

Report on 1994 Council Meeting

At the Council meeting in San Francisco on 18 February, Executive Officer Richard S. Nicholson reported that 1993 was an excellent year for the Association. Grant funds and advertising revenue continued to grow. In the last 2 years international membership doubled, and overall membership as of 31 December 1993 was the highest in the Association's history (141,840).

Nicholson announced Dan Koshland's decision to retire as editor-in-chief of *Science*. He said a search committee was being formed and Koshland agreed to stay on until a successor is chosen. Among administrative changes, Nicholson said the meetings office was downsized and incorporated into the membership office in an effort to make the operation more efficient and cost-effective. He also noted that AAAS decided to cease efforts to acquire rights to non-AAAS books for its publications office.

AAAS Programs

Richard Getzinger and Jeff Stann of the International Directorate reported on the new Latin American initiative. They described the initial planning meeting held last spring in Washington, attended by more than 50 international participants and co-chaired by incoming AAAS president Francisco Ayala and Antonio Peña of Mexico. Participants agreed on findings and recommendations that will set the stage for the next phase of cooperative activities. A steering committee was formed and a June 1994 meeting is being planned in Manaus, Brazil, to discuss transboundary and regional issues of biodiversity.

Shirley Malcom of the Education and Human Resources Directorate briefed the Council on activities of the Science Linkages in the Community (SLIC) Program. The project's goal is to help forge coalitions in communities that will in turn work to strengthen local

educational opportunities, both traditional and nontraditional. Under a \$3.26 million grant from the DeWitt Wallace-Reader's Digest Fund, three sites were selected where the project will be implemented: Rapid City, South Dakota; Rochester, New York; and Chicago, Illinois. Currently there is funding for 4 years of SLIC activities, and it is hoped that gradually additional cities can be added.

New Building

Carl Amthor, chief administrative and financial officer of AAAS, reviewed the history leading to the decision to build a new AAAS headquarters building and the selection of Harry Cobb of Pei Cobb Freed & Partners as the architect. Amthor said Randy Croxton is working with Cobb to create an environmentally sensitive and energy-efficient design for the 12-story building, which will include a conference center, an auditorium, a members' lounge, a science exhibit area, and a science education laboratory for visiting students.

The present plan is to initially lease three floors of the new building to other science and engineering societies. Amthor noted that a capital campaign was launched to help raise money for finishing of the public spaces in the building. The expected date of completion is 1996.

Report by Task Force on Section Structure

Betsy Clark, incoming AAAS Board chairman, reported that the Task Force on Section Structure, composed of seven retiring chairs representing both large and small sections, met during the annual meeting, and concern was expressed about the trend toward more sections and greater disciplinary fractionalization. The group recommended that a clear philosophy and criteria be established before any new sections are formed.

Council Actions

The Council took the following actions:

- The National Organization of Gay and Lesbian Scientists and Technical Professionals and the Association of American State Geologists were approved as new AAAS affiliates.

- Proposed bylaw changes reflecting previously approved division bylaw changes to the territories served by the SWARM and Pacific divisions were approved.

- The formation of a new Section on Neuroscience was approved.

- The disaffiliation of four non-responsive, inactive AAAS affiliates was approved.

- Renaming of the Section on Agriculture was approved. It will be called the Section on Agriculture, Food, and Renewable Resources.

- A resolution establishing a Task Force on Section Affairs was approved (see below).

- A resolution was introduced by Rolf Sinclair of the Section on Physics calling for creation of a U.S. postal stamp to commemorate the 1998 150th anniversary of the founding of AAAS.

Resolution to Create Task Force on Section Affairs

Whereas sections represent the Association's constituencies, contribute to the creativity and success of the Association's annual meetings, and have the responsibility and potential to serve as important communication links with Association members generally; and

Whereas a number of changes have occurred in recent years in terms of the role and responsibility of sections; and

Whereas the intended relationships among sections and with the Association's headquarters

staff are not clear to many section officers and members; and

Whereas the Association could profitably devote more substantive attention to section affairs; and

Whereas improved communication between sections and AAAS staff about current operations of the Association is highly desirable; and

Whereas a number of ideas and possible opportunities exist that are worth exploring to assist the sections in playing a more active and creative role in accomplishing the objectives of the Association; and

Whereas these possibilities include, among others:

- an annual meeting of section officers held 6 months before and after the Association's annual meeting;

- more effective means for communicating substantive matters among the sections and the Association, including the use of modern electronic technologies;

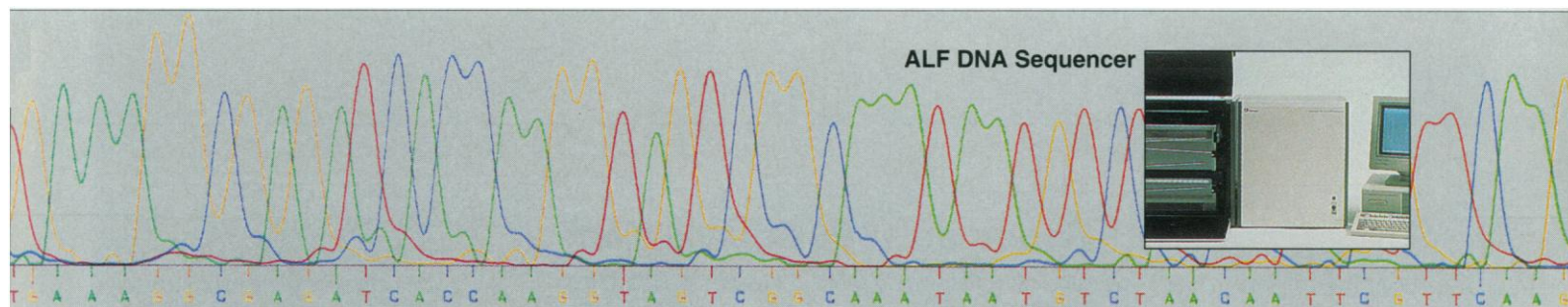
- a liaison staff officer to work directly with the sections; and

- changes related to the funding and administration of section activities.

Therefore, be it resolved that Rita Colwell, the incoming president-elect, shall appoint and chair a Task Force on Section Affairs to examine means for improving the effectiveness of sections and make recommendations accordingly.

The task force should consist of 7 to 10 members, most of whom should be section officers. The composition of the task force should be representative of the diversity of AAAS and be balanced in terms of disciplinary mix and the varying size of sections. The task force should make a progress report to the Council and sections within 6 months and a full report at the 1995 Council meeting.

—Gretchen Seiler



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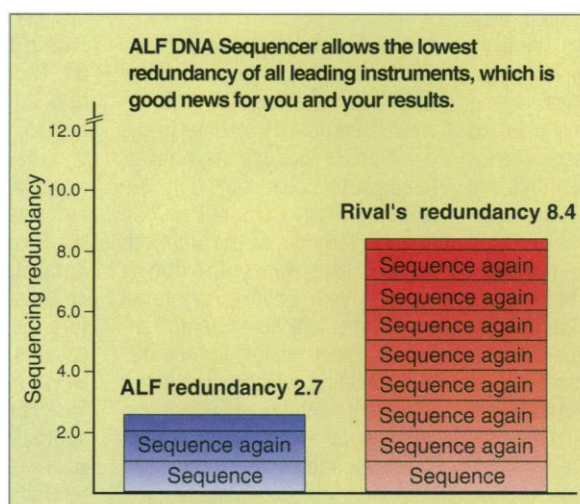
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References

1. Comparison of three non-isotopic automated DNA sequence analysis systems. *Clinical Chemistry*, 38 (1992) 465. Van Ranst, M., Fiten, P., Voet, M., Volckaert, G., Opdenakker, G.
2. Automated low-redundancy large-scale DNA sequencing by primer walking. *BioTechniques* 15 (1993) 714-721. Voss, H., Wiemann, S., Grotheus, D., Sensen, C., Zimmermann, J., Schwager, C., Stegemann, J., Erfle, H., Rupp, T., Ansorge, W.
3. Sequence length and error analysis of Sequenase and automated Taq cycle sequencing methods. *BioTechniques* 14 (1993) 442-447. Koop, B.F., Rowan, L., Chen, W.-Q., Deshpande, P., Lee, H., Hood, L.

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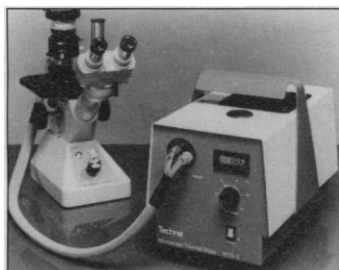
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Radiolabeled Nucleotides

Easytides, colored radiolabeled nucleotides, simplify molecular biology research by making shipping, pipetting, and storage more

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Confocal Imaging System

The MRC-1000 Confocal Laser Scanning Imaging System marks the beginning of a new generation of these instruments. A major innovation significantly increases photomultiplier sensitivity. Redesigned and relocated electronics enhance signal-to-noise ratio. The system features up to three independent confocal detection channels, each with computer-controlled gain and black level. The confocal iris and six-position emission filter wheel on each channel are independently controlled by the computer. Instrument set-up for a particular fluorochrome can be preset as a method and recalled by a single key stroke. **Bio-Rad Laboratories. Circle 143.**

Mobile Phase Recycler

The MR-100 Mobile Phase Recycler consists of a three-way valve that diverts contaminated solvent to a waste container and recycles uncontaminated mobile phase back to the system's mobile phase reservoir. Solvent consumption is drastically reduced as is environmental impact of solvent disposal. The MR-100 is installed immediately downstream from the liquid chromatography (LC) detector and makes use of

the detector's analog output to determine the valve's position. The unit is compatible with all types of LC detectors and most isocratic separations. **Eppendorf North America. Circle 144.**

Microwave Reaction Accelerator

MicroWell is a product line for microwave acceleration of chemical reactions. Unlike ordinary microwave ovens based on the multi-mode technique, MicroWell 10 features a single-mode microwave cavity. This technique is based on a patented method to achieve



uniform and stable microwave fields in the treated sample. MicroWell 10 therefore overcomes the traditional problems of reaction control associated with ordinary microwave ovens. The first product in the line released, MicroWell 10 is designed for positron emission tomography chemistry, and can speed reaction times tenfold. **Labwell. Circle 145.**

Free Radical Marker Assays

The kits in a new line of assays for free radical markers are fast, specific, and reproducible. They are suitable for the analysis of many biological samples, and have applications in many fields of research including AIDS, inflammation, and aging. The kits include a colorimetric assay for glutathione, a colorimetric assay

for lipid peroxidation, a colorimetric assay for lactoferrin, a human myeloperoxidase immunoassay, a human lactoferrin immunoassay, and a human plasma selenium glutathione peroxidase immunoassay. **R & D Systems Europe. Circle 146.**

Purification Kit

The Rapid mRNA Purification Kit isolates poly (A⁺) RNA from total RNA simply, rapidly, and reliably. The poly (A⁺) RNA produced can be used in primer extensions, cDNA generation, reverse transcriptase polymerase chain reaction, or Northern blotting. No special equipment is needed. Purifications can be performed in 20 min, using a standard laboratory microcentrifuge. **AMRESCO. Circle 147.**

Literature

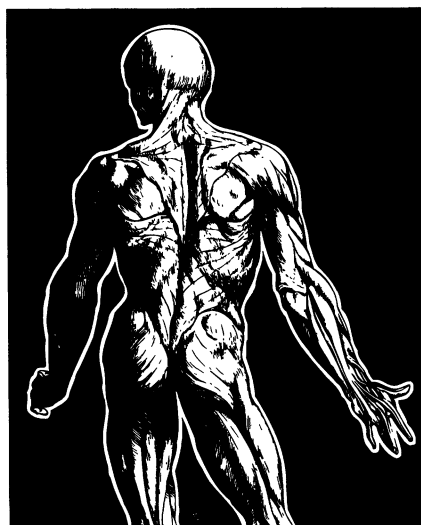
Catalogue 1994 extends to 400 pages in 10 sections, including nucleic acid labeling and detection; protein studies; cloning, sequencing, and gene expression; in situ hybridization; membranes; autoradiography; enzymes; radiochemicals; Biotrak assays; and drug development services. **Amersham International. Circle 148.**

1994 Signal Transduction Catalog & Technical Resource includes products such as antibodies to signaling proteins, calcium channel and metabolic modulators, calcium caged chelators and fluorescent probes, calmodulin and calmodulin inhibitors, enzymes and growth factors, enzyme activators, inositol phosphates, nitric oxide synthase inhibitors, protein kinase and protein phosphatase inhibitors, and protein tyrosine kinase inhibitors. **Calbiochem-Novabiochem International. Circle 149.**

Waterpro Water Purification Systems contains 44 pages of information on a full line. **Labconco. Circle 150.**

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CONFERENCE AGENDA

SUNDAY, OCTOBER 2

Welcoming Reception

MONDAY, OCTOBER 3

**Plenary Session I: Genome Analysis –
The New Frontier**

*"Human Gene Identification by Positional
Cloning"*

Dr. Francis Collins, National Center for
Human Genome Research

*"Genetic Basis of Human Colorectal
Cancer"*

Dr. Bert Vogelstein, Johns Hopkins
Oncology Center

*"Mapping Genes and Genomes: Genetic
Dissection of Complex Traits"*

Dr. Eric Lander, Whitehead Institute/
MIT

"Human Genome Diversity"

Dr. Mary Claire King, University of
California, School of Public Health

"Manipulating Cancer Genes in the Mouth"

Dr. Harold Varmus, National Institutes
of Health

*"Intellectual Property: DNA and its
Offspring"*

Dr. Kate Murashige, Morrison &
Foerster

*"Presymptomatic Diagnosis of Self and
Progeny"*

Dr. C. Thomas Caskey, HUGO

Concurrent Sessions

M1 *"New Methods of DNA-Based
Diagnosis"*

Dr. Stephen P.A. Fodor,
Affymetrix, Inc.

M2 *"Human Gene Identification"*

Dr. Kay E. Davies, Institute of
Molecular Medicine, University
of Oxford

M3 *"Social and Scientific Issues in
Genetic Testing"*

Dr. Nancy Wexler, Hereditary
Disease Foundation

M4 *"Gene Therapy"*

Dr. Inder M. Verma, The Salk
Institute

TUESDAY, OCTOBER 4

**Plenary Session II: Development and
Signal Transduction**

**Special Guest: Donna Shalala, U.S.
Department of Health and Human
Services**

"MYOD & Myogenesis"

Dr. Harold Weintraub, Fred
Hutchinson Cancer Research Center

"Genome Analysis in the Mouse"

Dr. Shirley M. Tilghman, Princeton
University

"Pax: Genes for Mice and Men"

Dr. Peter Gruss, Max Planck Institute
of Biophysical Chemistry, Germany

*"From an Interferon Clone to the
Regulation of Oncogenesis"*

Dr. Tadatsugu Taniguchi, Institute for
Molecular and Cellular Biology,
Osaka University

"C. elegans Genome Project"

Dr. Richard Wilson, Washington
University Medical School

*"Small GTPases – Switching on Biological
Responses"*

Dr. Alan Hall, MRC Laboratory for
Molecular Cell Biology, U.K.

Concurrent Sessions

T1 *"Gene Targeting"*

Dr. Elizabeth Robertson, Harvard
University

T2 *"Sequence to Function"*

Dr. Temple F. Smith, Biomolecular
Engineering Research Center,
Boston University

T3 *"Education and the Human Genome
Project"*

Dr. Paula Gregory, National Center
for Human Genome Research, NIH

T4 *"Chromatin Structure and the
Regulation of Gene Expression"*

Dr. Gary Felsenfeld, Laboratory of
Molecular Biology, NIH

WEDNESDAY, OCTOBER 5

Plenary Session III: Mapping

*"Toward the Ultimate Generation of an
Integrated Map of the Human Genome"*

Dr. Daniel Cohen, C.E.P.H., France

*"Application of High Resolution Genetic
Maps to Studies of Common Disorders"*

Dr. Jeffrey C. Murray, University of
Iowa

"Yeast Genome Project"

Dr. André Goffeau, Université
Catholique de Louvain, Unité de
Biochimie Physiologique

*"The Drosophila Genome Project – a
Progress Report"*

Dr. Gerald M. Rubin, University of
California

*"Status and Prospects for the Complete
Human Genome Sequence"*

Dr. Richard A. Gibbs, Baylor College
of Medicine

*"High Speed DNA Sequencing: Present and
Future Technologies"*

Dr. Lloyd M. Smith, University of
Wisconsin

"Towards a Complete Set of Human Genes"

Dr. J. Craig Venter, The Institute for
Genomic Research

**Plenary Session IV: Mapping and
Applications**

*"Vertically Integrated Mapping and
Sequencing of Human DNA"*

Dr. Maynard Olson, University of
Washington School of Medicine

"Interpreting Genes and Genomes"

Dr. David J. Lipman, NIH, National
Library of Medicine

"Some Applications of a Genome Library"

Dr. Melvin Simon, California Institute
of Technology

"Huntington Disease"

Dr. James F. Gusella, Massachusetts
General Hospital

"Ancient DNA"

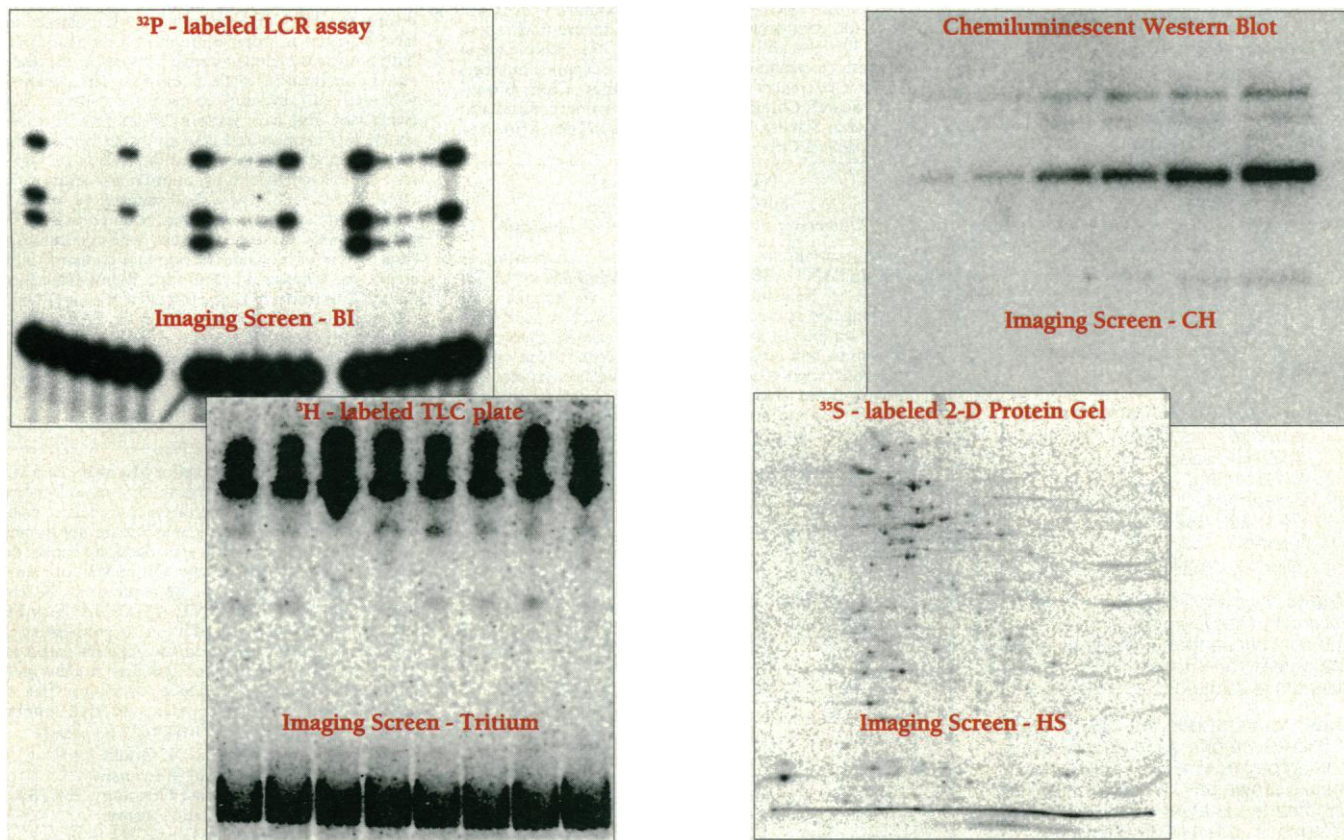
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Institut, Universität München

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NEUROBIOLOGIST

Division of Neurosurgery
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Head, Division of Neurosurgery
University of Maryland School of Medicine
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POSITIONS OPEN

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Dr. Michael N. Gould
University of Wisconsin
Department of Human Oncology, K4/332
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Madison, WI 53792

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

The National Institutes of Health (NIH) invites applications for five senior Health Scientist Administrators/Medical Officers within the Office of AIDS Research, Office of the Director. These are Civil Service positions offering a salary ranging from GS-14 to GS-15 pay level per annum (currently \$59,022 to \$69,427). Medical Officers selected may be eligible for a Physicians Comparability Allowance ranging from \$5,000 to \$20,000 per year. A one year probationary period must be served by persons if not currently in the Civil Service.

These positions serve as the five Coordinating Chairs for the following AIDS working groups: Vaccine, Behavioral Research, Therapeutics, Etiology and Pathogenesis, and Natural History and Epidemiology. Each Chair is responsible for facilitating and coordinating efforts of an advisory committee in strategic planning, identifying scientific opportunities, setting research priorities, and enhancing trans-NIH coordination and collaboration.

The NIH vacancy announcement, OD-94-1034A, with mandatory/desirable qualifications can be obtained by calling (301) 402-4111.

Applicants must possess knowledge of and experience in AIDS-related research within the specific AIDS working group to be considered for that position, and must state the working group specialty to which they are applying on their applications. *In addition, the applicants should address these desirable factors:* (1) Knowledge of AIDS-related research in the specialty area for which the applicant is applying; (2) Experience in preparing budgets and budget narratives; (3) Demonstrated skill in preparing verbal and written reports on complex scientific issues associated with the specialty area for which the applicant is applying; and (4) Experience in facilitating and coordinating committees with the goal of identifying scientific opportunities and setting research priorities.

Applicants are required to submit an Application for Federal Employment (SF-171), available at Federal Job Information Centers and Federal Personnel Offices or an electronic facsimile. The application material must be sent to:

**National Institutes of Health
Office of the Director Personnel Office
Building 31, Room 1C-27
9000 Rockville Pike
Bethesda, Maryland 20892**

Applications must be postmarked no later than May 16, 1994.

Selection for this position will be based solely on merit, with no discrimination for nonmerit reasons such as race, color, religion, sex, national origin, political affiliation, marital status, disabling condition, age, or membership or nonmembership in an employee organization.

U.S. Citizenship required
NIH IS AN EQUAL OPPORTUNITY EMPLOYER

POSITIONS OPEN

ACADEMIC COORDINATOR I

The University of California at Davis invites applications for an Academic Coordinator I and curator for the U.C. Davis Herbaria. This is a full-time academic position in the Division of Biological Sciences. A Ph.D. is required. Candidate must have a strong background in plant systematics and experience with herbarium curation, including management of facilities and exchange with other herbaria. An ability to identify plants in the seedling or vegetative stage and from fragmentary material will be required. Successful candidate will be expected to teach one course per year in plant identification and systematics of the California flora.

Candidates should submit curriculum vitae, a statement of interest; a statement of teaching and curatorial experience, and names and addresses of three referees by June 15, 1994, to: **Dr. Marcel Rejmánek, Chair, Search Committee, Section of Plant Biology, Division of Biological Sciences, University of California, Davis, CA 95616.** The University of California, Davis, is interested in candidates who are committed to the highest standards of scholarship and professional activities, and to the development of a campus climate that supports equality and respect for differences based on gender, cultural ethnicity, level of disability, and sexual orientation. The University of California is an Affirmative Action/Equal Opportunity Employer.

DIRECTOR PRE-CLINICAL STUDIES NEW YORK CHIROPRACTIC COLLEGE

Responsibility for pre-clinical courses including anatomy, pathology, physiology and neurophysiology. Supervision of pre-clinical faculty. Evaluation procedures, scheduling, budget review and coordination of academic counseling. Limited teaching responsibilities.

Requires Ph.D. or M.S. in basic sciences, prefer D.C. with graduate studies in basic sciences. Require several years of teaching and administrative experience. Send résumé to: **Director of Human Resources, New York Chiropractic College, 2360 Route 89, Seneca Falls, NY 13148-0800.**

DIRECTOR, SCIENCE AND RESEARCH

National professional association seeks director to manage department, act as liaison to funding agencies and organizations for research in communication sciences and disorders; serve on task force at NIH, manage research conferences. Requires doctoral in Communication Sciences and Disorders, Psychology or related field, 10 years of research experience and substantial record of research scholarship. Benefits include medical/life/dental insurance and 4 and one half weeks of vacation. Send résumé to: **ASHA/DR, 10801 Rockville Pike, Rockville, MD 20852.** Equal Opportunity Employer/Affirmative Action.

DIRECTOR

DynCorp-PRI, (Program Resources, Inc.) has an opening in our Rockville, Maryland, laboratory for a Director of Biomedical Services to lead a professional staff in providing contract laboratory research services.

Applicants should possess a Ph.D., M.D., or equivalent and have a minimum of ten years of independent research experience with five years of directing a technical laboratory group. A demonstrated record of achieving and maintaining independent funding support is also required.

Send curriculum vitae to: **DynCorp-PRI, 2000 Edmund Halley Drive, Reston, VA 22091, Attention: Angela Ewell.** We are an Equal Opportunity Employer, M/F/D/V.

POSTDOCTORAL POSITION. Endothelial Biology and ACE Expression, Department of Pathology, Emory University. An NIH-funded position is immediately available to study the molecular regulation of angiotensin converting enzyme (ACE) expression by endothelial cells. These cells express ACE only when they are confluent and nonproliferative; this project is to try to understand the biochemistry of why and how cells stop proliferating. Applicants will be expected to work with and oversee graduate students and technicians and to take a substantial role in developing a program investigating ACE expression by vascular tissues. Applicants should have a Ph.D. or M.D. with experience in molecular biology and an interest in growth regulation or vascular biology. Send curriculum vitae, reprints and references to: **Ken Bernstein, M.D., Room 711 WMB, Emory University, Atlanta, GA 30322.** Emory University is an Equal Opportunity Employer.

POSITIONS OPEN

TEMPORARY 1-YEAR POSITION for 1994-95 academic year, Wildlife Department, requires Ph.D. or near completion with demonstrated expertise in wildlife management, upland vertebrates, upland ecology, techniques and principles of wildlife management. Courses taught may include upland wildlife, upland habitats, wildlife principles and other assigned courses. Successful college teaching preferred. Salary Range \$31,764 to \$34,824. Submit curriculum vitae, transcripts of academic work, 3 letters of recommendation, and other materials to: **David W. Kitchen, Department of Wildlife, Humboldt State University, Arcata, CA 95521.** Telephone: (707) 826-3953. Closing May 30, 1994, or until position filled. Humboldt State: Equal Opportunity/Affirmative Action/Title IX Employer.

The University of Alabama at Birmingham is currently seeking applicants for the faculty position of **INSTRUCTOR**, non-tenure-earning. This position would be responsible for development and application of spectroscopic and imaging methods on the 4.1T system and associated equipment. All interested applicants should send curriculum vitae and three letters of recommendation to: **Gerald M. Pohost, M.D., Director, Division of Cardiovascular Disease, University of Alabama at Birmingham, THT 311, UAB Station, Birmingham, AL 35294.**

UAB is an Affirmative Action/Equal Opportunity Employer.

POSTDOCTORAL TRAINING POSITIONS JOHNS HOPKINS SCHOOL OF HYGIENE AND PUBLIC HEALTH

Postdoctoral training positions are available for U.S. citizens and permanent residents in our NIEHS-supported Training Program in Environmental Health Sciences. Training positions are available with faculty conducting research in areas of biochemical and molecular toxicology including mechanisms of carcinogenesis, molecular dosimetry and biomarkers, chemoprevention of cancer, identification of xenobiotic responsive genes, the genetics and mechanisms of reactive oxygen toxicity, neurotoxicity of lead, mechanisms of chemical activation, and immunotoxicity. Women and ethnic minorities are encouraged to apply. Interested individuals should send curriculum vitae, the names of three references, and a statement regarding current and future research interests to: **Director, Training Program in Environmental Health Sciences, Johns Hopkins School of Hygiene and Public Health, Department of Environmental Health Sciences, Room 7032, 615 North Wolfe Street, Baltimore, MD 21205.** Johns Hopkins University is an Equal Opportunity Employer.

POSTDOCTORAL POSITION available to study hormonal and cytokine regulation of plasminogen activator and plasminogen activator inhibitor gene expression in human and rat hepatocytes and hepatoma cells. Molecular biology experience is required. Send curriculum vitae, statement of research interests, and names of three references to: **Dr. Thomas Gelehrter, Department of Human Genetics, Box 0618, University of Michigan Medical School, Ann Arbor, MI 48109-0618.** Equal Opportunity/Affirmative Action Employer.

POSTDOCTORAL POSITION: Available immediately to participate in ongoing cellular, biochemical and molecular biology studies on soluble T cell receptor molecules and their role and function in immune regulation. Extensive training in cellular immunology is required and experience in molecular biology/biochemistry is desired. Send curriculum vitae, statement of research interests, and names of three references with telephone numbers to: **Dr. John W. Moorhead, Department of Immunology, Campus Box B-164, University of Colorado Health Sciences Center, Denver, CO 80262.** FAX: (303) 270-7642. The University of Colorado is an Equal Opportunity and Affirmative Action Employer. Applications from women and minority groups are encouraged.

POSTDOCTORAL POSITION IN MOLECULAR BIOLOGY. Opportunity to be part of a team developing new DNA sequencing methods in the Barnett Institute of Northeastern University. Research on the sequence of genes of the major histocompatibility complex (MHC). Ph.D. in molecular biology or biochemistry and recombinant DNA experience required. Applicants should send curriculum vitae and three references to: **Dr. Carol Warner, Department of Biology, 414 Mugar, Northeastern University, Boston, MA 02115.** Equal Opportunity Employer.

POSITIONS OPEN

UNIVERSITY OF NORTH DAKOTA DEPARTMENT OF SURGERY GRAND FORKS, NORTH DAKOTA

The Department of Surgery has an opening for a **POSTDOCTORAL POSITION** in basic science research involving shock or oncology. Applicants must have a Ph.D., experience and knowledge in molecular biology, interest/experience in graduate/undergraduate teaching and a record of publication. A joint appointment with a basic science department is possible. Responsibilities will include enhancing basic research activities in the department and participation in surgery resident and medical student education. Qualified individuals should send curriculum vitae and the names of three references to: **David R. Antonenko, M.D., Ph.D., FACS, Professor and Chairman, University of North Dakota, Department of Surgery, P.O. Box 9037, Grand Forks, ND 58202-9037.** The University of North Dakota is an Equal Opportunity/Affirmative Action Employer.

BIOCHEMISTRY AND MOLECULAR BIOLOGY OF HOST DEFENSE SYSTEMS UNIVERSITY OF CALIFORNIA, IRVINE (UCI)

Four **POSTDOCTORAL POSITIONS** and a **FACULTY ASSISTANT/ASSOCIATE RESEARCHER POSITION** are available in the UCI Department of Pathology for studies on cell-mediated and humoral host defense systems. This ongoing research program seeks to characterize the molecular basis of innate immunity provided by natural antibiotic peptides (e.g., indolicidin, defensins and β -defensins) produced by leukocytes and epithelial cells. Unique research opportunities are available for postdoctoral applicants with experience in (1) production and characterization of peptide libraries, (2) heterologous expression of bioactive molecules in bacteria and yeast, (3) biophysical characterization of peptide-bilayer interactions, (4) production of liposomal formulations of bioactive peptides/proteins, (5) tissue culture models of cellular injury, and (6) regulation of eukaryotic gene expression.

Applicants for the Faculty Research Position should have at least 5 years of postdoctoral experience, a strong background in biochemistry and molecular biology, and demonstrated ability to direct and coordinate activities of more junior researchers. Send curriculum vitae, research experience and interests, and names of three references to: **Dr. Michael E. Selsted, Department of Pathology, College of Medicine, University of California, Irvine, CA 92717-4800.** The University of California is an Equal Opportunity Employer.

POSTDOCTORAL POSITION. Testis ACE and Development, Department of Pathology, Emory University. An NIH-funded position is immediately available to study the biochemistry and molecular biology of angiotensin converting enzyme (ACE) expression by male germ cells. Developing germ cells express large amounts of a unique isozyme of ACE due to the recognition of a small tissue-specific, intragenic promoter (MCB 13:18-27, 1993). The project is a wonderful opportunity to study tissue-specific gene expression. Applicants will be expected to work with and oversee graduate students and technicians and to take a substantial role in developing a program investigating the distinctive biochemistry of male germ cells. Applicants should have a Ph.D. or M.D. with experience in molecular biology and an interest in development. Send curriculum vitae, reprints and references to: **Ken Bernstein, M.D., Room 711 WMB, Emory University, Atlanta, GA 30322.** Emory University is an Equal Opportunity Employer.

POSTDOCTORAL POSITION. The Angiotensin II Receptor and Phosphorylation, Department of Pathology, Emory University. An NIH-funded position is immediately available to study the intracellular signaling initiated by the angiotensin II receptor. Unlike the typical paradigm of G-protein coupled receptors, angiotensin II can stimulate an intracellular cascade of protein phosphorylation. Applicants will be expected to work with and oversee graduate students and technicians and to take a substantial role in developing a program investigating angiotensin II-mediated signaling. Applicants should have a Ph.D. or M.D. with experience in molecular biology/protein phosphorylation. Send curriculum vitae, reprints and references to: **Ken Bernstein, M.D., Room 711 WMB, Emory University, Atlanta, GA 30322.** Emory University is an Equal Opportunity Employer.



Medicinal Chemist

Post-Doctoral Position

A post-doctoral research position is available immediately for a fixed term upto three years in the Drug Discovery unit in pharmaceuticals Division, Novo Nordisk A/S.

Current efforts in Drug Discovery are directed towards development of novel therapeutic approaches in the treatment of epilepsy, neurodegenerative diseases, schizophrenia and osteoporosis. The Drug Discovery unit is internationally recognized for pioneer work in the areas of amino acid and dopamine neurotransmission.

Candidates should have a Ph.D. degree with a strong background in synthetic organic chemistry, and an interest into the influence of organic molecules on biological processes. In addition, the role requires willingness to carry out independent and innovative research towards defined targets, within the context of interdisciplinary project groups. The position offers an opportunity to pursue a research career within an international context. The official company language is English.

Drug Discovery is located in new, state of the art laboratories at a greenfield site in Maaloev, just west of Copenhagen, approx. 10 km. from Novo Nordisk's corporate headquarters.

Written application marked "Chemist 1044" and names of three references, and details of previous research experience should be sent to Human Resources HCG, Building 9Q, DK-2880 Bagsvaerd, Denmark.

Novo Nordisk is one of the world's leading biotechnology companies. It is a major force in insulin manufacture and diabetes treatment and is the world's largest producer of industrial enzymes. The company also manufactures and markets a variety of other pharmaceuticals and bioindustrial products. Headquartered in Denmark, Novo Nordisk employs more than 11,500 people in 47 countries.

Novo Nordisk



Novo Nordisk A/S
Novo Allé
DK-2880 Bagsvaerd
Denmark

dkfz

A Group Leader Position at the Deutsches Krebsforschungszentrum will be available for a qualified candidate working on Signal Transduction and/or Growth Regulation

Preference will be given to applicants who show promise of developing an innovative and vigorous research program on signal transduction, cell cycle regulation and/or receptor function. Close cooperation with existing Research programs on "Tumour Cell Regulation" and "Diagnostics and Experimental Therapy" is desired.

The appointment will be at the salary level BAT Ia, with appropriate equipment and support. The position is available for a five year period; subsequent promotion to a tenured position is possible.

Interested individuals should submit a curriculum vitae and bibliography, a short description of current and future research interests, and names and addresses of three referees by May 31, 1994 to the

Deutsches Krebsforschungszentrum
Wissenschaftlicher Stiftungsvorstand
Im Neuenheimer Feld 280
D-69120 Heidelberg, Germany

ASSISTANT DIRECTOR

Cell Culture Section/Biological Process Sciences

SmithKline Beecham Pharmaceuticals, a world leader in pharmaceutical research, seeks a distinguished Process Development Scientist to lead our Cell Culture Section in the Biological Process Sciences Department in Biopharmaceutical R&D. The Assistant Director will provide managerial and scientific direction to a group of eight experienced and accomplished professionals responsible for the early development of cell culture systems which produce biopharmaceuticals for preclinical and clinical evaluation.

The successful candidate will have an advanced degree in Cell Biology, Microbiology, or other related field and at least 10 years of relevant experience which includes at least 5 years in the biopharmaceutical industry. Candidates need to have significant records of achievement in animal cell culture technology, knowledge of Good Manufacturing Practices, experience supervising scientific staff, and superior oral and written communication skills. Skills in cell line characterization and molecular biology are desirable.

Our state-of-the-art research facility is located in suburban Philadelphia near Valley Forge, PA. We offer competitive compensation/benefits/relocation package, as well as a stimulating work environment in which to grow and excel. For confidential consideration, please send your resume, along with three references, to: SmithKline Beecham Pharmaceuticals, #H0315, PO Box 401, Conshohocken, PA 19428. We are an Equal Opportunity Employer, M/F/D/V.



SmithKline Beecham
Pharmaceuticals

Challenging the natural limits.

POSITIONS OPEN



A Group Leader Position at the Deutsches Krebsforschungszentrum will be available for a qualified candidate working on Cancer Prevention

Preference will be given to applicants who show promise of developing an innovative and vigorous research program on cancer prevention, including basic scientific research as well as research on epidemiological and clinical aspects and chemoprevention of cancer.

Close cooperation with existing Research Program on "Cancer Risk Factors and Prevention" and other research groups at the DKFZ and the University of Heidelberg is desired.

The appointment will be at the salary level BAT Ia, with appropriate equipment and support. The position is available for a five year period; subsequent promotion to tenured position is possible.

Interested individuals should submit a curriculum vitae and bibliography, a short description of current and future research interests, and names and addresses of three referees by May 31, 1994 to the

Deutsches Krebsforschungszentrum
Wissenschaftlicher Stiftungsvorstand
Im Neuenheimer Feld 280
D-69120 Heidelberg, Germany

POSTDOCTORAL POSITION:

Available immediately to study the etiology of altered vascular response in benign and malignant neovascular proliferative events. Emphasis will be placed on the potential role of nitric oxide, ANF, angiotensin-II, and prostacyclin receptor physiology and transmembrane second messenger signalling systems in modulating the neovascular growth and/or vascular reactivity. Candidates should have a Ph.D. and experience with molecular/cellular biology. Please send curriculum vitae with names, addresses, and telephone numbers of three references to: James V. Sitzmann, M.D., Division of Surgical Oncology, Blalock 665, The Johns Hopkins Hospital, 600 North Wolfe Street, Baltimore, MD 21287-4665. The Johns Hopkins University is an Equal Opportunity Employer.

POSTDOCTORAL POSITIONS (two) are available immediately to investigate (i) the structure-function relationship of the components of the pyruvate dehydrogenase complex (PDC) using site-directed mutagenesis and (ii) regulation of the promoter regions of the PDC genes using cultured cells and transgenic animals. Experience in molecular biology is desirable. Send curriculum vitae and names of three references to: Mulchand Patel, Department of Biochemistry, State University of New York, 140 Farber Hall, 3435 Main Street, Buffalo, NY 14214. The State University of New York is an Equal Opportunity/Affirmative Action Employer. Women and minorities are encouraged to apply.

POSTDOCTORAL POSITION available immediately to study neuroadaptations resulting from chronic administration of, and withdrawal from, cocaine and other drugs of abuse. The current focus of the work is on neurophysiological alterations in the mesoaccumbens dopamine system and its excitatory amino acid afferents. Electrophysiological approaches include current, voltage and patch clamp analyses from neurons recorded in brain slices or in acutely dissociated preparations. Experience with these techniques is preferred. Please send current curriculum vitae and names of three references to: Dr. F.J. White, Department of Neuroscience, FUHS/Chicago Medical School, 3333 Green Bay Road, North Chicago, IL 60064-3095. Affirmative Action/Equal Opportunity Employer.

POSITIONS OPEN

POSTDOCTORAL POSITION IN MOLECULAR IMMUNOLOGY. Research on the role of major histocompatibility complex (MHC) genes in early embryonic development using recombinant DNA techniques and transgenic mouse production and analysis. Ph.D. in molecular biology or immunology or biochemistry. Recombinant DNA experience required. Applicants should send curriculum vitae and three references to: Dr. Carol Warner, Department of Biology, 414 Mugar, Northeastern University, Boston, MA 02115.

Northeastern University is an Equal Opportunity, Affirmative Action, Title IX University.

POSTDOCTORAL POSITION IN THE MASS SPECTROMETRY ANALYSIS OF MHC CLASS I PEPTIDES MAYO CLINIC

A postdoctoral position is available immediately in the sequencing of MHC Class I peptides involved in autoimmune disease. Expertise in both sector and ion trap mass spectrometry, as well as immunology, desirable. Please send curriculum vitae, a summary of research experience, and the names and addresses of three references to: Dr. Stephen Naylor, Director, Biomedical Mass Spectrometry Facility, Guggenheim C009B, Mayo Clinic, Rochester, MN 55905, USA. Mayo Foundation is an Affirmative Action and Equal Opportunity Educator and Employer.

POSTDOCTORAL POSITION SOLID STATE NMR IN BIOLOGY

A postdoctoral position is available immediately to work on lipids in membranes (biomembranes and model systems) by solid state NMR techniques with a BRUKER AMX 400. The objective is to develop high resolution NMR techniques on lipids in order to measure lipid asymmetry and lateral organization as well as lipid-protein interactions. Experience in NMR preferentially in solid state techniques is required. Experience in biology is not necessary. The candidate will have to collaborate with students. One-year contract renewable for a second year. Send curriculum vitae and names of three referees to: Pr. P.F. Devaux, Institut de Biologie Physico-Chimique, 13, rue Pierre et Marie Curie, 75005 Paris, France. FAX: +33 1 40 51 85 17; E-mail: devaux@ibpc.fr.

POSTDOCTORAL POSITION. Drosophila vision and signal transduction. Position is available to study the mechanisms underlying vision using a combination of molecular, genetic, biochemical and electrophysiological techniques (see *Science*, November 1993, Vol. 262, Pg. 1038-1042). Applicants should have a strong background in molecular biology, biochemistry, or genetics. Please submit curriculum vitae and three letters of recommendation sent directly by referees to: Dr. Craig Montell, Department of Biological Chemistry, The Johns Hopkins University School of Medicine, 725 North Wolfe Street, Baltimore, MD 21205. The Johns Hopkins University is an Equal Opportunity/Affirmative Action Employer.

POSTDOCTORAL POSITION is available to study the newly discovered adipose tissue specific β_3 -adrenergic receptor. Towards this goal, the latest techniques of cell biology, biochemistry and molecular biology including DNA cloning, gene expression and transgenic animals are used. Applicants should have a diploma in biochemistry or biology, and a good background in molecular biology. The position, funded by the University, is available starting August 1, 1994. Please send curriculum vitae and the names of two references to: Prof. Jean-Paul Giacobino, Département de Biochimie médicale, C.M.U., 1, rue Michel Servet, 1211 Geneva 4 Switzerland.

CLINICAL CHEMISTRY POSTDOCTORAL FELLOWSHIPS at Mayo Clinic. Seeking applicants for two-year ComACC-approved fellowship directed toward qualified individuals (Ph.D. or M.D. required) pursuing careers in clinical chemistry. Individuals completing the program are eligible for certification by the American Board of Clinical Chemistry. Applications on file by October 31, 1994, will be considered for appointment beginning in July 1995. Contact: Mary F. Burritt, Ph.D., Division of Clinical Biochemistry, Mayo Clinic, Rochester, MN 55905, for more information. Mayo Foundation is an Affirmative Action and Equal Opportunity Educator and Employer.

POSITIONS OPEN

POSTDOCTORAL POSITION to perform structure/function studies on the recombinant cystic fibrosis transmembrane conductance regulator protein. The main approach entails characterization of wildtype and site-directed mutants of CFTR expressed in and purified from insect cells using the baculovirus expression system. The ideal candidate will have a background in molecular biology and/or biochemistry with experience in the characterization of recombinant proteins. Please send curriculum vitae and arrange to have 3 letters of recommendation sent to: Elmer M. Price, Ph.D., Dalton Cardiovascular Research Center, Research Park, University of Missouri-Columbia, Columbia, MO 65211. Affirmative Action/Equal Opportunity Employer/ADA Institution.

STANFORD UNIVERSITY POSTDOCTORAL FELLOWSHIPS. Postdoctoral fellowships are available for research on molecular and cellular aspects of gastrointestinal disease. Faculty's current interests include: • Christine Cartwright: Src oncogenesis; molecular mechanisms of carcinogenesis in the colon; intestinal cell growth control. • Anson Lowe: Protein sorting in the exocrine pancreas; organelle biogenesis. • Suzanne Matsui: Molecular biology and pathogenesis of gastroenteritis viruses; mechanisms of viral replication. • Bishr Omary: Cytoskeletal intermediate filament phosphorylation and glycosylation, and associated proteins, from a structural/functional perspective. Stipends will be funded by an NIH training grant. Requirements are Ph.D. or M.D. and U.S. citizenship or permanent residency. Send curriculum vitae, date of availability and three references to: Peggy George, Division of Gastroenterology, MSLS P304, Stanford University, Stanford, CA 94305-5487. Stanford University is an Equal Opportunity/Affirmative Action Employer.

POSTDOCTORAL FELLOWSHIP available immediately to investigate the effects of alcohol on hepatocyte pathology, fibrogenesis, and liver-specific gene regulation. Applicants should have an M.D. or Ph.D. degree, and be citizens or permanent residents of the United States. Please send curriculum vitae and the names and telephone numbers of three references to: Dr. Esteban Mezey, Professor of Medicine, 921 Ross Research Building, The Johns Hopkins University School of Medicine, 720 Rutland Avenue, Baltimore, MD 21205.

CORNEAL BIOLOGY. Two positions available at POSTDOCTORAL or RESEARCH ASSOCIATE level. (1) Cell Biologist to study wound healing in the cornea specifically, fibroblast control mechanisms. Experience in electron microscopy, inflammatory factors/cytokines, and cell markers. (2) Physiologist to study mechanism of fluid transport across corneal endothelium. Experience in biochemistry, cell culture, and electronics. Salary commensurate with experience. Send curriculum vitae to: Dr. David Maurice, Department of Ophthalmology, Columbia University, Eye Research Division, 630 West 168th Street, New York, NY 10032. Columbia University is an Equal Opportunity Employer.

POSTDOCTORAL RESEARCH ASSOCIATE POSITION available for studies of biochemistry and chemistry of sterols and sphingolipids. Ph.D. in biochemistry or bioorganic chemistry. Significant experience with bioanalytical techniques and radioactive and stable isotope methodologies desirable. Send curriculum vitae and names of three references to: G. J. Schroepfer, Jr., Department of Biochemistry and Cell Biology, Rice University, P.O. Box 1892, Houston, TX 77251. Rice University is an Equal Opportunity/Affirmative Action Employer.

POSTDOCTORAL RESEARCH POSITION is available at the Laboratory of Cell Growth at the VA Medical Center, San Francisco, and UCSF to work on regulation of gene expression in colon cancer. Prospective candidates should have extensive experience in recombinant DNA technology including cDNA library construction and screening, PCR analysis, sequencing, footprinting and gel retardation. This is a fully funded position with excellent research facilities and ideal environment for career development. Position is available immediately. Please forward curriculum vitae and names of three references before May 15, 1994, to: Dr. Millie Hughes-Fulford, VA Medical Center, Lab of Cell Growth (151F), 4150 Clement Street, San Francisco, CA 94121. FAX: (415) 476-1267. U.S. citizenship is required. VA/UCSF is an Equal Opportunity Employer.

**Yale University
Assistant Professor
Department of Pathology**



The School of Medicine is seeking applications for a Surgical Pathologist at the Assistant Professor level to fill a position at the West Haven Veteran's Hospital with a faculty appointment at Yale Medical School. The successful candidate will contribute to medical student/resident, and fellow teaching, and develop a focused and robust program in investigative oncology. The candidate must be board certified in Anatomic Pathology. A record of demonstrated productivity/investigative skills is desired.

Send current CV to:
Dr. José Costa,
Professor and Vice Chair
Department of Pathology
310 Cedar Street
New Haven, Connecticut 06510

Deadline for application is May 30, 1994.

If you have submitted your CV in the last 18 months, your application is on file.

Yale University is an equal opportunity, affirmative action employer. Minority and women candidates are urged to apply.



SENIOR RESEARCH ASSOCIATE

Howmedica is a world leader in the development of implantable orthopaedic devices and a subsidiary of Fortune 100 Pfizer Hospital Products Group. To maintain our commitment to excellence, we are seeking a Senior Research Associate to oversee our Histology Laboratory, located at our worldwide R&D Center in Rutherford, New Jersey.

Responsibilities will include coordinating and tracking the processing of specimens from various preclinical studies and implant retrievals, and communicating results in both oral and written forms.

You should have at least three years of general histology experience and one year in preferred biomaterial processing in the area of material/tissue/implant interactions. Familiarity with light and scanning electron microscopy is important; experience with EXAKT and/or qualitative microscopic evaluation of undecalcified sections would be a plus.

Howmedica offers a competitive salary commensurate with qualifications and experience, along with a comprehensive benefits package. For confidential consideration, please send your resume, indicating salary history and requirements, to: **Ms. Caroline Eppich, Personnel Associate, Dept SRA, Howmedica Inc., Division of Pfizer Hospital Products Group, 359 Veterans Boulevard, Rutherford, New Jersey 07070.** No phone calls, please. We are an equal opportunity employer, and are proud to provide a smoke-free work environment.

Howmedica

MANAGER, ANALYTICAL

RESEARCH and TESTING

Baxter Healthcare Corporation's Blood Substitutes Program is an entrepreneurial group of scientific and medical professionals dedicated to the development, testing and manufacture of hemoglobin based human therapeutics. Due to the success of this program, we have an opportunity for a highly motivated, team-oriented individual within the Research & Development function.

This position is responsible for the supervision and coordination of the activities of scientists and technicians engaged in analytical methods development and validation, raw material and final product release testing, stability testing, and biochemical assays in support of the development of hemoglobin based therapeutic formulations. You will also be expected to work closely with other R&D and program functions to ensure compliance with GLP/GMP regulations, and support preclinical and clinical product evaluations, formulation and process development, process scale-up, implementation of commercial scale manufacturing operations, and regulatory submissions.

The ideal candidate should possess a Ph.D. in analytical biochemistry, analytical chemistry or equivalent with at least 5 years supervisory experience in a pharmaceutical or industrial setting. Familiarity with GLP/GMP requirements is essential as are strong oral, written and interpersonal skills. Previous experience in the development of protein based products and a wide array of chemical and biochemical analytical techniques is desirable.

If you are interested in working in an environment in which both technical competence and interpersonal skills are highly valued then you should consider Baxter. Our professional environment is unsurpassed. For immediate consideration, please forward a resume to: **Human Resources, Dept. MART, Baxter Healthcare Corporation, Rte. 120 & Wilson Rd., WG2-3S, Round Lake, IL 60073.** An Equal Opportunity Employer.

Baxter

SECTION OF MUSCULOSKELETAL BIOLOGY DEPARTMENT OF BIOMEDICAL ENGINEERING RESEARCH INSTITUTE THE CLEVELAND CLINIC FOUNDATION

The Section of Musculoskeletal Biology, Department of Biomedical Engineering is seeking candidates for appointment at the Assistant Staff, Associate Staff or Staff level. Applicants must have a Ph.D. degree or equivalent and demonstrated experience in independent research in the areas of cell biology, biochemistry, molecular biology, glycobiology and/or biomechanics of the musculoskeletal system at the cell or tissue level. Applicants should have in-depth experience in one or more of the following: connective tissue cell biology and microscopy; structure, function and metabolism of connective tissue macromolecules; roles of cytokines and growth factors in connective tissue development; tissue engineering and orthopedic biomaterials.

Successful candidates will receive start-up seed funding, and are expected to develop independent research programs, secure extramural funding to support these activities, and participate in the graduate education program. Graduate students from several academic centers conduct research activities in the Department. The Section of Musculoskeletal Biology currently has programs in matrix proteins in connective tissue repair (Cahir McDevitt, Ph.D.) stem cells and fracture healing (George Muschler, M.D.), growth plate cell biology (Robert Miller, Ph.D.) and connective tissue proteoglycan biochemistry (Vincent Hascall, Ph.D.). The Cleveland Clinic Research Institute is organized into eight interactive departments (Biomedical Engineering, Biostatistics & Epidemiology, Cancer Biology, Cardiovascular Biology, Cell Biology, Immunology, Molecular Biology and Neurosciences) with 270 staff and junior scientists and receives funding from the NIH, philanthropic and industrial sources, and internal support from the Cleveland Clinic Foundation. Applicants should send resume in confidence to:

V.C. Hascall, Ph.D., Chairman, Search Committee
Section of Musculoskeletal Biology
Department of Biomedical Engineering (Wb3)
The Cleveland Clinic Foundation
9500 Euclid Avenue, Cleveland, Ohio 44195
Telephone: (216) 445-5676
FAX: (216) 444-9198

The Cleveland Clinic is an Equal Opportunity/Affirmative Action Employer

POSITIONS OPEN

POSTDOCTORAL/RESEARCH ASSOCIATE

A position is available to study the coordinate regulation of genes of heme and iron transport and metabolism with that of genes involved in protection against oxidative damage. Experience in protein purification, molecular biology (including DNA-protein interactions), and cell culture is desirable. Stipend commensurate with experience. The School of Biological Sciences is a Program of Eminence of the University of Missouri with faculty whose research focuses on molecular recognition. Please send curriculum vitae with names, addresses and telephone numbers of 3 references to: **Dr. Ann Smith, Ph.D., Division of Molecular Biology and Biochemistry, School of Biological Sciences, University of Missouri-K.C., Kansas City, MO 64110. FAX: 816-235-5158. The University of Missouri is an Equal Opportunity Employer.**

POSTDOCTORAL RESEARCH ASSOCIATE

A position is available for an applicant who has substantial experience in molecular biology and who can apply molecular biological techniques to the study of toxins that act on the nervous system. The successful applicant will join a multidisciplinary research group investigating toxins that act on voltage-dependent ion channels. The successful applicant can choose from a variety of projects, such as constructing synthetic genes for toxins and channels or performing selective mutagenesis of toxins and channels. Applicants should provide curriculum vitae, list of publications, and names of three references to: **Dr. Lance Simpson, Room 314-JAH, Jefferson Medical College, 1020 Locust Street, Philadelphia, PA 19107. Jefferson Medical College is an Affirmative Action/Equal Opportunity Employer.**

RESEARCH ASSOCIATE (Full-time, annually renewable) UNIVERSITY OF MINNESOTA, DEPARTMENT OF MEDICINE

Applications are invited for an M.D. or Ph.D. prepared individual in a well-established stem cell transplantation biology laboratory for an investigator with 3 plus years of experience in cell biology with an emphasis in normal and leukemic hematopoiesis. Required experience: superior skills in stem cell selection using FACS and other immunological selection procedures, stem cell culture, short-term progenitor assays and long-term culture and knowledge of molecular biology techniques, including reverse transcription PCR.

Duties will include responsibility for stem cell selection using FACS and other procedures, stem cell cultures using a variety of techniques, designing and altering selection procedures and cultures and supervising FACS technician and lab technicians. Salary commensurate with experience. To apply, please send curriculum vitae together with a brief summary of professional experience and three professional references to: **Catherine M. Verfaillie, M.D., Department of Medicine/Division of Hematology, Box 194 UMHC, University of Minnesota, 420 Delaware Street, S.E., Minneapolis, MN 55455.**

Last date for receipt of applications: May 27, 1994.
Start date: As soon as possible.

The University of Minnesota is an Equal Opportunity Educator and Employer.

RESEARCH ASSOCIATE POSITION for mass spectral studies of sterol and sphingolipid metabolism. Significant experience in operation of quadrupole and magnetic units in GC-MS mode required. Send résumé and names of three references to: **G. J. Schroepfer, Jr., Department of Biochemistry and Cell Biology, Rice University, P.O. Box 1892, Houston, TX 77251. Rice University is an Equal Opportunity/Affirmative Action Employer.**

RESEARCH SCIENTIST/POSTDOCTORAL POSITION available immediately at Yale University to investigate molecular and physiologic regulation of K-ATPase/active K transport in laboratory studying colonic ion transport. Ph.D. with strong background in molecular biology required. Experience in cell culture and physiological systems desirable. Salary commensurate with experience. Send curriculum vitae, summary of research interests and names of 3 to 4 references to: **Dr. Henry J. Binder, Department of Medicine, 333 Cedar Street, New Haven, CT 06510. FAX: 203-785-7273. Yale University is an Equal Opportunity/Affirmative Action Employer.**

POSITIONS OPEN

RESEARCH ASSOCIATE

Research Associate position available immediately in an expanding program in viral vaccine immunology. Experience in cellular immunology preferred along with broad background in molecular biology. Requirements: Ph.D. in immunology or virology; postdoctoral experience desirable. Send curriculum vitae with references to: **Dr. Ann Arvin, G-312, Department of Pediatrics, Stanford University School of Medicine, Stanford, CA 94305-5119.**

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NMR SPECTROSCOPISTS. As part of a major commitment to the development of structural biology at the University of Pennsylvania, the Department of Biochemistry and Biophysics invites applications for tenure-track positions in NMR spectroscopy. Applicants should have demonstrated expertise and accomplishments in modern multidimensional NMR with a strong background in protein and/or nucleic acid structure, dynamics, and function. Please forward curriculum vitae and a statement of background and future scientific intentions, and have 3 letters of recommendation sent, to: **Ms. Caryn Stivelman, Johnson Research Foundation, B501 Richards Building, University of Pennsylvania, Philadelphia, PA 19104-6089. The University of Pennsylvania is an Affirmative Action/Equal Opportunity Employer. Applications from women and minorities are encouraged.**

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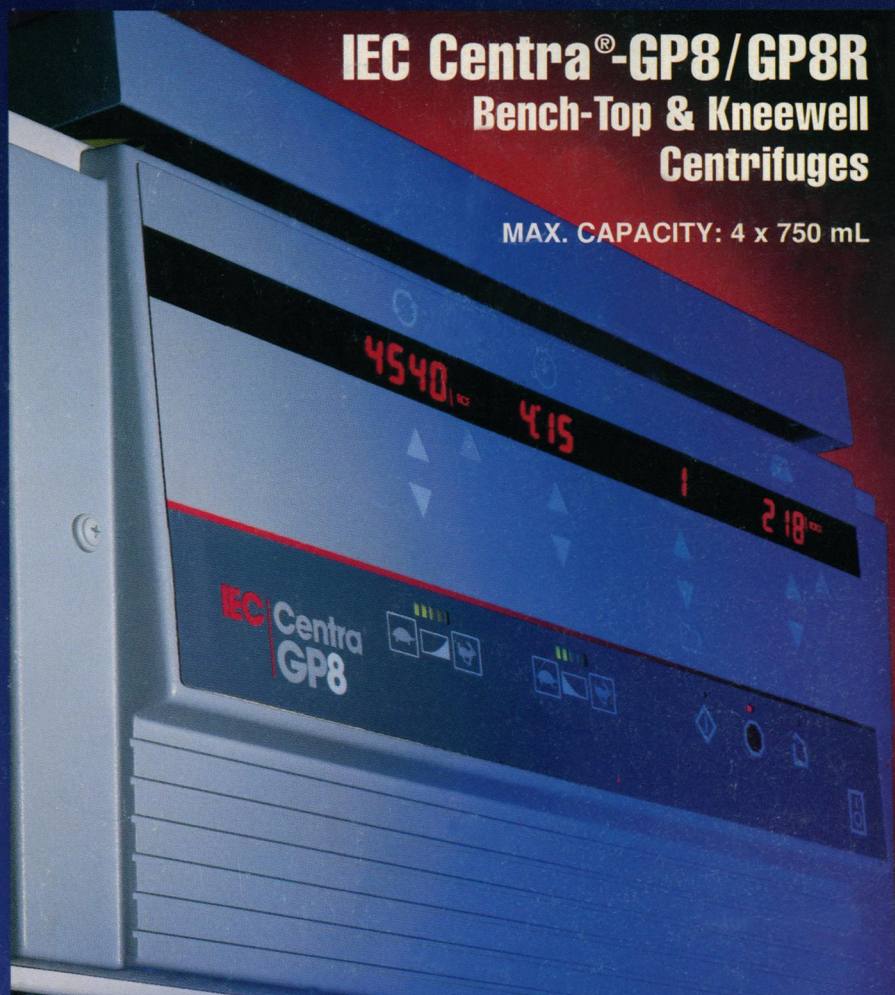
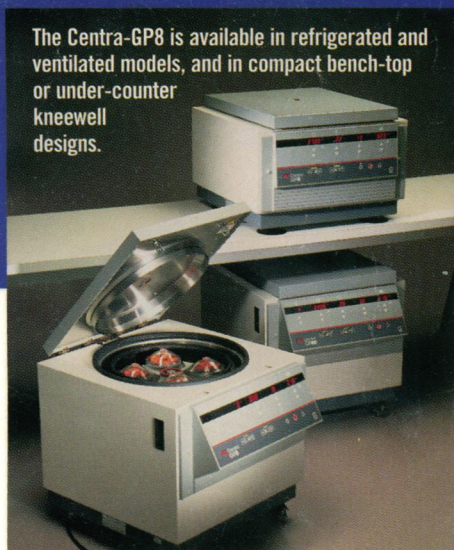
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