

discussion integrating all these lines of knowledge into a paleoceanographic history of the ocean basins.

Criticisms are largely of second-order importance. Kennett tends to rely on last-big-synthesis articles as source references rather than on the papers that made the original breakthroughs. In many cases, he writes most clearly when the subject matter is more distant from his research specialties. Closer to his own interests, the style at times tends toward long descriptive narratives that can be difficult to follow. One flaw is more significant: for a book focused on paleoceanography, the climatological treatment of modern oceanography is too thin. Missing is some important material, much of it recent, on regional transport and air-sea exchange of heat. This kind of base-line understanding of the modern climate system is of fundamental importance to a book so heavily devoted to climatic interpretations of Cenozoic oceanographic phenomena. Similarly, there is more room for base-line treatment of recent developments in plankton ecology and particle flux, particularly the results from sediment traps, multiple tows, and large-volume filtration.

This material could be added to a second edition at the expense of the occasionally excessive amount of geotectonic classifying and categorizing (especially of continental margin types) and arguably superfluous nomenclature ("megasutures," "offscraping," "ecospace"). Fundamentally, however, this is an authoritative work from a scientist obviously committed to the final product. Congratulations to Kennett.

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Continental Margins

Dynamics of Passive Margins. R. A. SCRUTTON, Ed. American Geophysical Union, Washington, D.C., and Geological Society of America, Boulder, Colo., 1982. vi, 200 pp., illus. \$15. Geodynamics Series, vol. 6.

Dynamics of Passive Margins is the final report of one of the ten groups through which the work of the decade-long geodynamics project (jointly sponsored by the International Union of Geological Sciences and the International Union of Geodesy and Geophysics) was organized between 1970 and 1980. This group dealt with the origin, evolution, and structural state of Atlantic-type con-

tinental margins, those formed by the breakup of larger bodies such as Gondwana and Laurasia.

I can think of at least three other books devoted, or mainly devoted, to the evolution of Atlantic-type margins that have appeared in the last few years. However, the editor of this one has avoided duplication by emphasizing some aspects that have not been widely discussed in the other books. For example, very different papers by Kosminskaya on Soviet geophysical studies in the Arctic and North Atlantic and Sweeney on studies of the Canadian Arctic margin emphasize that data acquisition is still the dominant problem in Arctic ocean geology. In the face of admittedly slender data, Sweeney opts for an origin of the Canada basin by rotation of the north slope of Alaska (and I would ask, perhaps the Chukotsk and the New Siberian block also?) about a pole near the Mackenzie delta during the early Cretaceous. Suturing of an earlier ocean he attributes to mid-Paleozoic collision between part of Siberia and North America roughly along the line of the coast of the Arctic Islands. These two suggestions fit well with the data in Sweeney's regional geophysical maps and five sections across the Arctic margin and provide a coherent working hypothesis for Arctic evolution.

Keen reviews eastern Canada, again with five sections across the margin, and considers thermal subsidence using data from eight oil wells. She points out that, although we are becoming skilled at modeling the thermal behavior of Atlantic-type margins (at least five practitioners of this skill contribute to the report), we do not yet deal well with early rifting phases. She also pleads for more studies of conjugate margins and of ancient Atlantic margins exposed in mountain belts. Long and Lowell address the slow subsidence of continental fragments isolated near Atlantic margins and find that they are able to model it simply in terms of the greater heat generation of the continental material.

The evolution of the margins of northern Europe, eastern Greenland, Australia, and East and West Africa are all well reviewed with good summary maps and cross sections. Dingle, in discussing Africa, finds that a mid-Cretaceous change from rift to broader basin subsidence (commonly called the *steer's head* relationship) is universal and finds in this support for Kent's remarkable suggestion of a "fundamental rheological modification of the crustal rocks" at this time. Sloss also argues for episodicity because he finds that rapid subsidence in intra-

continental basins tends to coincide with marginal rapid subsidence. He invokes a process of subcontinental melting and uplift (which reminds me of Krenkel's ideas of 60 years ago) alternating with outflow of material from beneath the continents to cause regional subsidence. Alternations of the two processes produced 10^8 -year cycles during the older Paleozoic.

Turcotte considers the state of stress at Atlantic margins, pointing out that elevation and density contrasts are sufficient to maintain substantial stresses even on old Atlantic margins. He suggests that this may account for a concentration of volcanoes at these margins, which is not as obvious to me as it is to him.

Bott considers the origin and distribution of stress on Atlantic margins and in the preceding rift state. The latter he regards as harder to interpret, but he suggests that the suction force exerted on an overriding plate during peripheral subduction may have been important in leading to the breakup of Pangea.

Scrutton provides a review of the decade's achievements. Most notable has been success in understanding subsidence generated by the processes of sediment loading and cooling at the margins. Scrutton also contributes a paper on strike-slip boundaries, a topic he has made his own.

The publishers and the authors have produced for \$15 a hardbound, informative summary of our present state of knowledge that will prove useful in addressing the next decade's main problem, which I see as an understanding of along-strike variations at Atlantic margins.

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Ability Testing. Uses, Consequences, and Controversies. Alexandra K. Wigdor and Wendell R. Garner, Eds. National Academy Press, Washington, D.C., 1982. Two volumes. Part 1, Report of the Committee. x, 242 pp. Paper, \$13.95. Part 2, Documentation Section. x, 414 pp. Paper, \$24.95.

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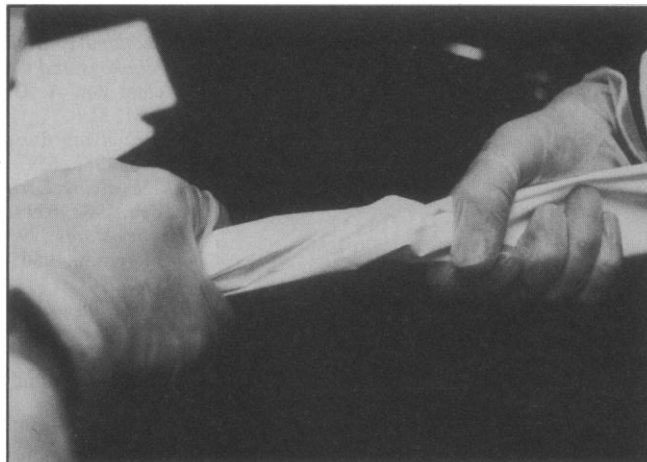
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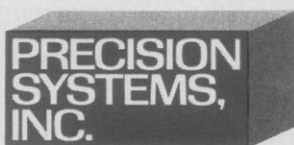
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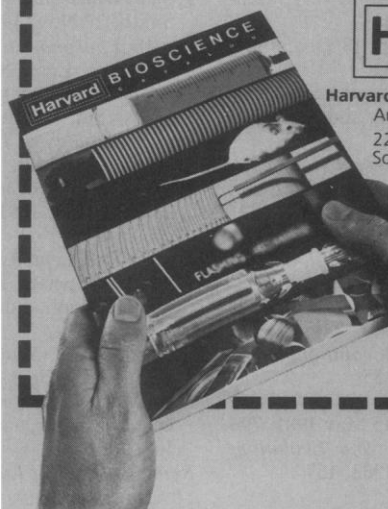
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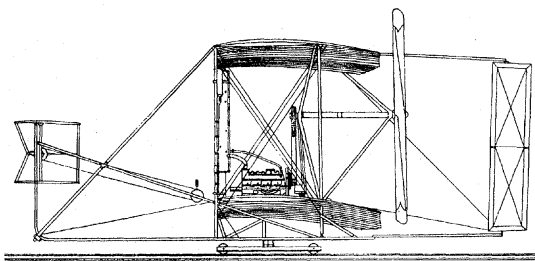
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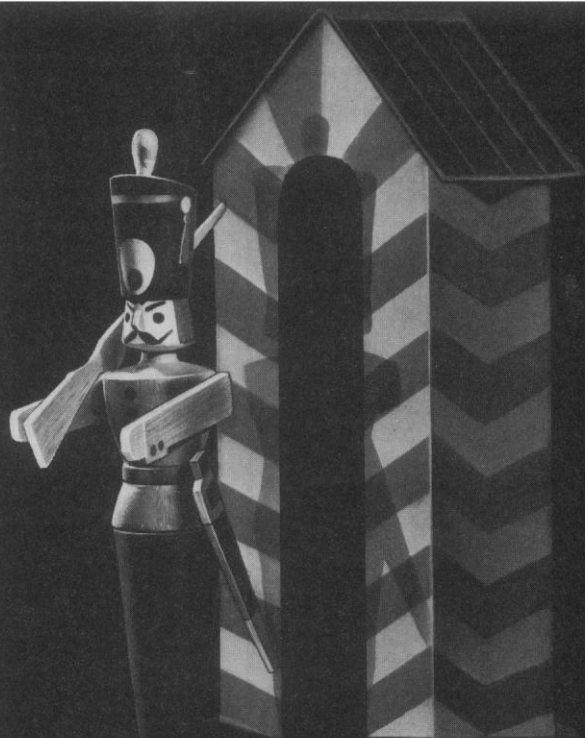
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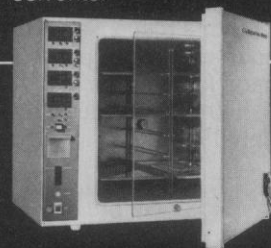
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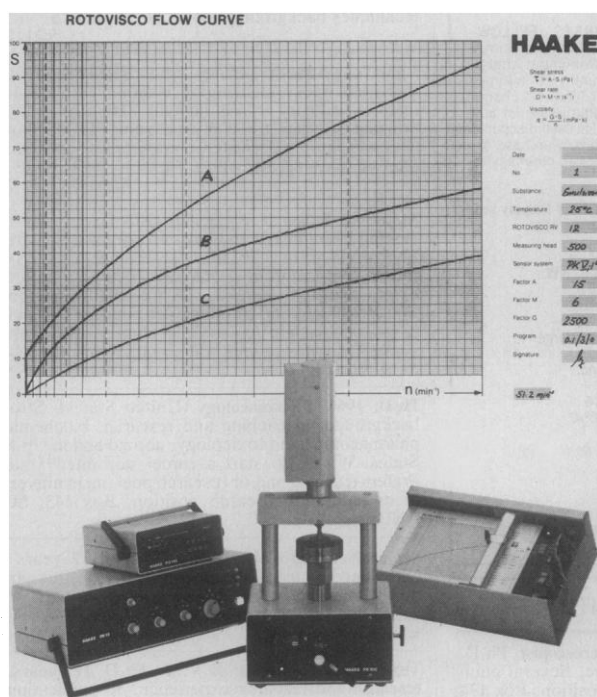
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ASSISTANT PROFESSORSHIP IN ANATOMY— Applications are invited for the above position, available on 1 July or 1 September 1982, from qualified individuals holding a doctor degree. Preference will be given to candidates who are prepared to teach gross anatomy to medical students and who have demonstrated research interest in molecular or cell biology. The applicants should submit curriculum vitae, statement of research interest, and the names of three references to: **Dr. T. Barka, Chairman, Department of Anatomy, THE MOUNT SINAI SCHOOL OF MEDICINE, One Gustave L. Levy Place, New York, N.Y. 10029.** An Equal Opportunity Employer.

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ANIMAL PHYSIOLOGY/CELL BIOLOGY. Assistant professor, tenure-track, beginning August 1982. Primary specialty in animal physiology. Also responsible for laboratory courses in cell biology and general biology. Research area open. Ph.D. required. State-supported university of 6000, 12-member Biology Department, B.S.-M.S. degrees. Send curriculum vitae, three letters of reference, and statement of teaching philosophy to: **Dr. Richard Collins, Department of Biology, University of Central Arkansas, Conway, Ark. 72032.** Deadline: 20 June. *An Equal Opportunity/Affirmative Action Employer.*

The **SECTION OF CELL BIOLOGY**, Yale University School of Medicine, invites applications for a position of **ASSISTANT PROFESSOR** available on 1 September 1982, or at some later date before 31 December 1982.

Candidates interested in analyzing general processes in cell biology by using DNA or RNA probe molecules—produced biosynthetically, biochemically, or generated by recombinant DNA technology—will be favored, but outstanding scientists with research interests in other area of cell biology would also be considered. Newly remodeled laboratory facilities will be available. Interest in interacting and collaborating with other members of the cell biology faculty would be welcome.

The new assistant professor will be expected to participate in the instruction of medical students, primarily in the laboratory teaching of cell biology—histology to small groups of students. Previous experience in this type of teaching is not required, but would be welcome. Participation in seminar courses given to graduate students will be encouraged.

Those interested should send applications to: **Dr. G. E. Palade, Section of Cell Biology, Yale University School of Medicine, P.O. Box 3333, New Haven, Conn. 06510**, before 15 July 1982. Curriculum vitae, a list of publications, a summary of current research activities, and the names of three referees should accompany the application. Letters of recommendation should not be included; when needed, they will be requested directly from the referees by the faculty of the section.

Yale University is an Equal Opportunity/Affirmative Action Employer.

POSITIONS OPEN

ASSISTANT PROFESSOR OF PHARMACOLOGY. Applications are invited by the Department of Pharmacology, University of Tennessee, for a tenure-track position available 1 July 1982. The applicant should possess the Ph.D. in pharmacology or a related discipline, or the M.D., have a strong background in biochemistry, molecular biology, or immunology, and should apply this knowledge to the study of fundamental problems in pharmacology. The applicant should have approximately 3 years of postdoctoral experience, should have demonstrated excellence in research, and should have an active interest in teaching. The candidate will be expected to establish and support an independent research program. Please submit complete curriculum vitae, three letters of reference, and a brief statement of future research plans, no later than 1 July 1982, to: **Dr. Murray Heimberg, Chairman, Department of Pharmacology, University of Tennessee Center for the Health Sciences, Memphis, Tennessee 38163.** *An Equal Opportunity/Affirmative Action Employer.*

CHIEF, MEDICAL SERVICE, VA Medical Center, Shreveport, Louisiana. A 449-bed teaching Medical Center with an ongoing medical research program and an active affiliation with Louisiana State University Medical Center in Shreveport. Board-certification and qualifications for a senior academic appointment are required. Salary negotiable. Inquiries, including curriculum vitae, should be sent to: **Richard D. Maca, M.D. (151), Chairman, Search Committee, VA Medical Center, 510 East Stoner Avenue, Shreveport, La. 71130.** *Equal Opportunity/Affirmative Action Employer.*

DIRECTOR, CLINICAL PHARMACOLOGY

The University of Alabama in Birmingham is seeking qualified candidates for the directorship of a newly created program in clinical pharmacology. Substantial space and state support are available. Appointments in an appropriate clinical department and pharmacology are available. Applicants should apply to: **John R. Durant, M.D., Chairman, Search Committee, Clinical Pharmacology, University of Alabama in Birmingham, University Station, Birmingham, Alabama 35294.** *An Equal Opportunity/Affirmative Action Employer.*

POSITIONS OPEN

BIOCHEMIST/IMMUNOCHEMIST

The Laboratory of Immunodiagnosis of Sloan-Kettering Institute is seeking applicants to fill a staff position in biochemistry. Persons with a Ph.D. in biochemistry and/or immunology who have experience in general immunochemistry and protein purification techniques are invited to apply. Salary and position will depend on background and experience. Applicants should submit curriculum vitae and the names of three references to:

**Dr. Carl Feit
Box 258
Sloan-Kettering Institute
425 East 68 Street
New York, N.Y. 10021**

BIOPHYSICAL CHEMIST and BIOCHEMIST desired for characterization of wheat storage proteins. Two temporary positions available for 1-year period, each with possibility of renewal; available May/June; salary: \$23,500 per year; Ph.D. and U.S. citizenship required. One position will emphasize physical characterization and study of protein-protein interactions; the other will emphasize purification and characterization with emphasis on amino acid sequencing. Send résumé to: **Dr. Donald D. Kasarda, Western Regional Research Center, ARS, U.S. Department of Agriculture, 800 Buchanan Street, Berkeley, Calif. 94710.**

CHAIRMAN, DEPARTMENT OF PATHOLOGY

The Uniformed Services University School of Medicine invites applications for the position of **chairman, Department of Pathology**. Candidates should be Board-certified in anatomic or clinical pathology, should have records of demonstrated excellence in teaching and research, and should have administrative abilities. Interested candidates should submit curriculum vitae, bibliography, and names of three references by 1 July 1982 to: **Director, Civilian Personnel/Manpower, Uniformed Services University of the Health Sciences, 4301 Jones Bridge Road, Bethesda, Md. 20814.** Applications will not be returned. *The Uniformed Services University is an Equal Opportunity/Affirmative Action Employer.*

Molecular Biologist San Francisco Bay Area

Stauffer Chemical Company seeks applications for the position of Molecular Biologist in its expanding biological sciences research group.

Applicants should have a PhD, preferably with postdoctoral experience, and a strong background in recombinant DNA technology. Expertise in any of the following areas is also desired: immunology, nucleic acid chemistry, protein purification, genetics and gene cloning.

The successful applicant will work in multi-disciplinary environment as part of a research team, and will at the same time be responsible for developing and directing new research programs.

All interested applicants should send a confidential resume, statement of research interest and experience, and the names of three references to: **D. A. Walker, Personnel Manager, Stauffer Chemical Company, 1200 S. 47th Street, Richmond, CA. 94804.** Stauffer is an affirmative action, equal opportunity employer.



RESEARCH ASSOCIATE

To provide social science analysis for a special project in the Technology Adaptation Program of the Massachusetts Institute of Technology. The project deals with policy and resource development in the petroleum industry. This individual will examine energy-economy interactions in developing countries, focusing on the role of petroleum in determining volume and pricing within such an economy. In addition will perform analysis of macro-economic adjustments in developing nations due to changes in investment strategies and structural transformation.

An advanced degree in Economics is called for, along with extensive experience in developing and implementing social and sectoral analysis projects in developing countries, preferably those of the Middle East. Familiarity with academic, governmental, and business situations in the Middle East also essential, as well as a strong history of interaction with foreign counterparts at high levels. Knowledge of manpower and energy issues, plus sectoral analysis in energy, transportation and construction sectors also important.

Please submit 2 copies of resume or curriculum vitae to: **Ms. Vera J. Ballard, MIT Personnel Office, E19-239, 77 Massachusetts Ave., Cambridge, MA 02139.** MIT is an equal opportunity/affirmative action employer.

MIT

POSITIONS OPEN

ASSISTANT PROFESSOR OF PHARMACOLOGY

The Department of Pharmacology and Experimental Therapeutics at the University of Maryland Medical School in Baltimore has a tenure-track opening for fall 1982 in one of the following areas: (i) **CARDIAC PHARMACOLOGIST** with interests in electrophysiological or biochemical aspects of cardiac regulation, or (ii) **IMMUNOLOGIC PHARMACOLOGIST** with interests in the application of antibodies to drug delivery, or the use of monoclonal antibody or DNA hybridization techniques in pharmacology. Candidates must have at least 2 years of postdoctoral training and a record of research accomplishment. The appointee will be expected to maintain a productive research program and to participate effectively in teaching the medical pharmacology course as well as selected graduate courses in areas of his/her special interest. While the appointee will be expected to establish an independent laboratory, there are opportunities for collaborative work within the department in the following areas: electrophysiology of vertebrate and invertebrate nervous tissue (including patch clamp and noise analysis), tissue culture, biochemical and microchemical analyses, neurotransmitter identification, receptor characterization, virology, and ultrastructural studies (including quick freezing, ion localization, and freeze fracture). Send curriculum vitae, statement of future interests, and names of four referees to: **Dr. Edson X. Albuquerque, Chairman, Department of Pharmacology and Experimental Therapeutics, University of Maryland Medical School, Baltimore, Md. 21201. The University of Maryland is an Equal Opportunity/Affirmative Action Employer.**

ASSOCIATE DEAN AND DIRECTOR OF RESIDENT INSTRUCTION

The University of Idaho, College of Agriculture, invites applications for the position of **ASSOCIATE DEAN AND DIRECTOR OF RESIDENT INSTRUCTION**, with responsibilities for all matters relating to instructional programs, curriculum planning, coordination for student recruitment and advising, development of innovative teaching programs, faculty development, development of student scholarships, and coordination of on-campus and off-campus academic programs.

Candidate should have an earned doctoral degree in a discipline appropriate to the college, successful teaching experience, significant administrative experience, experience in curriculum planning and development in institutions of higher learning, and should be able to be an effective spokesperson for programs of the college.

The University of Idaho is the land-grant and principal research university of the state of Idaho. The College of Agriculture and the Agricultural Experiment Station offer a full range of academic, research, and extension services, with each of these functions headed by an associate dean. A wide variety of undergraduate and graduate programs is offered through nine academic departments. Salary is competitive and commensurate with experience. Nominations and applications will be accepted until 30 June 1982 or until a suitable candidate is identified. Send five letters of reference along with complete curriculum vitae and bibliography to:

**Dr. Lee Bulla, Jr.
Chairman, Search Committee
Agricultural Sciences Building
College of Agriculture
University of Idaho
Moscow, Idaho 83843**

An Equal Opportunity/Affirmative Action Employer

CHAIR OF PHARMACOLOGY

Applications are being accepted for the position of chairperson of pharmacology at the University of Pittsburgh School of Medicine. This endowed chair requires an established investigator (M.D., M.D.-Ph.D., or Ph.D.) of national reputation with a strong commitment to medical and graduate student teaching as well as an appreciation of clinical pharmacology. Adequate space and funding for the recruitment of new faculty members are available. Inquiries will be held in strict confidence.

Submit curriculum vitae and bibliography to:

**Gerald S. Levey, M.D.
Chairman, Search Committee
Department of Medicine
1200 Scaife Hall
Pittsburgh, Pa. 15261**

Closing date: 1 August 1982. *The University of Pittsburgh is an Affirmative Action/Equal Opportunity Employer.*

POSITIONS OPEN

THE UNIVERSITY OF TEXAS HEALTH CENTER AT TYLER is seeking an individual of proven excellence to fill the post of **ASSOCIATE DIRECTOR FOR CLINICAL AFFAIRS**. The Health Center at Tyler is a health component of The University of Texas System reporting to the Chancellor and the Board of Regents. This young institution has a commitment to excel in patient care, teaching, and research in chest diseases. The associate director for clinical affairs will be responsible for supervision and strengthening of all clinical services, and will assist in further development of the teaching program at a postgraduate level, and will provide guidance in the expansion of a clinical research program. This position requires a doctor of medicine degree and Board-certification in an appropriate specialty. The candidate must have a record of leadership in clinical care, administration, and teaching. Familiarity with clinical research is highly desirable. The position should provide a rewarding challenge with salary and benefits commensurate with the outlined responsibilities. Send curriculum vitae and letter of interest to:

**Search Committee, c/o Director of Personnel
The University of Texas Health Center at Tyler
Box 2003
Tyler, Texas 75710
Equal Opportunity Employer**

CHAIRPERSON, MICROBIOLOGY COOK COUNTY HOSPITAL

The Department of Laboratories of Cook County Hospital, Chicago, Illinois, invites applications for the position of chairperson of the Division of Microbiology. Ph.D. is required with a minimum of 5 years of experience in clinical bacteriology. Individual with publications in the field of diagnostic microbiology and experience in laboratory management will be given preference. Submit curriculum vitae and three letters of recommendation to: **Dr. Robert Muldoon, Division of Virology, Cook County Hospital, 1835 West Harrison Street, Chicago, Ill. 60612. An Equal Opportunity/Affirmative Action Employer.**

COORDINATOR OF BIOLOGY LABORATORY INSTRUCTION

The departments of Botany and Zoology/Physiology at the University of Wyoming are seeking to fill a full-time, 11-month, professional staff position for a **Coordinator of General Biology Laboratory Instruction** by 1 July 1982. The successful candidate will be expected to work closely with faculty from both departments. We seek a broadly trained individual with at least an M.A. or M.S. in any life science, and with proven and documented experience in teaching and directing general biology, botany, and/or zoology laboratories.

The successful candidate will be expected to coordinate laboratory instruction in a program enrolling approximately 2000 students per year. Duties will include: (i) maintenance and ordering of living organisms, prepared specimens, and instructional materials, (ii) curriculum development, and (iii) guidance and coordination of teaching assistants and laboratory instructors. Successful performance in this position may lead to continued contract renewals, subject to the resources of the university. Starting salary will be competitive. Submit curriculum vitae or résumé, names and telephone numbers of at least four references, and copies of education publications and/or evidence of laboratory-related curriculum materials that have been developed to:

**Office of Personnel
Wyoming Hall
University of Wyoming
Laramie, Wyoming 82071**

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

COLLEGE OF THE VIRGIN ISLANDS FACULTY POSITION—PHYSICS

The College of the Virgin Islands will appoint a visiting assistant or associate professor of physics to start 15 August 1982. An earned doctorate and college-level teaching are required. Knowledge of computer science or CAI desirable. Will teach introductory physics for science majors, physical science for nonscience majors, and computer science or second-year physics. Send résumé and three letters of reference to: **William P. MacLean, Chairman, Division of Science and Mathematics, College of the Virgin Islands, St. Thomas, U.S. Virgin Islands 00801.**

An Equal Opportunity/Affirmative Action Employer

POSITIONS OPEN

Applications are invited for the position of **DEAN** of the West Virginia University School of Medicine. The position involves the duties of the chief executive and academic officer of the school.

Candidates must have academic administrative experience, preferably in a medical school. Candidates should have a career showing scientific and scholarly activity, and an M.D. degree is preferable.

Letter of application and curriculum vitae, including the names and addresses of at least three professional references, should be forwarded to:

**Alvin L. Watne, M.D.
Chairman, Dean's Search Committee
West Virginia University Medical Center
Morgantown, W. Va. 26506**

The deadline for receipt of applications is 1 July 1982. *West Virginia University is an Equal Opportunity/Affirmative Action Employer.*

The Department of Dermatology, University of Michigan Medical School, is searching for a **SECOND DERMATOLOGICAL SURGEON** who is either trained or untrained but willing to take a subspecialty in dermatologic surgery to assist in building a dermatosurgery unit. The responsibilities of the position will include the teaching of surgery to residents and the integration of surgical material from several hospitals. An interest in prospective clinical research as it pertains to surgery and cutaneous oncology is essential. The candidate must be Board-eligible or Board-certified in dermatology and possess (or be willing to obtain) documentable special expertise in dermatologic surgery. Title and salary are negotiable. The position will be available July 1982. Address applications, including curriculum vitae, to: **John J. Voorhees, M.D., Professor and Chairman, Department of Dermatology, University of Michigan Medical School, Room C-2064 Outpatient Building, Ann Arbor, Michigan 48109. A nondiscriminatory, Affirmative Action Employer. Code 40.**

ENVIRONMENTAL HEALTH SCIENTIST Tenure-track Faculty Position

September 1982

Hunter College School of Health Sciences; requires doctorate or equivalent, administrative experience, demonstrated excellence in undergraduate/graduate teaching, and sponsored research. Generalist preferred; secondary interest in toxicology. Appointee will be considered for program directorship. Send curriculum vitae and references to: **Dr. George Kupchik, Chairman, Search Committee, 440 East 26 Street, New York, N.Y. 10010. Women and minorities are urged to apply.**

MOLECULAR BIOLOGY OF CONNECTIVE TISSUE Postdoctoral Research

A program of basic research on the structures and interactions of proteoglycans and collagens has been established in the Department of Oral Biology of the University of Alberta. Excellent facilities are available, including equipment and technical assistance for automated amino acid sequencing and analysis, HPLC (two units), cell culture, and immunology.

Enquiries about fellowships should be sent with curriculum vitae to: **Dr. C. H. Pearson, Division of Biochemistry, Department of Oral Biology, University of Alberta, Edmonton, Alberta, Canada T6G 2N8.**

MOLECULAR AND CELLULAR BIOLOGIST. An anticipated tenure-track position in the Department of Biological Sciences. Applicants should have a Ph.D. and postdoctoral experience with a strong academic and research background in molecular and cellular biology. Responsibilities include teaching undergraduate and graduate courses emphasizing modern laboratory technology in molecular biology, the conduct of an active and fundable research program in any area of molecular biology in eukaryotic cells (preferably mammalian system, but will also consider experience in strain improvement technologies for yeast or other fungi). Active participation in the undergraduate In Vitro Cell Biology Program, and interaction with colleagues in biology, biochemistry, and biophysics. Rank and salary are commensurate with experience. Appointment may begin fall 1982 or when the position is filled with a qualified candidate. Send curriculum vitae, reprints, a statement of teaching and research interests, and three letters of recommendation no later than 30 June 1982 to: **Dr. H. Z. Liu, Chairman, Department of Biological Sciences, Box 1000, State University of New York, Plattsburgh, N.Y. 12901. An Equal Opportunity/Affirmative Action Employer.**

BIOCHEMICAL ENGINEER

Cetus Corporation, an innovative leader in biotechnology is seeking a PhD in Biochemical Engineering with a minimum of 3 years experience in a capacity of production/development with relevant pharmaceutical industry.

Candidates should have experience with recombinant DNA technology and state of the art techniques of harvesting/extracting cells and the purification of proteins. Knowledge of GLP, GMP, FDA and NIH guidelines relating to the use of recombinant DNA technology in large scale production is essential.

Cetus offers career challenge and growth and an outstanding compensation package. For confidential consideration send resume to:

Cetus Corporation
Box SCI-EJM
600 Bancroft Way
Berkeley, CA 94710
An Equal Opportunity Employer
M/F/Handicapped

CETUS

IMPERIAL CANCER RESEARCH FUND (ICRF)

DIRECTOR

Cancer Epidemiology and Clinical Trials Unit Oxford

The IMPERIAL CANCER RESEARCH FUND, whose headquarters and main laboratories are located at Lincoln's Inn Fields, London, is the pioneer cancer research institute in the United Kingdom. The ICRF Council has recognized the importance of environmental factors in the causation of cancer and regards a major research activity in this field as an essential part of its strategy. In consequence the Cancer Epidemiology and Clinical Trials Unit was established at Oxford in 1977 on the initiative of Professor Sir Richard Doll, F.R.S., and the Council is now seeking a successor to Sir Richard Doll as director of the unit when he retires on 30 September 1983. The post of director would be established at full professorial level.

For further information, contact: **Dr. W. F. Bodmer, F.R.S., Director of Research, Imperial Cancer Research Fund**, address below.

Applications, accompanied by full curriculum vitae, should be sent to:

The Secretary
Imperial Cancer Research Fund
Lincoln's Inn Fields
London W.C.2, England

Closing date: 30 June 1982.

RESEARCH SCIENTIST

The Department of Neurology at the University of Massachusetts Medical Center is seeking a Research Scientist trained in the investigation of the neurobiology of aging and dementia. A broad background in neurophysiologic, biochemical, pharmacologic, anatomic, and behavioral techniques is required. A knowledge of the neurobiology of aging is necessary in this position. Experience in scientific writing and editorial skills are advantageous.

Apply to David A. Drachman, M.D., Professor and Chairman, Department of Neurology.



University of Massachusetts Medical Center
55 Lake Avenue North
Worcester, MA 01605

An affirmative action/
equal opportunity employer

Technical Associate \$1704.-\$2903.

The Lawrence Berkeley Laboratory is seeking a qualified professional to maintain a JEOL-ARM 1000 resolution high electron microscope in optimum working order for the National Center for Electron Microscopy. Duties will include: making daily alignments, performance checks, troubleshooting for ARM; participating in the design and construction of ARM components and modifications as well as instructing new users; and assisting in research programs of project investigations.

Extensive experience with electron microscopy service and maintenance is required. Knowledge of Cockcroft-Walton accelerators, high voltage electron microscope operation and maintenance, high resolution imaging methods and mini-computer control is preferred. Background in electronics and vacuum technology is desired along with substantial college coursework in electrical engineering, mechanical engineering or physics. College degree is desirable.

To apply, please forward TWO copies of your resume, including salary history, to: **Lawrence Berkeley Laboratory, Employment Office, 1 Cyclotron Road, Building 65, Berkeley, CA 94720. Please specify job #B/0164.** We are an equal opportunity employer.



**LAWRENCE
BERKELEY
LABORATORY**

SCHOOL OF ENGINEERING UNIVERSITY OF SOUTHERN CALIFORNIA

The Office of the President is seeking nominations and applications for the position of Dean of Engineering. Candidates must possess an outstanding academic record in teaching and research, and a commitment to excellence in private higher education. Experience in academic administration, established contacts with private industry and government, and potential for fund raising are essential.

The University of Southern California, the largest private university in the west, is comprised of 21 graduate and professional schools, 1900 full time academic faculty, 28,000 students, and offers bachelor's, master's, and doctoral degrees in 150 fields of study.

The School of Engineering is comprised of 12 departments, 140 full time academic faculty, 3,800 students (40% of whom are graduate students), and offers bachelor of science, master of science, engineer, and doctor of philosophy degrees in 24 engineering disciplines. Research expenditures total approximately \$20 million annually.

Nominations (by 31 May 1982) and inquiries should be directed to:

Cornelius J. Pings
Senior Vice President for Academic Affairs
ADM 101
University of Southern California
Los Angeles, California 90007
(213) 743-6343

USC is an Equal Opportunity Employer through Affirmative Action.

POSITIONS OPEN

FACULTY POSITION IN CHEMICAL BIOLOGY. For teaching and research of Biology Program. Must have strong chemistry background and Ph.D. in an area of biology related to chemistry, such as physiology, microbiology, immunology. Send résumé, letters of recommendation, and evidence of research activity (papers, proposals) by 4 June 1982 to: N. Kumbaraci, Biology Search Committee, Departments of Chemistry and Chemical Engineering, Stevens Institute of Technology, Hoboken, N.J. 07030. An Equal Opportunity/Affirmative Action Employer.

FACULTY POSITION IN HUMAN NUTRITION. Department of Food Science and Nutrition, University of Minnesota; full-time, tenure-track assistant professor. Appointee to develop independent research program in clinical nutrition. Teach about two courses per year, undergraduate and graduate, in normal and clinical nutrition. Opportunity for clinical practice. Salary competitive; attractive fringe benefits. Starting date: September or as arranged. M.D. or Ph.D. in nutrition or closely related field, demonstrated ability to design and carry out research related to clinical nutrition, and interest in teaching and advising students. Department has clinical appointees, training programs, research opportunities in health care, and research institutions in Twin Cities, Rochester, and St. Cloud, Minnesota. Applications by 15 June or until filled. Send detailed résumé (including three references) to: Dr. E. F. Caldwell, Head of Department, 1334 Eckles Avenue, St. Paul, Minn. 55108. The University of Minnesota is an Equal Opportunity Educator and Employer and specifically invites and encourages applications from women and minorities.

University of Michigan Medical School, Department of Microbiology and Immunology, is seeking applicants for a tenure-track **FACULTY POSITION IN MOLECULAR BIOLOGY.** The University of Michigan has selected the area of gene expression for special emphasis and has designated this position a **THURNAU PROFESSORSHIP** at the assistant or associate level. Candidates should have interest and research experience in eukaryotic molecular genetics. Preference will be given to those interested in animal virology but individuals in other areas of eukaryotic molecular biology are encouraged to apply. An interest in participating in the medical and/or graduate teaching programs of the department is required. Please send curriculum vitae, a description of research interests and long term goals, and the names of three references to: Chairman, Search Committee, Department of Microbiology and Immunology, University of Michigan Medical School, Ann Arbor, Mich. 48109. A nondiscriminatory, Affirmative Action Employer. Code 28.

MOLECULAR GENETICISTS

The Wistar Institute, a leading independent research institution in basic biomedical sciences, is searching for scientists to fill positions at the assistant professor level. The candidates should have an interest in prokaryotic molecular genetics, yeast and *Drosophila* genetics, chemistry of nucleic acids including oligonucleotide synthesis, and regulation of gene expression in eukaryotes. The applicants should have an outstanding record of accomplishments and at least 2 years of postdoctoral experience. The Wistar Institute is located on the campus of the University of Pennsylvania, immediately neighboring the hospital of the University of Pennsylvania and Children's Hospital of Philadelphia. Applicants should send their curriculum vitae with a statement of research interest and the names of three references to: Dr. Warren Cheston, Associate Director, The Wistar Institute, 36th Street at Spruce, Philadelphia, Pa. 19104.

NEUROSCIENTIST

The Johns Hopkins Medical School, Departments of Cell Biology/Anatomy and Neuroscience, invite applications for two faculty positions. Selection will be based on research accomplishments in the anatomy, development, or cell biology of the nervous system. Primary teaching responsibility will be neuroanatomy in a multidisciplinary neuroscience course. Faculty rank is based on experience. Submit curriculum vitae, representative reprints, statement of research objectives, and names of three references to: Search Committee, Department of Cell Biology and Anatomy, Johns Hopkins Medical School, 725 North Wolfe Street, Baltimore, Maryland 21205.

Applicants will be considered without regard to race, religion, sex, or national origin. The Johns Hopkins University is an Equal Opportunity/Affirmative Action Employer.

POSITIONS OPEN

FISHERIES BIOLOGIST

The State University of New York (SUNY) College of Environmental Science and Forestry (ESF) and College at Oswego invite applications for a position sponsored by New York Sea Grant Institute for a fisheries biologist. The successful candidate will hold a joint, tenure-track position at ESF, Syracuse, and SUNY at Oswego and will be responsible for developing a fisheries research program on lakes Ontario and Erie and providing advisory services to resource management agencies, with lesser emphasis on teaching in area of specialty. This faculty appointment will be at the assistant or associate professor level with salary commensurate with qualifications and experience. **Minimal qualification is a Ph.D. in fish biology or fishery science.** Related professional experience and a knowledge of current research, fisheries management issues, funding sources, or legislation germane to the Great Lakes fishery resource are desirable. Preference will be given to applicants with qualifications in fish population dynamics or fish community ecology in freshwater systems. To apply please submit a letter of application and curriculum vitae, and have three letters of recommendation sent by 28 June 1982 to:

Dr. Ronald J. Scrudato, Chair
Search Committee for Fisheries Biologist
King Hall
SUNY at Oswego
Oswego, New York 13126

An Equal Opportunity/Affirmative Action Employer

VISITING FACULTY FISHERIES AND WILDLIFE

Teach, confer with students and faculty, and lead discussions on future of fisheries and wildlife. Earned terminal degree and fisheries/wildlife management experience required. Send application material by 15 June 1982 to: Dr. John Neuhold, UMC-52, Utah State University, Logan, Utah 84322. An Affirmative Action/Equal Opportunity Employer.

IMMUNOLOGIST—University of New Mexico. Applicants must have 3 years of postdoctoral training and be capable of establishing a strong independent program. Rank and salary dependent on qualifications. Send curriculum vitae, in-press manuscripts, statement of research goals, and three references to: Thomas Tomasi, M.D., Ph.D., Cancer Research and Treatment Center, 900 Camino de Salud, NE, Albuquerque, N.M. 87131. Affirmative Action/Equal Opportunity Employer.

MOLECULAR BIOLOGIST—University of New Mexico. Applicants must have a minimum of 3 years of postdoctoral training and be capable of establishing a strong independent program utilizing recombinant DNA technology. Rank and salary depend on qualifications. Send curriculum vitae, in-press manuscripts, statement of research goals, and three references to: Thomas Tomasi, M.D., Ph.D., Cancer Research and Treatment Center, 900 Camino de Salud, NE, Albuquerque, N.M. 87131. Affirmative Action/Equal Opportunity Employer.

PHYSICS/MATHEMATICS. Faculty position in liberal arts college related to the American Baptist churches. Duties include teaching physics in pre-medical program, teaching and working with mathematics majors. The applicant would also teach one section in a general education program. Ph.D. is preferred. Send résumé and credentials or request a complete position description from: Keith Shumway, Academic Vice President, Ottawa University, Ottawa, Kansas 66067. Salary and rank commensurate with background. An Equal Opportunity/Affirmative Action Employer.

PHYSIOLOGIST. The National College of Naturopathic Medicine, a private 4-year college, invites applications for a faculty position in basic medical sciences for fall 1982. The position involves the teaching of medical physiology to first-year students as a part of a conjoint basic medical sciences program. Applicant must have teaching experience and have a Ph.D. or equivalent degree. She/he should be well versed in all areas of human physiology and demonstrate a strong interest in teaching. An interest in natural holistic health care or related areas is preferred. Rank and salary depend on qualifications and experience. Send letter of application, curriculum vitae, and three letters of reference by 18 June 1982 to: Dr. G. S. S. Khalsa, Dean of Curriculum and Instruction, National College of Naturopathic Medicine, 11231 S.E. Market Street, Portland, Oregon 97216.

POSITIONS OPEN

MUSEUM EDUCATION DIRECTOR

The Oregon Museum of Science and Industry (OMSI) seeks an educator to administer extensive precollege education programs in physical, biological, earth, and computer sciences. Advanced degree, record of accomplishment, strong commitment to education required. OMSI is a nationally recognized science education center and museum. Salary range: \$25,000 to \$35,000. Send résumé, three references, and statement of interest by 28 June 1982 to: Michael Templeton, Executive Director, OMSI, 4015 S.W. Canyon Road, Portland, Ore. 97221. Equal Opportunity Employer.

PATHOLOGIST. Applications sought for junior staff position in surgical pathology, Los Angeles County—University of Southern California Medical Center. California license required. Candidate should have a strong interest in teaching and scholarly activity. Reply to: Chair, Department of Pathology, 2025 Zonal Avenue, Los Angeles, California 90033.

An Equal Opportunity/Affirmative Action Employer

PATHOLOGIST. Applications sought for Associate Director of Blood Bank, Los Angeles County—University of Southern California Medical Center. California license and previous training in immunohematology required. Candidate should have strong interest in teaching and scholarly activity. Reply to: Chair, Department of Pathology, 2025 Zonal Avenue, Los Angeles, California 90033.

An Equal Opportunity/Affirmative Action Employer

PLANT PHYSIOLOGIST/PLANT BIOCHEMIST. Career Federal Service, Independent research on biochemical and physiological factors related to growth and yield of plants under stress due to insects and environment. Position at North Grain Insects Research Laboratory, South Dakota State University campus, Brookings, S.D.; GS-11/12/13. Salary based on qualifications and experience. For applications: J. Brooks, USDA-ARS-B33, 2000 West Pioneer Parkway, Peoria, Ill. 61615. Telephone: 309-671-7319. An Equal Opportunity Employer. Candidates must be U.S. citizens.

POSTDOCTORAL POSITION available now to summer 1984 for research on the biochemistry and immunology of myelin and brain proteins. Must have Ph.D. in biochemistry, immunology, cell biology, or related area. Areas available: protein structure and function, neurologic mutant animals, immunocytochemistry, oligodendrocyte differentiation. Salary: \$15,000 first year. \$18,000 second year. Send curriculum vitae and names of three references to: Dr. T. J. Sprinkle, VA Medical Center Research Service (151), Neurochemistry Laboratories, Augusta, Ga. 30910; telephone: 404-828-2029. Equal Opportunity/Affirmative Action Employer. M/F.

Scripps Institution of Oceanography invites applications for **TWO POSTDOCTORAL POSITIONS** in physical oceanography.

1) A position sponsored by the Institute of Geophysics and Planetary Physics to participate in research in the field of ocean acoustic monitoring (acoustic tomography) as applied to problems of ocean climate. Applicant should have a background in physical oceanography at the Ph.D. level or equivalent. Some experience in the analysis of long-range acoustic transmissions and their interpretation in terms of ocean characteristics is a strong asset.

2) A position sponsored by the Ocean Research Division to conduct research into the processes responsible for large-scale annual and interannual changes in the general circulation of the world's oceans. Expertise in large-scale geophysical fluid dynamics is required, with motivation directed toward the analysis and interpretation of global-scale upper ocean data sets now being collected at Scripps Institution for the study of short-term climate changes in the oceans.

Appointments for 1 or 2 years in the University of California system will be at the level of postgraduate research or assistant research, salary from \$19,848 to \$30,100, commensurate with qualifications. Private foundation funding limits awards to U.S. citizens. Please specify position you seek and submit résumé, including names of at least three references, before 30 June 1982 to: J. D. Frautschy, Deputy Director, A-010, Scripps Institution of Oceanography, University of California, San Diego, La Jolla, California 92093. Request position profile at the same address. An Equal Opportunity/Affirmative Action Employer.

SENIOR RESEARCH MANAGEMENT

IPRI, a leader in research and development in modern agricultural genetics, offers a unique opportunity for an experienced molecular biologist to provide creative, technical leadership to a growing company.

You will be responsible for planning, organizing and directing research activities in eukaryotic organisms, as well as interaction with scientists in plant cell research, plant pathology and plant breeding.

A Ph.D. with extensive research management experience is required.

We provide a generous compensation package which includes a family medical program, pension plan and equity participation. You may apply for this position by submitting your resume, list of publications, and references to:

IPRI
Personnel Department
853 Industrial Road
San Carlos, CA 94070

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Senior Programmer/Analyst Life Sciences

Hoffmann-La Roche, a world leader in the field of biotechnology, has a unique opportunity for a senior technical specialist.

Responsibilities include the independent development of computer systems in the areas of the life sciences and molecular genetics in support of biochemical and recombinant DNA projects.

Requirements: BS in a scientific discipline and several years' experience in the design, programming and implementation of scientific systems, including the application of artificial intelligence methods to current problems in biology and medicine; proficiency in FORTRAN, LISP, SAIL and PASCAL.

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Quality Assurance GLP-AUDITOR OF TOXICOLOGY

We are an ethical pharmaceutical company offering a challenging opportunity for a person with a BS degree in Toxicology, Biochemistry, or Pharmacology, preferably with experience in laboratory studies, analyses, and animal experimentation. Exposure to G.L.P.'s is desirable.

The candidate should have good communication (oral and written) skills, and be able to interact effectively with other professionals. The position will have responsibility for the inspection of all phases of drug animal safety studies (acute toxicity, subchronic, chronic, reproduction and teratology studies), auditing the study data, and final study reports. The position will also monitor the toxicology department for compliance with G.L.P.'s. Some travel will be required.

The salary offered will be commensurate with experience and background and include an excellent benefit program.

Please submit resume including salary history and requirements in confidence to:

Personnel Department

Endo Laboratories, Inc.

Subsidiary of E. I. du Pont de Nemours & Co. (Inc.)
1000 Stewart Avenue, Garden City, N.J. 11530

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CHEMIST/BIOCHEMIST NATIONAL INSTITUTES OF HEALTH

The National Institute of Neurological and Communicative Disorders and Stroke, National Institutes of Health, Public Health Service, Department of Health and Human Services, invites applications for the position of Chemist/Biochemist in the Laboratory of Neuro-otolaryngology. The Laboratory is located within the Intramural Laboratory Research Program, and utilizes laboratory facilities to conduct basic research in the Communicative Neurosciences. The successful candidate will be expected to participate in planning and conducting original, independent and collaborative research studying basic biochemical mechanisms of auditory function. Mandatory requirements include a Ph.D. or equivalent in biochemistry or closely related field with substantial research experience in auditory biochemistry, reflected by a quality record of publications and achievements. Consistent with the interest and objectives of the Laboratory of Neuro-otolaryngology, candidates with an interest and background in the molecular basis of genetic deafness and central and peripheral neurotransmitters will be preferred. This position will be filled through a career Civil Service appointment, subject to competitive procedures proscribed by the Office of Personnel Management. The position will be filled at the General Schedule 13/14 level, with a basic salary range of \$33,586 to \$51,596 per annum. Applications should include Personal Qualifications Statement (SF-171), Curriculum Vitae, Bibliography and the names of three references. Applications should be forwarded by June 14, 1982, to:

NINCDS Personnel Office
c/o Mr. Cliff Schein
Bldg. 31, Room 8A25, 9000 Rockville Pike
Bethesda, Maryland 20205

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POSITIONS OPEN

POSTDOCTORAL FELLOW/RESEARCH ASSOCIATE. Ph.D. in microbiology or biochemistry to study pathogenetic mechanisms; cell membrane biochemistry, cell surface analysis and adherence mechanisms, immune response. Send curriculum vitae and the names of three references to: **Dr. I. van de Rijn, Associate Professor, Department of Microbiology and Immunology, Bowman Gray School of Medicine, 300 South Hawthorne Road, Winston-Salem, N.C. 27103.**

Applications are sought for **POSTDOCTORAL FELLOWS** for research positions in recombinant DNA, immunobiology, and experimental carcinogenesis. Those interested should forward curriculum vitae and bibliography to: **Dr. Stewart Sell, Chairman, Department of Pathology and Laboratory Medicine, University of Texas Medical School at Houston, 6431 Fannin, P.O. Box 20708, Houston, Texas 77030. Equal Opportunity Employer.**

POSTDOCTORAL POSITION IN PHARMACOLOGY available 1 July 1982 to study the relationship of pharmacokinetics to the behavioral effects of narcotic analgesics in the rat. Experience in animal surgery and behavioral pharmacology essential. Salary: \$17,000 per annum, plus benefits. Send curriculum vitae and references to: **Dr. Charles E. Inturrisi, Department of Pharmacology, Cornell University Medical College, 1300 York Avenue, New York, N.Y. 10021. Equal Opportunity Employer.**

POSTDOCTORAL POSITION available immediately to study erythroid cell differentiation and expression of globin genes during fetal development. Applicants with background in cell and molecular biology helpful. Salary commensurate with experience, beginning at \$17,000 per annum for a newly graduated Ph.D. Send curriculum vitae and names of two references to: **Dr. D. H. K. Chui, Department of Pathology, McMaster University Medical Centre, Hamilton, Ontario, Canada L8N 3Z5.**

POSTDOCTORAL POSITIONS—Cellular Immunology; Molecular/Cell Genetics. Immunologist to study leukocytes, lymphokines, interferon involvement in tumor rejection. Geneticist to work on differentiation in mammalian cell culture, nuclear acid biochemistry, recombinant DNA. Recent Ph.D. Send curriculum vitae, graduate transcript, and three references to: **Dr. S. Silagi, Cornell University Medical College, 515 East 71 Street, New York, N.Y. 10021. Equal Opportunity Employer.**

POSTDOCTORAL POSITION IN NEUROBIOLOGY. Opportunity to participate in program investigating autonomic function in the lumbosacral spinal cord. Experience with electron microscopy, immunohistochemistry, and microelectric recording techniques desirable. Position available for 1 or 2 years. Salary: \$15,922. Interested persons send résumé and curriculum vitae to: **Irving Nadelhaft, Ph.D., VA Medical Center, University Drive C, Pittsburgh, Pa. 15240. An Affirmative Action/Equal Opportunity Employer.**

POSTDOCTORAL POSITION available immediately with Stuart Smith, Ph.D., D.Sc., to study hormonal regulation of lipogenic enzymes at transcriptional and translational levels. Minimum salary: \$18,000 per annum. Send résumé and names of three references to: **Personnel Department, Children's Hospital Medical Center, 51st and Grove Streets, Oakland, Calif. 94609.**

BAYLOR COLLEGE OF MEDICINE DEPARTMENTS OF CELL BIOLOGY, NEUROLOGY AND THE PROGRAM IN NEUROSCIENCE POSTDOCTORAL RESEARCH ASSOCIATES

Postdoctoral positions available immediately for studies into the molecular biology of muscle gene expression. The study will involve the analysis of specific regulatory proteins to DNA sequences of developmental interest, cloning and sequencing of structural gene domains, and related in vitro transcription experiments.

Applicants should hold a Ph.D. degree with relevant experience in molecular biology or biochemistry. Salary is competitive with fringe benefits.

Send résumé and letters of recommendation to either: **Dr. Henry F. Epstein, or Dr. Robert J. Schwartz, Program in Neuroscience, NB 302, The Neurosensory Center, Baylor College of Medicine, Houston, Texas 77030. An Equal Opportunity Employer.**

POSITIONS OPEN

POSTDOCTORAL POSITION available in July 1982 to work on the plasma clotting factors, platelets, or endothelial cells. Salary is dependent on experience. Send curriculum vitae to: **Eric Lian, M.D. (D26), P.O. Box 01670, Division of Hematology, University of Miami, Miami, Florida 33101. An Equal Opportunity/Affirmative Action Employer.**

POSTDOCTORAL POSITION available September 1982 for cellular electrophysiologist to study permeability and ionic conductance of developing gap junctional channels using computer-assisted video processing and patch clamping methods. Experience with intracellular microelectrode techniques required. Familiarity with patch clamp and microcomputer methods desirable. Send curriculum vitae, plus names and telephone numbers of three referees, to: **Dr. J. D. Sheridan, Department of Anatomy, 4-135 Jackson Hall, University of Minnesota Medical School, Minneapolis, Minn. 55455. Telephone: 612-376-3908. The University of Minnesota is an Equal Opportunity/Affirmative Action Employer.**

POSTDOCTORAL RESEARCH ASSOCIATE position available 1 July 1982 for developing monoclonal antibodies which recognize chemical carcinogen-DNA adducts. This project affords the opportunity to develop expertise in chemical analytic methodologies, mammalian cell culture techniques, and biochemical epidemiology. Please send curriculum vitae to either: **Dr. John D. Groopman, Boston University School of Public Health, or Dr. Ann Rothstein, Department of Microbiology, Boston University School of Medicine, 80 East Concord Street, Boston, Mass. 02118. An Equal Opportunity Employer, M/F.**

POSTDOCTORAL RESEARCH ASSOCIATE with training and experience in chemistry, biochemistry, or molecular biology, and familiarity with nuclear magnetic resonance techniques. The work will involve magnetic resonance studies of membrane lipoproteins, as well as their labeling and isolation. Contact: **Professor Paul C. Lauterbur, Department of Chemistry, State University of New York (SUNY) at Stony Brook, Stony Brook, N.Y. 11794. SUNY, Stony Brook, is an Equal Opportunity/Affirmative Action Employer. AK number, 352.**

TWO POSTDOCTORAL RESEARCH ASSOCIATES IN BACTERIAL IMMUNOCHEMISTRY. Channing Laboratory, Harvard Medical School. Projects involve study of the pathogenesis of: (i) immunity towards and infection with *Bacteroides fragilis*, and (ii) the role of *Streptomyces aureus* and other organisms in the etiology of toxic shock syndrome. Focus is on the isolation of antigens, immunochemical and biochemical characterizations of these products, and study of their role in pathogenesis as well as their vaccine potential. Ph.D. in biochemistry, immunology, microbial genetics, or microbiology. Contact: **G. B. Pier, Ph.D., or D. L. Kasper, M.D., Channing Laboratory, 180 Longwood Avenue, Boston, Mass. 02115.**

POSTDOCTORAL RESEARCH ASSOCIATE position available 1 September 1982. Candidates should have interest in cell and molecular neurobiology to participate in the characterization of peripheral and central controls over luteinizing hormone-follicle stimulating hormone and prolactin secretion from the pituitary gland. This individual should have expertise with techniques involved in peptide and protein isolation purification and characterization. Please send curriculum vitae, list of publications, and names of three references to: **Dr. Marc E. Freeman, Department of Biological Science, Florida State University, Tallahassee, Florida 32306. Telephone: 904-644-3896.**

The **DEPARTMENT OF PSYCHIATRY** of the Tulane University School of Medicine is looking for an individual to initiate a psychopharmacology research and training program. This individual should have an M.D. and/or a Ph.D. degree and have had experience both in research and the clinical aspects of psychopharmacology. His or her publication list should have articles published in peer review journals that are concerned with both basic pharmacologic investigational work as well as clinical research. If interested, the applicant should write to: **Dr. Donald Gallant, Professor of Psychiatry, Tulane University School of Medicine, New Orleans, La. 70112, no later than 1 July 1982. It should be noted that Tulane University is an Equal Opportunity/Affirmative Action Employer and applications from qualified women and minority group members are especially encouraged.**

POSITIONS OPEN

POSTDOCTORAL TRAINEE POSITION IN ENVIRONMENTAL TOXICOLOGY training program available 1 September 1982. Environmental Health Science Center (EHSC), Oregon State University (OSU), administers interdepartmental program sponsored by NIEHS. Research emphasis: metabolism and mode of toxic action of environmental contaminants. Position requires recent degree in chemistry, biochemistry, or biological sciences. Applications due 15 July 1982. U.S. citizens or permanent residents only. **Dr. Ian J. Tinsley, Program Director, EHSC, Oregon State University, Corvallis, Ore. 97331. OSU is an Equal Opportunity/Affirmative Action Institution.**

CORRECTION

The Department of Neurosciences, University of California, San Diego (UCSD), has a tenured position at the **FULL PROFESSOR LEVEL**. Candidates should have a Ph.D. or M.D. degree and demonstrated ability to carry out a strong, independent research program in an area of marine neurosciences. The position requires teaching of neurosciences at the graduate and medical school levels. Opportunities exist for collaborative research with the broad, interdisciplinary Neurosciences Group at UCSD and the Scripps Institution of Oceanography. Salary will depend on qualifications of the applicant. All applications received by 30 September 1982 (corrected) will receive thorough consideration. Send curriculum vitae, bibliography, and names and addresses of five references to: **Search Secretary, Department of Neurosciences, M008, University of California, San Diego, La Jolla, California 92093. The University of California is an Equal Opportunity/Affirmative Action Employer.**

NATIONAL SCIENCE FOUNDATION (NSF)

NSF, Division of Materials Research, is seeking qualified candidates for two positions: a 1-year rotational assignment as **PROGRAM DIRECTOR** and a 1- or 2-year rotational assignment as **ASSOCIATE PROGRAM DIRECTOR** for the Metallurgy Program in the Metallurgy, Polymers, and Ceramics Section. These positions are excepted from the competitive civil service at the EC-14/EP-15 grade range (equivalent to GS-14/15), \$39,689 to \$60,689 (limited by statute to \$57,500) per annum for the program director position, and EC-13/14 grade range (equivalent to GS-13/14), \$33,586 to \$51,596 per annum for the associate program director position. Candidates should have a Ph.D. or equivalent experience in metallurgy/materials science or related disciplines, a substantial record of scientific/research publications, 6 to 8 years of experience beyond the Ph.D., and preferably some experience in directing/managing basic research in an academic, industrial, or governmental institution. Résumés should be sent to: **National Science Foundation, Personnel Administration Branch, 1800 G Street, NW, Room 212, Washington, D.C. 20550, attention: E. Paul Broglio. For further information, telephone: 202-357-7841. These positions will remain open until filled. NSF is an Equal Opportunity Employer.**

NATIONAL SCIENCE FOUNDATION (NSF)

NSF, Division of Astronomical Sciences, is seeking qualified candidates for the position of **PROGRAM MANAGER** in the Astronomy Centers Section. The position will be filled on a 2-year rotational basis or on a permanent basis. The position is excepted from the competitive civil service at EC-13/14/EP-15 (equivalent to GS-13/14/15), \$33,586 to \$60,689 (limited by statute to \$57,500) per annum. Candidates should have a Ph.D. or equivalent experience in the field of astronomy or a closely related field and 6 to 8 years of experience beyond the Ph.D. Technical and/or program management experience at a national astronomy center is desired. The program manager maintains a direct liaison with one or more of the NSF-funded National Astronomy Centers (NAIC, KPNO, CTIO, NAO, and SPO), monitoring their programs, expenditures, operations, and preparing the necessary documentation to support their operations. Responsibilities include budget preparation and participation in long-term initiatives planning in the Division of Astronomical Sciences. Candidates should submit a letter of application, accompanied by a résumé and a list of at least three references, to: **National Science Foundation, Personnel Administration Branch, 1800 G Street, NW, Room 212, Washington, D.C. 20550, attention: E. Paul Broglio, EX 82-34. For further information, contact: Dr. L. P. Bautz, telephone: 202-357-9488, or L. K. Randall, telephone: 202-357-9450. NSF is an Equal Opportunity Employer.**

Biochemistry Post Doctoral Position

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Responsible for *in vivo* and *in vitro* metabolism of
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PhD in Biochemistry required with a knowledge of
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Familiarity with all aspects of isolation and
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We offer an excellent salary and benefits package
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Please forward c.v. in confidence to: C.J. Elder,
SMITHKLINE BECKMAN CORPORATION,
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Philadelphia, PA 19101. We are an
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The European Molecular Biology Laboratory (EMBL) Nucleotide Sequence Data Library

The library established at the EMBL exists to collect,
organise and make freely available the published body of
nucleic acid sequence data. The collection will be very
frequently updated and corrected to ensure that the
library reflects current scientific knowledge.

The initial data base contains nearly 600,000 nucleo-
tides comprising some 600 separate entries. Annotation
of each entry includes source, reported sequence fea-
tures, sequence length and base composition, taxonomic
classification of contents and indexes by author, by
keyword, and by organism are provided. The library is
designed to be read by both people and computer pro-
grams, so that it is a useful reference source for scientists
with or without extensive computing facilities or exper-
tise.

The data base is available now for distribution of magnet-
ic tape. On-line access for computer terminal users will
be available over telephone lines in a few months.

A newsletter giving more information about the sequence
library and how to gain access to it will be supplied upon
written request (please don't telephone). Write to: **G.
Hamm, European Molecular Biology Laboratory, Meyer-
hofstrasse 1, 6900 Heidelberg, F.R.G.**

OCEANOGRAPHERS. The U.S.
Department of the Interior's New
York Outer Continental Shelf Of-
fice has several oceanographer
vacancies in its environmental as-
sessment and studies areas. Can-
didates with expertise in chemical
or physical oceanography are es-
pecially needed, but any oceanog-
rapher is welcome to apply since
other positions are available or
upcoming. Salary range \$19,477-
\$28,245 depending upon educa-
tion and experience. For more in-
formation about the positions and
for applications, call Ms. Kennedy
at (212) 264-0808 or write to U.S.
Dept. of the Interior, Bureau of
Land Management, 26 Federal
Plaza, Suite 32-120, New York,
NY 10278. NOTE: All positions
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POSITIONS OPEN

**ALICE E. DOISY PROFESSOR
AND CHAIRMAN
EDWARD A. DOISY DEPARTMENT
OF BIOCHEMISTRY
ST. LOUIS UNIVERSITY
SCHOOL OF MEDICINE**

The St. Louis University School of Medicine invites applications for the position of **Alice E. Doisy Professor and Chairman** of the Edward A. Doisy Department of Biochemistry. We are particularly looking for a scientist with an outstanding record of accomplishments in research and a clear commitment to both medical and graduate education. The successful candidate will be responsible for the leadership of 19 tenure-track faculty dedicated to research, teaching, and service. Interested candidates should send curriculum vitae and the names of three references to:

**Dr. Thomas C. Westfall, Chairman
Biochemistry Search Committee
Department of Pharmacology
St. Louis University School of Medicine
1402 South Grand Boulevard
St. Louis, Missouri 63104**

Application deadline is 1 July 1982. *St. Louis University is an Affirmative Action/Equal Opportunity Employer and will welcome applications from members of minority groups and women.*

RESEARCH ASSOCIATE. To join our ongoing program on ^{13}C NMR of intact tissue with an emphasis on diseased human muscle. This position requires a Ph.D. or an M.Sc. degree and experience in NMR spectroscopy. The salary is open, depending on experience. Starting date: July 1982 or thereafter. Applicants should supply curriculum vitae and have three reference letters sent to: **Dr. Michael Barany, Department of Biological Chemistry, University of Illinois College of Medicine, Chicago, Ill. 60612.** *The University of Illinois is an Affirmative Action/Equal Opportunity Employer.*

STAFF RADIOLOGIST

DePaul Hospital is actively searching for a diagnostic radiologist with up-to-date training in all areas of diagnostic radiology. The candidate should be competent in general diagnostic radiology, computed tomography, ultrasonography, nuclear medicine, digital angiography, and interventional radiology. The candidate must have undergone recent training in a major academic institution. The minimal training required is 3 years of residency and at least 1 year of special experience. Documented interests and abilities in resident teaching and academic research are requirements, especially in the field of digital angiographic applications. The appointment will begin on 1 July 1982. Send letters of application, curriculum vitae, and two letters of reference to:

**Frederick P. Stitik, M.D.
Chairman, Department of Radiology
DePaul Hospital
150 Kingsley Lane
Norfolk, Va. 23505**

Affirmative Action/Equal Opportunity Employer

A position is available in the Department of Biochemistry for a **TEACHER-RESEARCHER IN MOLECULAR BIOLOGY**. The position is tenure-track and is at the level of assistant professor. Interested candidates should contact: **Dr. M. Waite, Department of Biochemistry, Bowman Gray School of Medicine of Wake Forest University, Winston-Salem, North Carolina 27103.** Telephone: 919-748-4373. *An Equal Opportunity/Affirmative Action Employer.*

Board-certified **THORACIC SURGEON** qualified for a position as an assistant or associate professor in the Department of Surgery, Section of Thoracic Surgery, University of Michigan Hospitals. Duties include direction and development of the cardiac and thoracic surgery program at the Ann Arbor Veterans Hospital, and participation in the clinical, research, and teaching activities of the Section of Thoracic Surgery. Minimum qualifications include Board-certification in thoracic surgery, skill in surgical treatment of thoracic disease, particularly acquired heart disease, and leadership and administrative qualities. Expertise in surgical treatment of congenital heart disease and experience and interest in a research area related to thoracic surgery preferred. Apply to: **Herbert Sloan, M.D., Professor and Head, Section of Thoracic Surgery, University Hospitals, C7079 OPB, Box 32, Ann Arbor, Michigan 48109.** A nondiscriminatory, Affirmative Action Employer. Code 19F.

POSITIONS OPEN

**The International Laboratory for
Research on Animal Diseases (ILRAD)**

**RESEARCH ASSOCIATE IN
ELECTRON MICROSCOPY**

Reference Number EM/82/I

Applications are invited for the above position which will become vacant from July 1982. The person appointed will carry out service electron microscopy for scientists in other disciplines and participate in research on host-parasite relationships.

Applicants should have a first degree in biology, or a related natural science, and a minimum of 2 years of experience in tissue preparation and ultra-microtomy. Preference will be given to candidates with additional experience in photographic darkroom techniques.

This is an international position and salary will be paid in U.S. dollars. Initial salary will depend upon qualifications and experience. Moving, housing, and commutation allowances are paid and there are medical and retirement benefits. Applications should include curriculum vitae and names and addresses of three referees, and should cite reference number EM/82/I.

Applications should reach: **The Chief Personnel Officer, ILRAD, P.O. Box 30709, Nairobi, Kenya, before 11 June 1982.**

RESEARCH CHEMIST in analytical toxicology or metabolic toxicology. Must have significant training and experience in residue analysis or separation and identification of xenobiotics in biological tissues and fluids. Doctorate in analytical chemistry, metabolism, or pharmacology is required. Experience in the use of analytical instruments and GC/MS. The position involves working with a group of scientists on government and industrial contracts. Time will be made available to develop individual research interests. Salary and academic rank commensurate with experience. Reply to: **Dr. Sami Selim, Primate Research Institute, New Mexico State University, P.O. Box 1027, Holloman AFB, N.M. 88330; telephone: 505-679-2214.**

An Equal Opportunity/Affirmative Action Employer.

RICE GENETICIST. Louisiana State University (LSU) Rice Experiment Station, Crowley, La. Requires a Ph.D. in plant genetics or agronomy. Preference will be given to applicants with a strong background in plant pathology and experience in mechanized crop production. Principal responsibilities will include cooperative work with rice breeders, plant physiologists, entomologists, plant pathologists, and other disciplines in rice research to develop superior rice germ plasm for varietal improvement. Responsibilities include cooperation with a rice tissue culture project and the screening of rice lines with the objective of supplying plant breeders with superior germ plasm. Leadership ability in organizing people, equipment, and materials for both field and laboratory is required of the position. Send résumé, transcripts, and three or more letters of recommendation to:

**M. D. Faulkner, Superintendent
LSU Rice Experiment Station
P.O. Box 1429
Crowley, La. 70526**

Position closing date is 1 July 1982, or until a suitable candidate is found. *Equal Opportunity/Affirmative Action Employer.*

TRAINEESHIPS

PRE- AND POSTDOCTORAL TRAINEESHIPS in an interdepartmental program in **EXPERIMENTAL PARASITOLOGY** are available as of 1 July 1982 at the University of Massachusetts/Amherst. Traineeships in biology, immunology, biochemistry, and chemotherapy of human and veterinary parasites are limited to U.S. citizens or permanent residents. Write to: **Dr. G. C. Coles, Department of Zoology, University of Massachusetts, Amherst, Mass. 01003-0027.** An Affirmative Action/Equal Opportunity Employer.

TRAINEESHIPS

PREDOCTORAL TRAINEESHIPS in oncology available for 1 September 1982 in an NCI-supported multidisciplinary training program. Stipend: \$5,040, plus tuition and other benefits. Research opportunities in molecular and cancer cell biology, chemical carcinogenesis, drug development, viral oncology, tumor immunology, chemotherapy, and adoptive immunotherapy. Outstanding candidates will be selected from recent graduates with high grades and GRE scores to be candidates for the Ph.D. degree. Trainees must be U.S. citizens or permanent residents. Candidates may apply by submitting their curriculum vitae (including academic achievements, honors, career goals) and three letters of reference. Write to: **Dr. Sheldon Dray, Program Director, Department of Microbiology/Immunology, University of Illinois Medical Center, P.O. Box 6998, Chicago, Ill. 60680.**

FELLOWSHIPS

GRADUATE FELLOWSHIP is available September 1982, for an outstanding student with interest in limnology, particularly the biology of river systems, zooplankton, or microbial ecology. The fellowship is for study at the University of Pennsylvania with research to be conducted with the staff of the Academy of Natural Sciences. The fellowship, which is renewable, covers tuition, some research supplies, and stipend. Apply in writing to: **Dr. Clyde Goulden, Academy of Natural Sciences, Philadelphia, Pa. 19103, or Dr. Robin Vannote or Dr. Thomas Bott, Stroud Water Research Center, R.D. Number 1, Box 512, Avondale, Pa. 19311.**

POSTDOCTORAL FELLOWSHIP for Ph.D. graduate interested in investigations of the mechanism of protein folding reactions. Techniques to be employed include fast reaction methods (stopped-flow and temperature jump) and nuclear magnetic resonance spectroscopy. A strong background in physical chemistry is required. Interested persons should send curriculum vitae and the names and addresses of three references to: **Barry T. Nall, Biochemistry and Molecular Biology, University of Texas Medical School, P.O. Box 20708, Houston, Texas 77025.** *The University of Texas is an Equal Opportunity/Affirmative Action Employer.*

Alberta Heritage Foundation for Medical Research in the Department of Zoology, University of Alberta

The Alberta Heritage Foundation for Medical Research provides **GRADUATE STUDENTSHIPS** and **POSTDOCTORAL FELLOWSHIPS** through the Department of Zoology, University of Alberta. In addition, there are scholarships for highly qualified researchers who may be appointed as staff members in the department for up to 5 years. Candidates interested in the fields of cell biology, developmental biology, endocrinology, thermogenesis, neurophysiology, and experimental parasitology are encouraged to apply. Applicants should forward their transcripts and curriculum vitae to: **Dr. F. S. Chia, Professor and Chairman, Department of Zoology, University of Alberta, Edmonton, Alberta, Canada T6G 2E9, prior to 15 July, for October competition.**

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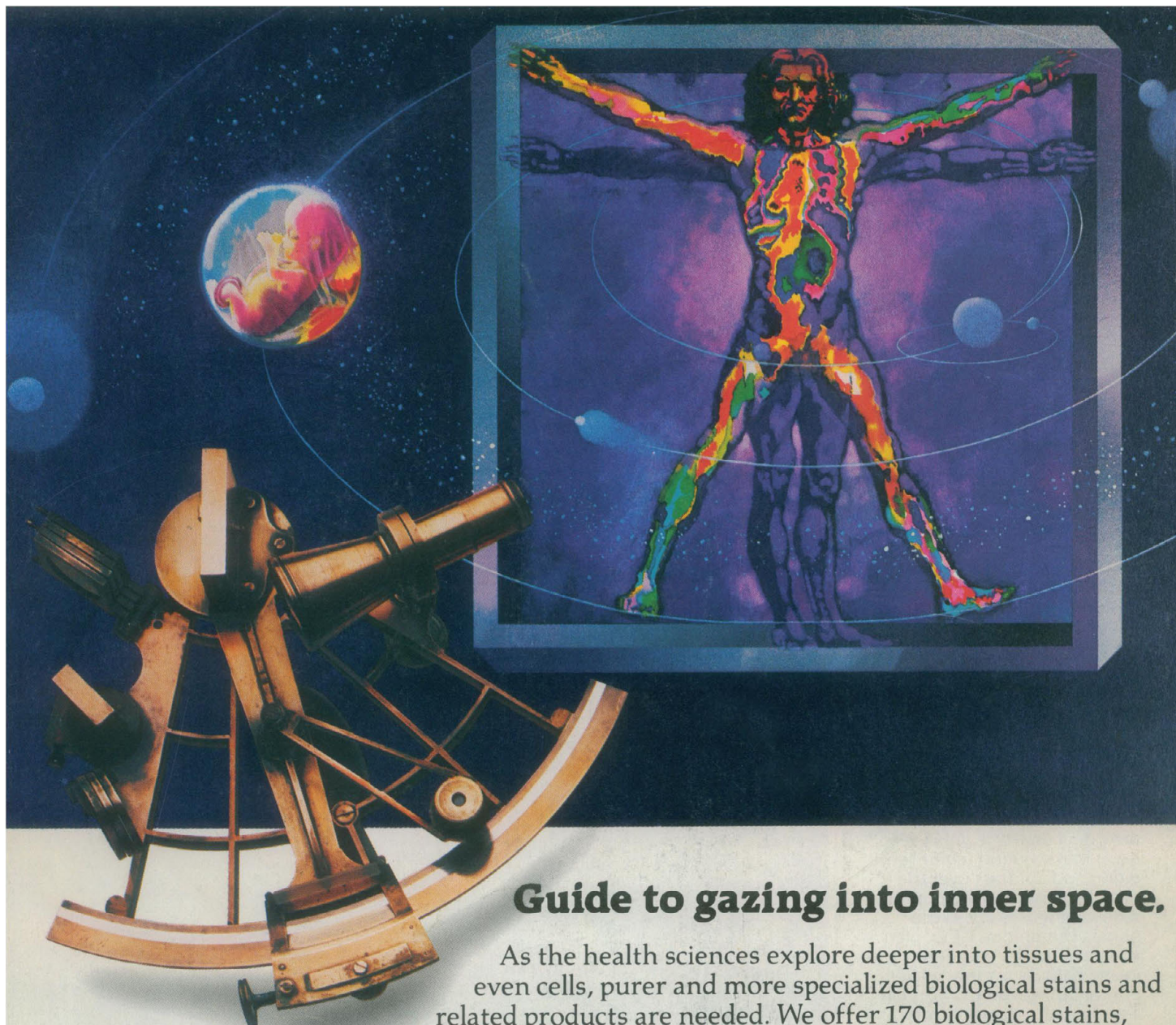
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