields: membrane biology and biophysics; neurophysiology; muscle biology; cardiovascular pharmacology; neuropharmacology; developmental neurobiology; and cell-to-cell communication. Applications are sought from highly qualified individuals with backgrounds in the physical, biological, or engineering sciences. Stipend dependent on qualifications. In reply, send undergraduate records, GRE scores, and a letter giving your scientific interests, and arrange for three letters of recommendation.

For consideration in Physiology and Biophysics, write to: **Dr. S. J. Socolar, P.O. Box 016430, Miami, Fla. 33101.** Telephone: 305-547-6821.

For consideration in Pharmacology, write to: **Dr. A. H. Caswell, P. O. Box 016189, Miami, Fla. 33101.** Telephone: 305-547-6643. *The University of Miami is an Affirmative Action/Equal Opportunity Educator and Employer.*

### POSTDOCTORAL FELLOWSHIP ON NUTRITION AND CANCER (Available 1 July 1984)

Overall project examines the basic biology and therapeutic responsiveness of multicellular tumor spheroids (MTS) derived from selected types of human malignancies, with emphasis on the mechanisms involved. Candidate will study both the endogenous biochemistry of MTS as well as their responsiveness to alteration of their nutritional environment, with the goal being to identify tumor specific growth control mechanisms. Experience in cell biology/biochemistry desirable. Send résumé and two letters of reference to: **Dr. John M. Yuhas, Department of Radiation Therapy, University of Pennsylvania, 3400 Spruce Street, Philadelphia, Pa. 19104.** Telephone: 215-898-4988.

A POSTDOCTORAL FELLOWSHIP is available immediately for an individual with training in molecular biology to work on an NIH-sponsored research project to clone cDNA and genomic sequences of hormonally induced enzymes involved in steroidogenesis, and to use cDNA sequences as probes to study the transcriptional regulation of these enzymes by hormones. Prior experience with techniques of molecular cloning essential. Salary depending on experience. Send curriculum vitae and three letters of reference to: **Dr. Evan Simpson, Department of Biochemistry, University of Texas Health Science Center, 5323 Harry Hines Boulevard, Dallas, Texas 75235.** *Equal Opportunity Employer.*

## FELLOWSHIPS

**POSTDOCTORAL FELLOWSHIP.** A postdoctoral position is available for candidates interested in immunology and with experience in molecular genetics, especially in gene transfer techniques, to work in a laboratory specializing in molecular analysis of cellular interactions in the immune response. Send résumé and letters of reference to: **Dr. Charles A. Janeway, Jr., and Donal B. Murphy, Department of Pathology, Yale University School of Medicine, New Haven, Conn. 06510.**

**POSTDOCTORAL FELLOWSHIP.** A postdoctoral fellowship is available in the Department of Genetic Toxicology at the Chemical Industry Institute of Toxicology (CIIT) for the study of the mechanisms of chemically induced cytogenetic damage and repair in mammalian systems. Candidates should have some cytogenetic experience. Stipend: \$19,000 first year. CIIT is an independent, not-for-profit research institute dedicated to the study of basic mechanisms of chemical toxicity. Interested individuals should contact: **Coordinator of Training, CIIT, P.O. Box 12137, Research Triangle Park, N.C. 27709.**

**POSTDOCTORAL FELLOWSHIP** available for studies of the mechanism of aging of cells in culture and the loss of limited replicative potential in neoplastic transformation. Background required in DNA replication, repair, or recombination, or in a similar area. Send curriculum vitae and names of two references to:

**Dr. Peter J. Hornsby**  
Fellowship Application  
Department of Medicine, M-013  
University of California, San Diego  
La Jolla, Calif. 92093

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

### SMITHKLINE BECKMAN FELLOWSHIP

The Center for Ulcer Research and Education (CURE) of the University of California, Los Angeles (UCLA), School of Medicine, invites applications from individuals who wish to pursue postgraduate studies related to fundamental and/or clinical aspects of gastrointestinal function. Current areas of interest include cell biology of gastric function, peptide receptor identification and pharmacology, peptide isolation, purification and sequencing, morphology of parietal cells, neuronal innervation of gastrointestinal tract, blood flow, and peptide physiology using in vivo and in situ techniques. Fellowships are for a minimum of 2 years. Salary is negotiable and based on experience and qualifications. Applicants should send curriculum vitae, three references, and one page describing their research interests or a research proposal to: **Dr. Nicholas Brecha, CURE, VA Center/Wadsworth, Building 115, Room 203, Los Angeles, California 90073.** *The University of California is an Equal Opportunity/Affirmative Action Employer. Minority and women candidates are urged to apply.*

**GRADUATE FELLOWSHIPS IN MOLECULAR MICROBIOLOGY.** The Department of Medical Microbiology at the University of Vermont invites applications from highly qualified persons interested in molecular biology. Areas of inquiry include: recombinant DNA applications to the study of development in higher fungi; pathogenic mechanisms, cell and molecular biology of toxin action and viral replication; immunology of the mammary gland; immunological effects of diagnostic ultrasound on cell membranes; cell mediated immunity; interferon induction by nonviral agents; brucellosis; maintenance and control of the carcinogenic state; biochemical immunological and recombinant DNA techniques to study the molecular basis of the attachment of *Streptococcus sanguis* to teeth. Full tuition remission and tax-free stipend of approximately \$7300 per year. Write: **Dr. Thomas J. Moehring, Department of Medical Microbiology, The University of Vermont, Burlington, Vt. 05405.**

## MARKETPLACE

### SPIDER PHARM

Collecting-Breeding-Custom Venom Preparations

<b>ACHAEARANEAE</b>	Suspected Presynaptic Calcium Channel Blocking Activity
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<b>LOXOSCELES</b>	Complement Inactivating Necrotoxins

Call or Write for Details and Availability:

8106 Sorensen Avenue  
Santa Fe Springs CA 90670 (213) 696-5381



**THE AGA KHAN UNIVERSITY**  
FACULTY OF HEALTH SCIENCES

Applications are invited for the following full-time faculty positions:

<b>BIOCHEMISTRY</b>	<b>ASSOCIATE PROFESSOR</b>
<b>PHARMACOLOGY</b>	<b>ASSISTANT PROFESSOR</b>
<b>PHYSIOLOGY</b>	<b>ASSOCIATE PROFESSOR</b>
	<b>ASSISTANT PROFESSOR</b>
	<b>TUTOR</b>

Candidates must have a Ph.D. or equivalent qualification with experience of teaching in a medical college and of research relevant to medical sciences. Those intending to pursue a career in Pakistan will be preferred. The undergraduate curriculum in Medicine is intended towards integration of basic and clinical sciences. The Faculty of Health Sciences and the Aga Khan University Hospital Services will be inter-dependent.

Salary and benefits will be commensurate with qualifications and experience. The letter of application with detailed resumé and names of at least two referees should be addressed to the Personnel Director, The Aga Khan University, P.O. Box 3500, Stadium Road, Karachi, Pakistan.

Staff Fellow (Ph.D.)  
Salary Range—\$17,000 to \$35,467  
(Having less than 3 years professional Research Experience)

Senior Staff Fellow (Ph.D.)  
Salary Range—\$20,688 to \$39,767  
(3-7 years Research Experience)

**NATIONAL INSTITUTES OF HEALTH**  
**NATIONAL INSTITUTE OF**  
**ENVIRONMENTAL HEALTH SCIENCES**  
**LABORATORY OF PHARMACOLOGY**

The Cell Pharmacology Section is seeking an individual to participate in pharmacological studies on freshly isolated and cultured lung, skin and liver cells. A strong background in cell biology with experience in pharmacological methods is required. The candidate must have a record of demonstrated research productivity and the ability to carry out independent as well as collaborative research. The initial appointment is for two years, with additional extension possible for talented researcher. Salary commensurate with candidate's qualifications and experience. Send curriculum vitae, bibliography and three recommendation letters to:

Mr. Bruce Wiggins, Code: HN-V243  
NIEHS Personnel Office  
P.O. Box 12233 (MD 1-01)  
Research Triangle Park, NC 27709  
(919) 541-3317

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**COLLEGE OF**  
**MEDICINE**  
of Yeshiva University

**MONTEFIORE**  
**MEDICAL**  
**CENTER**

**CHAIRPERSON**  
**DEPARTMENT OF**  
**NEUROLOGY**

We are recruiting a Chairperson for the unified Department of Neurology of the Albert Einstein College of Medicine of Yeshiva University and the Montefiore Medical Center. This Department has a distinguished academic tradition, and we are interested in identifying candidates with outstanding credentials. The individual selected will have responsibilities for all activities in Neurology at both institutions, and a Search Committee has been appointed to recommend a candidate for this position.

Applications and nominations for the position are invited. The successful candidate must have demonstrated leadership and broad experience in both clinical and academic Neurology as well as proficiency in administration. The candidate must be able to qualify for senior academic rank on the faculty of the Albert Einstein College of Medicine.

Please address correspondence to: Louis M. Sherwood, M.D., Chairman, Search Committee for Chairperson of the Department of Neurology, Albert Einstein College of Medicine, 1300 Morris Park Avenue, Bronx, New York 10461.

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**Protein Separation Chemist**

Bio-Response is a new and unique biotechnology company located in the San Francisco Bay area. We are committed to a large scale production of medically and commercially significant polypeptides from mammalian cell culture for our clients as well as from our own cell lines.

We are seeking a senior protein chemist to direct and expand our expertise into the area of protein purification. This person will be responsible for concentration, purification, and characterization of monoclonal antibodies, enzymes, hormones, lymphokines, and other proteins produced in our patented MCT\* system. In addition, the successful candidate will contribute to process and product development with other Bio-Response scientists.

The position requires a Ph.D. with at least 3-5 years of additional and relevant experience. Preference will be given to individuals with strong backgrounds in the design and implementation of immunoaffinity protocols. Other desirable qualifications include: experience with industrial scale protein purification, state of the art methods for protein analysis, and familiarity with FDA guidelines.

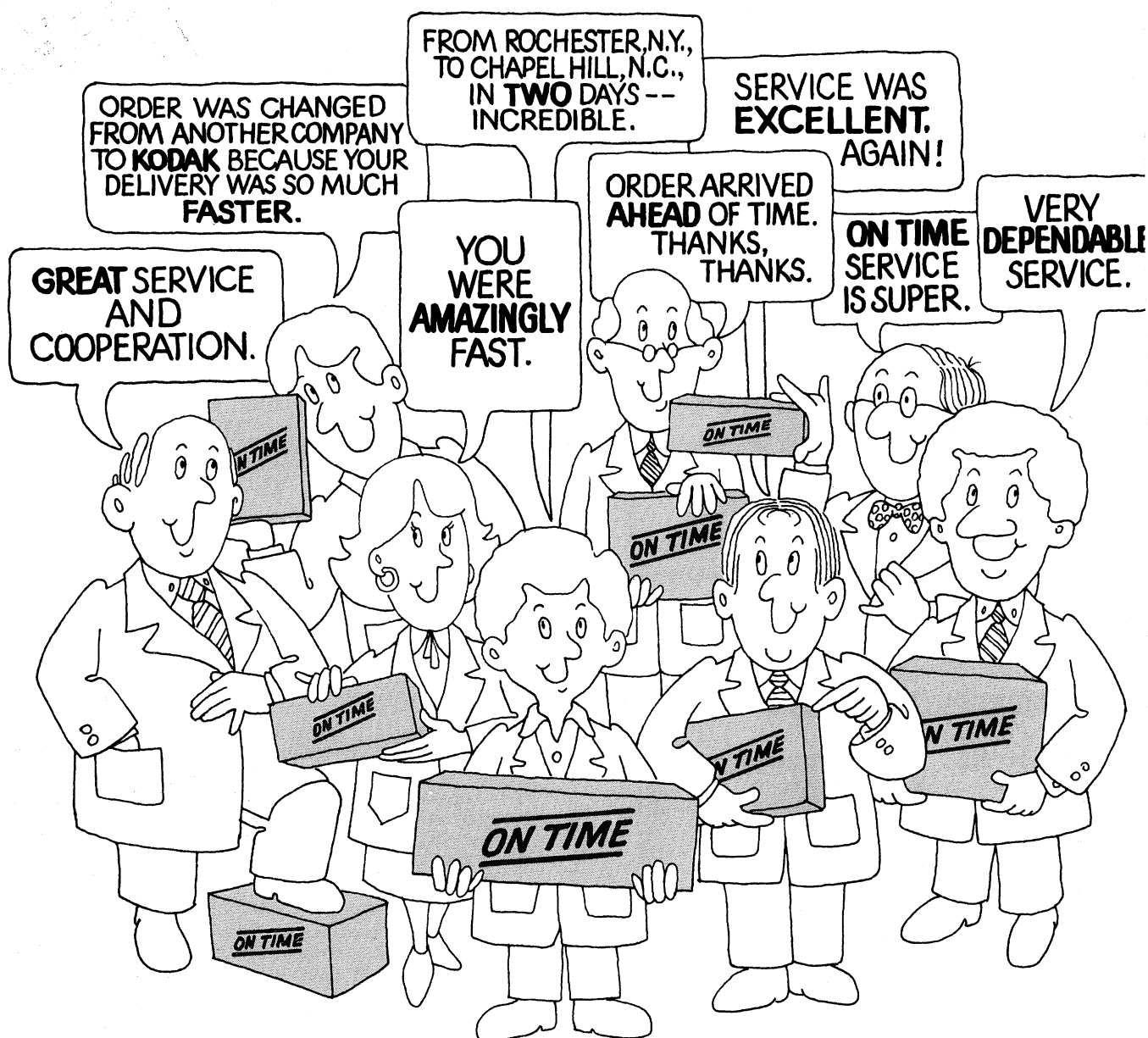
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Please send resume and salary history (in confidence) to:

**Maureen Costello, Ph.D.**  
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