

al source book available on the archeology of the Florida Indians. It is a little too technical for most lay readers, perhaps, and is not always detailed enough for the serious student, but it is a cogent and valuable introduction to the subject. Most important (and gratifying) of all, the book clearly demonstrates how much has been learned since the last major attempts to synthesize Florida archeology just 30 years ago. The authors do an admirable job in bringing us up to date.

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Two Mathematicians

John von Neumann and Norbert Wiener. From *Mathematics to the Technologies of Life and Death*. STEVE J. HEIMS. MIT Press, Cambridge, Mass., 1980. xx, 548 pp. \$19.95.

Steve Heims has undertaken an ambitious task in writing this book. In Wiener and von Neumann he has chosen subjects of prodigious intellect and versatility, well suited for dual biography because their activities and research brought them into frequent contact, while their attitudes toward politics and technology diverged.

Wiener is best known as the "ex-prodigy" (the title of the first volume of his autobiography), who capitalized on an intense and demanding early education in his later accomplishments. These included a mathematical treatment of Brownian motion, advances in probability theory, and the development of cybernetics, with its applications in the social and life sciences as well as in engineering. After education in Hungary and Germany, von Neumann applied his precise and rapid powers of reasoning to axiomatic quantum mechanics, game theory, electronic computing, and weapons technology. In their years at MIT and Princeton, respectively, the two men often had occasion to meet. They shared many interests, but pursued them in characteristically different ways.

In his impressionistic portraits of the two Heims weaves a variety of sources together, including correspondence, interviews (both his own and those conducted by others), reminiscences of colleagues, and his subjects' publications. But the ideal situation of equivalent sources for the two subjects does not obtain, since there is no von Neumann counterpart to Wiener's intimate self-portraits. This fact, combined with von

Neumann's notably smooth adaptation to his social environment, may account in part for Heims's difficulty in grasping the human character of von Neumann. Wiener, with his penchant for self-analysis and eccentric behavior, presents no such difficulty.

Heims's ultimate intention, however, is less to examine Wiener and von Neumann as individuals than to appraise scientific activity itself. In this context, von Neumann stands as symbol and archetype, "a scientific man within all the major connotations of today" (p. 360). As a "paragon of science," von Neumann espoused "value neutrality" and faith in scientific and technological progress (*ibid.*). Much of this dual biographical essay is devoted to a critique of the scientific ethos, which Heims sees in fundamental "conflict with a wider, more comprehensive humanness" (p. 363). Particularly damnable is von Neumann's enthusiastic and lucid commitment to technological horrors. Heims provides a lengthy account of the politics and administration of superarmament. The reader might wish to learn more about von Neumann's participation in the decision-making process, but the necessary governmental documentation was evidently not open to Heims. For his purposes, however, it is enough to know that von Neumann participated, and did so willingly.

By contrast, Wiener, whose relations with society were often rocky, held implicitly "organismic" values infused with the concept of process, an outlook Heims characterizes as fundamentally ecological. Wiener's mode of cybernetic analysis "is particularly suited to exposing the inhuman use of human beings" (p. 303), and, unlike von Neumann's game-theoretical approach, helps the social steersman keep off a suicidal course. Wiener sought to construct a practical and painfully modern philosophy of technology. Its personal expression would be a refusal to put technological knowledge and tools in irresponsible hands and the erection of yet another barrier between Wiener and the amoral majority of the scientific and technical community. All this Heims finds laudable and, more to the point, congenial to his own point of view.

The genre of dual biography puts special demands on an author, and Heims occasionally succumbs to the natural temptation to force a contrast or parallel. The insistence on von Neumann as an "outsider," for example, seems forced or irrelevant at times. The author also passes up some promising opportunities for detailed comparison—for example,

Wiener's and von Neumann's different approaches to long-range weather prediction. Heims does describe with care and finesse Wiener's concern with stochastic processes and von Neumann's formal, axiomatic method. If some topics—the early history of quantum mechanics, or prewar Hungarian society and politics—are better explained elsewhere, Heims's accomplishment in providing access to measure theory and game theory is still substantial. The appetite is whetted for intellectual biographies of both Wiener and von Neumann.

Heims entertains no such intent in this work. Instead, he uses Wiener and von Neumann to illustrate his contention that "the traditional ethos of the scientific community, dictated by the god of scientific and technological progress, needs modification so as to allow for the re-emergence of suppressed human and cultural needs" (p. 159). It is debatable whether these two mathematicians are representative of the options facing the scientific community. For Heims, however, this question, and the tasks of the biographer, are made subordinate to a vehement conviction of the moral poverty of modern science.

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The Amateur Archaeologist's Handbook. Maurice Robbins with Mary B. Irving. Harper and Row, New York, ed. 3, 1981. xii, 306 pp., illus. \$12.95.

American Medicine in Transition, 1840-1910. John S. Haller, Jr. University of Illinois Press, Urbana, 1981. xii, 458 pp., illus. \$27.95.

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(Continued on page 1538)

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Newly offered instrumentation, apparatus, and laboratory materials of interest to researchers in all disciplines in academic, industrial, and government organizations are featured in this space. Emphasis is given to purpose, chief characteristics, and availability of products and materials. Endorsement by *Science* or AAAS is not implied. Additional information may be obtained from the manufacturers or suppliers named by circling the appropriate number on the Readers' Service Card (on pages 1450A and 1534E) and placing it in the mailbox. Postage is free.

—RICHARD G. SOMMER

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Gas Chromatograph

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Literature

Atomic Spectroscopy compares single- versus double-beam configurations, tells how to determine optical efficiency, and features analytical instruments and accessories for elemental analysis. Instrumentation Laboratory. Circle 822.

Electrophoresis Supplies describes polyacrylamide gel apparatus for research and clinical applications. Isolab. Circle 823.

Fermentation Equipment lists fermentor vessels, accessories, and modular-control instrumentation. LSL Biolafitte. Circle 825.

Photomicroscope III includes accessories and equipment and offers advice on production of quality photomicrographs with this instrument. Carl Zeiss. Circle 827.

Research Products features liquid scintillation chemicals and apparatus, radiation monitoring equipment, and materials for radioactive labeling. Research Products International. Circle 840.

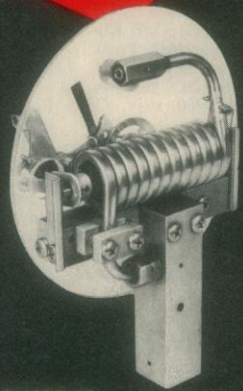
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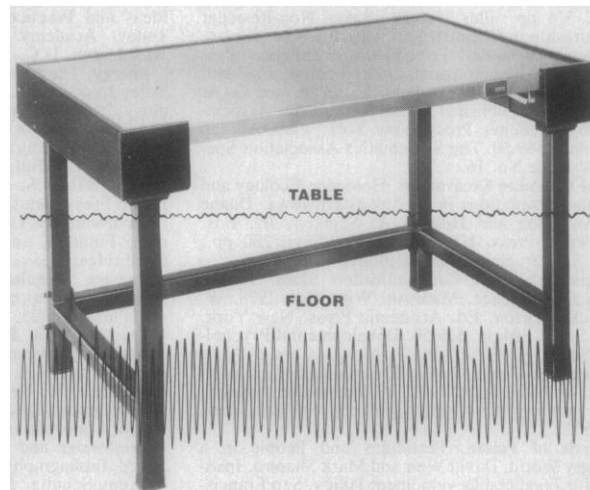


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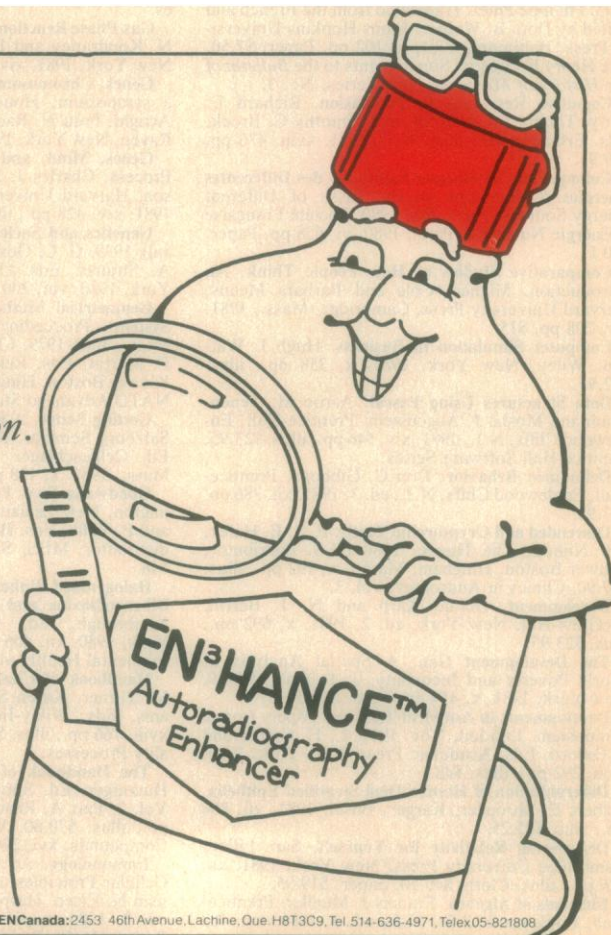
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(Continued from page 1496)

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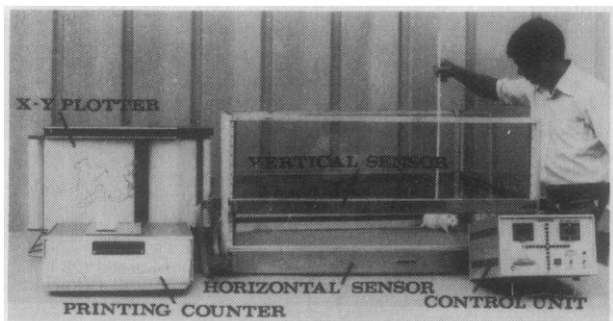
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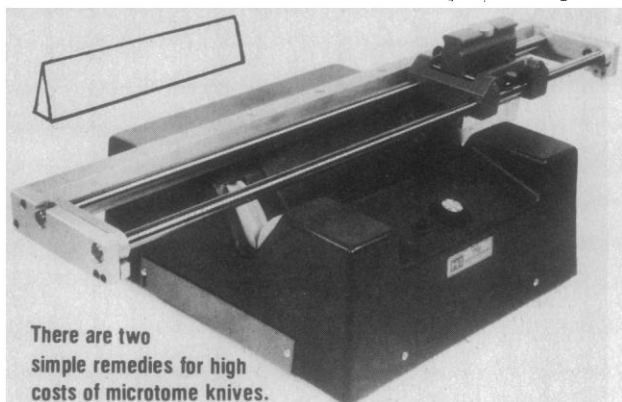
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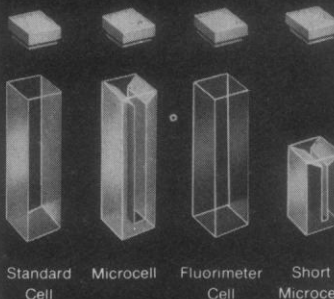
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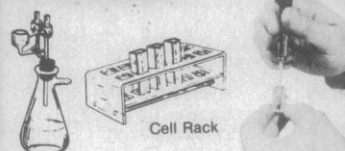
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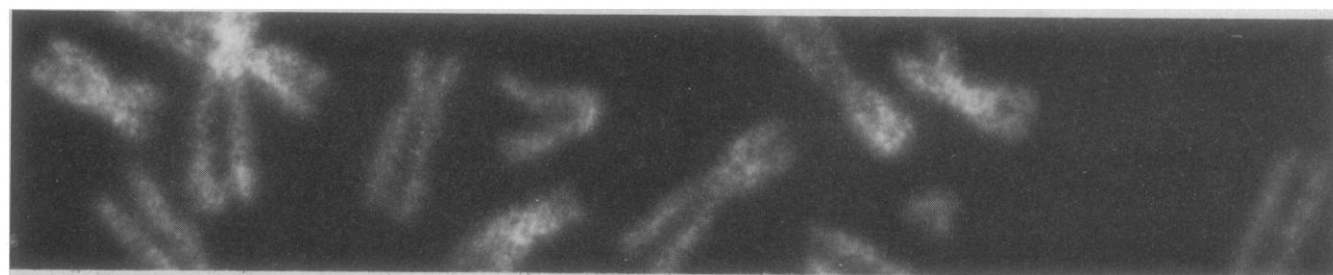
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ASSISTANT PROFESSOR/HUMAN ANATOMY AND PHYSIOLOGY. School of Allied Health Sciences, The University of Texas Medical Branch at Galveston. Assistant professor to teach junior- and senior-level courses in human anatomy and physiology beginning August. Ph.D. and teaching experience required. Applicants should send a curriculum vitae, three letters of reference, and documentation of teaching effectiveness to: HAP Search Committee, School of Allied Health Sciences, The University of Texas Medical Branch, Galveston, Texas 77550. Deadline for application is 10 July postmark. U.T.M.B. is an Affirmative Action/Equal Opportunity Employer.

ASSISTANT PROFESSOR POSITION

The Department of Microbiology, St. Louis University Medical Center, invites applications for an appointment as assistant professor (tenure track). Applicants should have a Ph.D. or M.D. or both and have postdoctoral research training. Teaching and research competence should be in the area of microbial pathogenesis. Please send curriculum vitae, bibliography, and a discussion of your present research, future research plans, and the names of three referees to Dr. Morton M. Weber, Department of Microbiology, St. Louis University Medical Center, 1402 South Grand Boulevard, St. Louis, Mo. 63104. An Equal Opportunity/Affirmative Action Employer. M/F/H.

DEPARTMENT OF BIOCHEMISTRY AND BIOPHYSICS University of California, San Francisco

Applications are invited for two tenure-track positions in the area of cell biology, molecular biology, or molecular genetics at either the junior or senior level. Please enclose curriculum vitae and a two-page summary of proposed research, and arrange to have three letters of recommendation forwarded to: Dr. William Rutter, Chairman, Department of Biochemistry and Biophysics, University of California, San Francisco, San Francisco, California 94143. The University of California is an Equal Opportunity/Affirmative Action Employer.

BIOLOGIST with Ph.D. **TO CONDUCT RESEARCH IN A BONE METABOLISM UNIT.** Individual should be experienced in electron microscopy, scanning and transmission, electron-probe analysis, and biochemical and radioimmunoassay techniques; some experience in quantitative histomorphometry is preferred. Interested applicants are invited to submit curriculum vitae and references to:

Dr. Robert Lindsay
Director
Helen Hayes Hospital
Route 9-W
West Haverstraw, N.Y. 10993

Helen Hayes Hospital is affiliated with Columbia University, an Affirmative Action/Equal Opportunity Employer.

POSITIONS OPEN

ASSOCIATE/FULL PROFESSOR OF BIOCHEMISTRY. The Department of Biochemistry invites applications for an associate or full professor position. Preference will be given to persons working in molecular biology or modern biochemistry. Applicants are requested to send a curriculum vitae, names and addresses of three references, and a description of future research goals to: Dr. William Merrick, Chairman, Search Committee, Department of Biochemistry, School of Medicine, Case Western Reserve University, Cleveland, Ohio 44106. An Equal Opportunity Employer.

BIOCHEMICAL GENETICS RESEARCH ASSOCIATE POSITION available immediately for 2-year duration. Biochemist for research program involving in vitro DNA repair studies in mutagen-sensitive mutants of *Drosophila*. Repair experiments include alkaline and neutral sucrose gradients, inhibition of DNA synthesis, and HPLC analysis of alkylation products. Previous experience in repair studies preferable. Salary based on experience. Send curriculum vitae and the names of three references to: Dr. R. L. Dusenbery, Department of Biology, Emory University, Atlanta, Georgia 30322 by 1 September 1981. Emory University is an Equal Opportunity/Affirmative Action Employer.

BIOLOGY CHAIRPERSON

Rensselaer Polytechnic Institute is seeking a chairperson for the Biology Department. The department has 15 faculty members and 25 graduate students with interests in cell and molecular biology, biochemistry, biophysics, and microbiology and wishes to expand in key areas within these disciplines. Candidates for the position must have a national reputation in research and the ability to maintain an active research program while promoting growth and development of the department. A commitment to high-quality education at both graduate and undergraduate levels is expected. Candidates should send curriculum vitae and the names of three references to the following:

Biology Search Committee
Cogswell Laboratory
Rensselaer Polytechnic Institute
Troy, New York 12181

Rensselaer is an Equal Opportunity/Affirmative Action Employer.

CELL PHYSIOLOGIST OR BIOLOGIST—RESEARCH ASSOCIATE

Candidate with proven ability to collaborate in ongoing project to define role of cations in growth regulation. Tissue culture experience required. Salary: \$18,000 depending upon qualifications. Send curriculum vitae and names of three references to F. Gary Toback, M.D., Ph.D., Department of Medicine, The University of Chicago, 950 East 59 Street, Chicago, Illinois 60637. Telephone: 312-947-6918.

An Equal Opportunity/Affirmative Action Employer

ASSOCIATE DEAN OF THE GRADUATE SCHOOL AND DIRECTOR OF THE OFFICE OF RESEARCH

The University of Arkansas for Medical Sciences (UAMS) invites applications and nominations for the position of associate dean of the Graduate School and director of the Office of Research. The associate dean is responsible for all graduate programs at UAMS and will have an independent budget for support of students and their research. As director of the Office of Research, he or she will encourage the development of research programs, identify funding sources, coordinate interdisciplinary projects, supervise research facilities and support personnel, and be responsible for all general institutional research funds including the Medical Research Endowment.

The candidate should have a Ph.D. in a biological science or an M.D., a record of scholarly achievements and funded programs, experience in graduate education, and proven leadership and administrative abilities. Persons with active research programs are preferred.

Please send nominations or a copy of your curriculum vitae and complete bibliography before 1 September 1981 to:

Dr. John E. Pauly, Chairman of the Search Committee
Department of Anatomy—Slot 510
University of Arkansas for Medical Sciences
4301 West Markham Street
Little Rock, Arkansas 72205

An Affirmative Action/Equal Opportunity Employer

POSITIONS OPEN

The University of California, Irvine, College of Medicine, is seeking a **CHAIR** for the **Department of Biological Chemistry**. Candidates will have demonstrated excellence in research and teaching and will have administrative experience. Candidates should be able to provide academic leadership for the department. Applications from all qualified candidates are welcome; the University of California is an Affirmative Action Employer. Send curriculum vitae before 7 August 1981 to: Dennis D. Cunningham, Chair of Biological Chemistry Search Committee, Department of Microbiology, College of Medicine, University of California, Irvine, Calif. 92717.

CHEMISTRY HEADSHIP

Oklahoma State University is searching for a head for their Chemistry Department. A chemist with outstanding scholarly credentials is being sought to be part of a college drive for excellence. Previous administrative experience will be considered but not required. Salary competitive. Nominations are welcome. Applications and three letters of recommendation should be sent to Professor L. E. Halliburton, Chairman of Search Committee, Department of Chemistry, Oklahoma State University, Stillwater, Oklahoma 74078 (Telephone: 405-624-5796). To receive full consideration, applications should be received by 15 September 1981. Oklahoma State University is an Affirmative Action/Equal Opportunity Employer.

FACULTY POSITIONS

CLINICAL GENETICS. We are hoping soon to make two appointments in clinical genetics. A senior faculty position in administration, research, teaching, and patient care, and a junior clinical position. Please send curriculum vitae and two reprints to: Renata Laxova, M.D., Laboratory and Genetics, University of Wisconsin, Madison, Wisconsin 53706. Equal Opportunity/Affirmative Action Employer.

DEAN

School of Natural Sciences and Mathematics
The University of Alabama in Birmingham
Birmingham, Alabama

Nominations and applications are invited for the position of Dean. The School of Natural Sciences and Mathematics offers graduate and undergraduate programs in Biology, Chemistry, Physics, Computer Science, Mathematics, Earth Science and Natural Science including the Ph.D. in the first three disciplines. A candidate for the position should have earned doctorate and relevant experience to qualify for tenured full professor, together with appropriate administrative experience. Academic experience should include significant undergraduate and graduate teaching and a record of research accomplishments. Please send nominations and applications (including curriculum vitae) before 15 September 1981 to:

Dr. John P. Anderson, Chairman
NS&M Dean Search Committee
UAB Special Studies
The University of Alabama in Birmingham
University Station
Birmingham, Alabama 35294
Telephone: 205-934-3295

An Equal Opportunity/Affirmative Action Employer

EPIDEMIOLOGIST. Research faculty at the University of Pennsylvania. To conduct and coordinate research in drug epidemiology and teach biostatistics and epidemiology. **Qualifications:** Ph.D. in epidemiology or related discipline and minimum of 2 years' research experience in epidemiology. Teaching experience also required. Salary \$16,325 to \$22,000. Contact: Burvin Hardy, Philadelphia Job Bank, 1709 South Broad Street, Philadelphia, Pa. 19148.

FACULTY POSITIONS. Expanding medical microbiology department invites applications for two tenure-track appointments. Successful applicants must have a Ph.D., postdoctoral training, and evidence of productivity. Development of a strong research program is expected. One position, rank dependent on qualifications, requires expertise and interests in pathogenic mechanisms, genetics, and immunity. The other, at the assistant professor level, is for a virologist involved in molecular aspects of viral pathogenesis and immunity. Applicants should send curriculum vitae, statement of research interests, and have three letters of recommendation sent to: Chairman, Search Committee, Department of Microbiology, University of Missouri-Columbia, School of Medicine, Columbia, Missouri 65212. Deadline: 1 October 1981. An Affirmative Action/Equal Opportunity Employer.

POSTDOCTORAL FELLOW, MICROBIAL BIOCHEMISTRY

SmithKline Corporation, a diversified multinational health care firm, is seeking a Postdoctoral Fellow for its Medicinal Chemistry/Microbiology Effort Center at its suburban Upper Merion facility, 17 miles west of Philadelphia, PA.

The successful candidate for this challenging position will be expected to isolate and characterize enzymes involved in bacterial cell wall biosynthesis.

Candidates are required to have a PhD in Biochemistry or in Microbiology with a strong background in Biochemistry. Experience in enzyme isolation by state-of-the-art techniques, enzyme kinetics and radiotracer techniques are also required.

SmithKline offers an excellent compensation and benefits program including an attractive relocation package along with opportunity for personal and professional growth. Please send resume in confidence to: SMITHKLINE CORPORATION, 1514 Spring Garden Street, Philadelphia, PA 19101. We are an equal opportunity employer, F/H/M/V.

SmithKline
CORPORATION

Senior Biochemist

We are the Research and Development Division of the Revlon Health Care Group, a worldwide group of diversified companies providing products and services in the field of human health.

Due to expanding opportunities in our organization, our Drug Disposition Department based at our lower Westchester County location, currently has an outstanding opportunity for a senior biochemist in our Bioanalytical Services Group.

We are looking for an individual with an advanced degree (preferably a PhD or equivalent) in biochemistry or a related science to support the needs of R & D for high volume assay methodologies for drugs in biological fluids. Previous

experience with GC and HPLC procedures essential.

Position will include monitoring of assays contracted to extramural laboratories and adaptation of laboratory methods to high volume automated or semi-automated procedures for inhouse assay support, and will involve frequent interaction with clinical and preclinical staff.

We offer excellent salary and fringe benefits.

Please send resume to Manager, Selection and Placement, Revlon Health Care Group, Dept 5982, Suite 816, 50 Rockefeller Plaza, New York, NY 10020.

An equal opportunity employer M/F

REVLON Health Care Group



LAND BIOMASS ENERGY R&D Project Management

GRI, as an energy research organization, finances, plans and manages R&D programs related to the natural gas industry in a broad spectrum of energy areas for the benefit of the gas consumer. Current R&D efforts are dedicated to the production of methane by bacterial decomposition of biomass (plant material), a renewable energy resource which can be produced in dispersed locations near the point of use.

Position will involve technical management of research programs and projects related to the production of methane from herbaceous, woody, and fresh-water plants through bioconversion and thermo-chemical gasification. M.S./Ph.D. biological or agricultural engineering with directly related research experience required. GRI, under a jointly funded project, is demonstrating the practicality of using a combination of sludge and water hyacinths from a wastewater purification pond as a methane-producing feedstock.

The expected high demand for natural gas reaffirms the need for talented professionals eager to address the energy challenges of the future. Your resume should be directed to: **J.R. QUINNAN**.

GRI
gas research institute

GAS RESEARCH INSTITUTE
8600 West Bryn Mawr Avenue, Dept. I.B-124
Chicago, IL 60631

equal opportunity employer m/f/h

POSITIONS OPEN

SEARCH CONTINUES

DIRECTOR, University of California Center for Occupational Health and Safety, and **PROFESSOR**, College of Medicine, University of California, Irvine, and School of Public Health, University of California, Los Angeles.

The University of California, Irvine, and Los Angeles campus seek an internationally recognized scholar in the field of **Occupational Health** for appointment as director of a developing Center for Occupational Health and Safety. A high level of achievement is required in Occupational Health-related research and teaching as is a strong interest in developing multidisciplinary programs that focus on health hazards in the workplace. The selected candidate should qualify for a professorship with Academic Senate membership.

Evidence of effective relationships with governmental agencies, labor organizations, and industrial management is highly desirable.

The University of California is an Equal Opportunity/Affirmative Action Employer. Please send curriculum vitae, a brief statement of current research interests, and the names of three or more references to:

Frederick Reines
Chair of Search Committee
and Professor of Physics
University of California, Irvine
Irvine, Calif. 92717

FACULTY POSITION—IMMUNOLOGY. The University of North Carolina Cancer Research Center and Department of Bacteriology and Immunology invite applications for an advanced faculty position in immunology. Areas of particular interest are, but are not limited to, molecular immunogenetics, lymphocyte membrane chemistry or biology, and biological response modification. Candidates must be interested in participating in graduate training activities and have a strong research program in cellular immunology under way. Major leadership role in the Cancer Research Center possible. Candidates should be citizens of the United States or eligible for a permanent visa. Please send your curriculum vitae and a covering letter in which you state your field of interest and references. *Minorities and women are encouraged to apply.* Correspondence should be addressed to: Shirley Powell, Assistant to the Director, Cancer Research Center, Box 30, MacNider Building, 202H, University of North Carolina, Chapel Hill, N.C. 27514. *The University of North Carolina is an Equal Opportunity/Affirmative Action Employer.*

FACULTY POSITION COORDINATOR OF FISHERIES AND WILDLIFE DEPARTMENTS OF ZOOLOGY AND FORESTRY

ASSISTANT OR ASSOCIATE PROFESSOR in the area of fisheries and wildlife to (i) direct the academic and research program, (ii) maintain an active personal research program, (iii) be responsible for program planning in extension, and (iv) teach an advanced course. Applicants must have a Ph.D. in fisheries, wildlife biology, or a related interdisciplinary field, such as wetlands ecology, and should have experience managing programs in a university setting. Ability to interact with off-campus state, federal, and private fisheries and wildlife agencies is essential. Applicants should send curriculum vitae and names of three references to: **Chairperson, Search Committee, Department of Zoology, North Carolina State University, Raleigh 27650.** Closing date is 15 August or until a suitable candidate is found.

NCSU is an Equal Opportunity/Affirmative Action Employer.

IMMUNOGENETICIST. Opportunity to collaborate in biomedical research projects involving nonhuman primates and to pursue independent research. Applicants with interest and experience in defining and exploiting major histocompatibility systems are especially encouraged. The Southwest Foundation is affiliated with the University of Texas Health Science Center at San Antonio and maintains more than 3000 nonhuman primates, large colonies of standard laboratory animals, and one marsupial species. The successful applicant will join Drs. John L. Vandenberg, Jean W. MacCluer, and Bennett Dyke in a newly established Genetics Program. This is an excellent opportunity for a creative scientist. Send résumé, statement of research interests, and names of three references to: **Personnel Manager, Southwest Foundation for Research and Education, P.O. Box 28147, San Antonio, Tex. 78284.** *An Equal Opportunity/Affirmative Action Employer.*

POSITIONS OPEN

IMMUNOLOGIST

Dartmouth Medical School invites applications now for a position of **Assistant Professor** or, in the case of exceptionally well-qualified applicants, **Associate Professor of Immunology.** This tenure-track appointment in the Department of Microbiology will be effective on or about 1 July 1982, but we hope to fill the position well before that date. Responsibilities include the development of an independently funded research program and teaching of immunology to medical and graduate students. *Women and minority candidates are especially encouraged to apply.* Minimal qualifications include an M.D. or Ph.D. and several years of postdoctoral research experience. Send a detailed curriculum vitae, a statement of research interests, and the names of three referees to: **Dr. Michael Fanger, Microbiology Department, Dartmouth Medical School, Hanover, New Hampshire 03755.** *An Equal Opportunity/Affirmative Action Employer.*

NEUROSCIENCE POSTDOCTORAL POSITIONS

AVAILABLE in the following areas: cellular neurophysiology (with W. H. Calvin, Ph.D., or P. A. Schwartzkroin, Ph.D.), epileptic neuron physiology and motor control (A. R. Wyler, M.D., and A. A. Ward, Jr., M.D.), neuroanatomical mechanisms of epilepsy and deafferentation (A. B. Harris, M.D., and L. E. Westrum, M.D., Ph.D.), physiology of human language and memory (G. A. Ojemann, M.D.), behavioral effects and mechanisms of action of antiepileptic drugs (J. S. Lockard, Ph.D.), and neurophysiology of peripheral nerve disorders (J. D. Loeser, M.D., and W. H. Calvin, Ph.D.). NRSA stipends with Payback Agreement for U.S. citizens or permanent residents with Ph.D. or M.D. and relevant research experience. Write individual faculty or:

Dr. William H. Calvin
Chairman, Selection Committee
Neurological Sciences Training Program
Department of Neurological Surgery (RI-20)
University of Washington
Seattle, Washington 98195

INTERNATIONAL RELATIONS EXECUTIVE DIRECTOR

The National Research Council (NRC), the principal operating arm of the National Academy of Sciences, a nationally prominent non-profit, nongovernmental institution located in Washington, D.C., invites applications for the position of **Executive Director of the Commission on International Relations (CIR).** The CIR has major responsibility for relations with international scientific organizations, for international exchange programs, for programs with developing countries, and for programs in international security and arms control. In addition, the CIR provides advice to the agencies of the government engaged in international scientific and technical relations.

The Executive Director manages one of the eight major program units of the NRC. Responsibilities include providing advice to the chairman of the NRC and the chairman of the CIR, CIR program initiation, administration and review, development of funding and budgets, and supervision of the staff of more than 45 professionals and 25 supporting staff.

A Ph.D. or equivalent is desirable with broad background in science and technology as a component of foreign policy. Substantial leadership experience is required in the field of international science and technology programs with major responsibilities for program development and policy analysis, and the utilization of technical advice in policy formulation. Familiarity with government agencies including contract/grant procedures and familiarity with private institutions concerned with international science and technology is highly desirable.

Applicants should send curriculum vitae to **Dr. Robert W. Johnston, Associate Executive Officer, National Academy of Sciences, 2101 Constitution Avenue, NW, Washington, D.C. 20418.**

An Equal Opportunity Employer

POSITIONS OPEN

Applications are invited for a **FACULTY POSITION IN NUTRITION** (rank and salary negotiable, subject to qualifications and experience). An individual is sought who has strong training in the experimental and biochemical aspects of nutrition and interest in the application of this training to problems in human nutrition. The position involves teaching of the comparative and metabolic aspects of nutrition at the undergraduate and graduate levels and development of an active research program in biochemical nutrition or toxicology. Curriculum vitae and names of three referees should be sent to: **Dr. B. L. Walker, Chairman, Search Committee, Department of Nutrition, University of Guelph, Guelph, Ontario, Canada N1G 2W1.** Closing date is 1 September 1981 or when position is filled. Subject to final budgetary approval.

Department of Ocean Engineering, Massachusetts Institute of Technology, TWO FACULTY POSITIONS.

Applications are invited from highly qualified individuals with a commitment to teaching and research in the following areas: (i) analysis and design of offshore and marine structures and (ii) solid mechanics in the field of ocean engineering and naval architecture. Teaching will be at the undergraduate and graduate levels. For the first position, research activities may be in the broad area of interest to the department, including analysis and design of offshore structures, analysis and design of marine structures, and structural dynamics and fabrications. Desirable qualifications include a broad knowledge of structural analysis and design in the field of ocean engineering. For the second position, research activities may be in the broad area of interest to the department, including plates and shells, plastic analysis, ice mechanics, and fracture and fatigue. Desirable qualifications include a broad knowledge of solid mechanics. Experience in applications to the field of ocean engineering is desirable but not necessary. For both positions, rank will be commensurate with experience and qualifications. In case of an appointment at the assistant professor level, a starting salary will be \$24,000 for the 9-month academic year. There are opportunities to supplement the academic-year salary during the summer months. A salary for the associate or full professor depends upon the qualifications of the applicant. Applications from all qualified candidates are welcome: *minorities and women are encouraged to apply.* Applications, including a résumé, names of references, and copies of abstracts of publications should be sent to: **Dr. Ira Dyer, Head, Department of Ocean Engineering, Building 5-228, Massachusetts Institute of Technology, Cambridge, Mass. 02139.**

The University of Manitoba, Faculty of Medicine, has positions available for **LECTURER THROUGH PROFESSOR.** These positions are available in response to the development of a multidisciplinary program in the area of recombinant DNA technology, molecular genetics, nucleic acids, and molecular endocrinology. The successful applicant(s) will be expected to develop an independent research program utilizing genetic engineering-recombinant DNA techniques. Send curriculum vitae, including a brief outline of future research interest, to **Dr. Henry G. Friesen, Professor and Head, Department of Physiology, University of Manitoba, 770 Bannatyne Avenue, Winnipeg, Canada R3E 0W3.** Canadian citizens, permanent residents, and others eligible for employment in Canada are encouraged to apply.

MINERALOGIST. The Academy of Natural Sciences of Philadelphia invites applications for the position of mineralogist. General responsibilities will encompass all aspects of curation of a large mineralogy collection of major national significance including maintenance and preservation of specimens, cataloging and information storage, and active involvement in exhibit preparation; participation in the Academy's education program and interaction with the amateur mineralogy community. Candidates should have a M.S. degree in mineralogy and prior experience with mineralogical curation techniques, including information storage and retrieval systems for scientific collections. Teaching and exhibits experience is highly desirable. Send résumé and names of three references by 30 July to: **Dr. John W. Sherman, Chairman, Mineralogy Search Committee, Academy of Natural Sciences of Philadelphia, Philadelphia, Pennsylvania 19103.**

Equal Opportunity Employer

RESEARCH CHEMIST/ DEVELOPMENTAL ENGINEER

The Staley Company, a rapidly growing Fortune 250 Firm, diversified in food ingredients, agri-business and industrial products, is currently seeking a Physical/Inorganic Chemist and a Developmental Engineer for our Research and Development staff.

PHYSICAL/INORGANIC CHEMIST

With Ph.D. in Physical Chemistry or related field. Must have expertise in crystallization of small molecules and basic knowledge of solution chemistry, kinetics, thermodynamics, phase changes and nucleation phenomena highly desirable.

DEVELOPMENTAL ENGINEER

With Ph.D. in Chemical Engineering or Biochemical Engineering. Must have strong interest in process research or development. Position affords direct involvement with process design and scale-up.

Successful candidates will possess 0-2 years post-doctoral or associate professor or basic industrial research experience. Must have good written and verbal communication skills, the ability to work well with a team, and possess a high degree of creativity.

For confidential consideration, please forward your resume with salary history to:



Staley

An equal opportunity/affirmative action employer M/F

Kathryn E. Newton
Placement Representative
A. E. Staley Manufacturing Company
2200 E. Eldorado Street
Decatur, IL 62525

D.V.M., Ph.D. Pathologist ACVP Diplomate

Career opportunity with top quality toxicology and pathology research laboratory located in Wonderful Western Michigan. Responsibilities will include the design, implementation and management of studies, the evaluation of data, the histopathologic assessment of lesions and the preparation of reports and, finally, contact with clients and regulators.

A total commitment to integrity and excellence is required. Financial package will be appropriate to the chosen individual.

Contact or send resume to Bobby Joe Payne, D.V.M., Ph.D., Director of Pathology and/or Gordon S. Dean, Ph.D., President.

TOXICITY RESEARCH LABORATORIES, LTD.
510 West Hackley Avenue
Muskegon, Michigan 49444
Telephone 6167332584

RESEARCH ASSOCIATES

We are a leading international manufacturer of health care and life support devices and are in the process of recruiting for our new Research and Development Center in Elkton, Maryland.

Immunochemist

M.S. or B.S. in immunochemistry, biochemistry; ASCP clinical chemist or related field with 2-3 years of R & D experience. Background should include protein purification and characterization, enzyme-protein conjugation and immunoassay development.

Biochemist

M.S. or B.S. with 2 years or more R & D experience in cell biology and protein chemistry. Background should include hybridomas cell line production, microbiology, protein chemical modification, animal immunization and general biochemical techniques, etc.

In addition to competitive salaries and liberal fringe benefits, we offer the opportunity for growth with a rapidly expanding company. Please send resume including salary history, in confidence to:

Terumo Medical Corporation
Stephen Zalik
Director of Personnel
70 S. Chapel Street
Newark, DE 19711



An Equal Opportunity Employer M/F

CSIRO

RESEARCH SCIENTIST/SENIOR RESEARCH SCIENTIST
DIVISION OF PLANT INDUSTRY
CANBERRA, ACT, AUSTRALIA

CSIRO has a broad charter for research into primary and secondary industry areas. The Organization has approximately 7400 employees—2500 of whom are research and professional scientists—located in divisions and sections throughout Australia.

Field: Molecular basis of plant improvement.

General: The Division of Plant Industry, which carries out research into problems fundamental to agricultural production invites applications from scientists interested in joining a group studying the genetics and molecular biology of plants. The broad objective of the group is the application of molecular biology to plant improvement.

The group is concerned with the following basic research problems:

- 1) Plant chromosome structure and genetic and molecular analysis of plant genes, including isolation, characterization, and regulation of expression.
- 2) The development of molecular vectors for the integration and replication of foreign DNA in plant cells.
- 3) The role and regulation of the expression of chloroplast genes in higher plants with special emphasis on the interaction between the nucleus and the chloroplast during chloroplast development.
- 4) Somatic cell genetics in plants including mutant isolation, transformation, and somaclonal variation.

Duties: To participate in one or more of the abovementioned research projects.

Qualifications: Applicants should have a Ph.D. degree in an appropriate field with research experience in molecular biology, molecular genetics, or plant tissue culture.

Salary: Research Scientist/Senior Research Scientist: \$A17,972 to \$A26,109 per annum.

Tenure: Indefinite with superannuation.

Applications: Stating full personal and professional details, the names of at least two referees, and quoting reference No.A4617 should reach:

The Chief
Division of Plant Industry
CSIRO
P.O. Box 1600
CANBERRA CITY, ACT 2601 AUSTRALIA

by 24 July 1981.

POSITIONS OPEN

UNIVERSITY OF QUEENSLAND LECTURER IN PLANT BREEDING AND GENETICS DEPARTMENT OF AGRICULTURE

Ph.D. in Plant Breeding and Genetics and proven capacity for teaching and research. Ability to teach plant breeding and cytogenetics at advanced undergraduate level essential. Research interests in physiological genetics and genetic engineering in relation to plant improvement desirable. To commence as soon as possible after appointment. Quote reference Number 24181, 31 July 1981.

Salary: \$A19,821 to \$A26,037 per annum.

Additional information and application forms are obtainable from: **The Staff Officer, University of Queensland, St. Lucia, Queensland, Australia 4067.**

MICROBIOLOGIST—PATHOGENESIS

The Department of Bacteriology and Immunology, University of North Carolina School of Medicine, Chapel Hill, seeks **Assistant or Associate Professor** level tenure-track faculty with interest in the biology of pathogenic organisms, preferably with expertise in molecular genetics. Position(s) available immediately. Evidence of research productivity required. *Applications particularly invited from women and minorities. An Affirmative Action/Equal Opportunity Employer.* Reply with curriculum vitae and names of references to **P. Frederick Sparling, M.D., 804 Faculty Laboratory Office Building, University of North Carolina School of Medicine, Chapel Hill, N.C. 27514.**

MICROBIOLOGIST: Visiting assistant professor; 2-year position. Ph.D. is required. Applicants must be qualified to teach general microbiology and applied microbiology, advise master's degree candidates, and coordinate ongoing research projects with sabbatical professor. Aquatic microbiologist with teaching experience preferred. Research space provided. Nine-month salary range: \$15,000 to \$16,000. Applications will be accepted until 24 July 1981. Applicants should send curriculum vitae, transcripts, and five letters of recommendation to: **Dr. Peggy A. Winter, Chairperson, Department of Biology, The University of West Florida, Pensacola, Florida 32504. The University of West Florida is an Equal Opportunity Employer.**

NEUROBIOLOGISTS/NEUROPHYSIOLOGISTS

The Yerkes Primate Center invites applications for two research positions in the Division of Neurobiology at the **Assistant or Associate Research Professor** level with the opportunity for a joint appointment in one of Emory University's academic departments. If an appointment is made in the Department of Anatomy, willingness to participate in the teaching of gross anatomy is desirable. Ph.D. required; postdoctoral experience expected; good overall background in neurosciences desirable. Applicants are expected to conduct independent and collaborative neurophysiologic research on the sensory and/or motor systems of primates. The center is committed to research in neurobiology, behavior, reproductive biology, and pathology in a wide variety of primates, including the great apes. Initial basic support is provided; however, researchers are expected to acquire grant support for their projects. Qualified applicants should send a description of future research goals, relevant reprints, curriculum vitae, and names of three references to: **Johannes Tigges, Ph.D., Chief, Division of Neurobiology, Yerkes Regional Primate Research Center, Emory University, Atlanta, Georgia 30322. Affirmative Action/Equal Opportunity Employer.**

POSTDOCTORAL POSITIONS

The Chemical Biodynamics Division of Lawrence Berkeley Laboratory is seeking postdoctoral applicants interested in pursuing fundamental research in collaboration with staff members in the laboratory. Applicants should have experience in the areas and/or techniques of recombinant DNA, chemical mutagenesis, plant cell tissue culture, picosecond fluorescence and spectroscopy, nanosecond IR spectroscopy, excimer chemistry, membrane-surface spectroscopy, and x-ray study of nucleic acids. *Applications from women and minorities with above experience are especially welcome.* Send applications to **Mr. Paul Hayes, Division Administrator, Laboratory of Chemical Biodynamics, c/o Employment Office, Lawrence Berkeley Laboratory, One Cyclotron Road, Berkeley, Calif. 94720. An Equal Opportunity Employer, M/F.**

POSITIONS OPEN

PATHOLOGIST—CELL BIOLOGIST

Established investigator for faculty position. Special areas of interest include basic cell structure/function relations, animal genetics, neurobiology, and animal virology. *Women and members of minority groups are encouraged to apply.* Please forward curriculum vitae to **John E. Craighead, M.D., Chairman, Department of Pathology, University of Vermont, Burlington, Vermont 05405.**

PHARMACOLOGISTS

Two faculty positions are open at the assistant professor level. The positions involve teaching at the undergraduate and graduate level in Pharmacology and Toxicology. In addition, the successful applicant would be expected to develop an independent research program and pursue extramural funding. Excellent laboratories and equipment are available, and some "seed" money would be provided. Interest in Cardiovascular Pharmacology and/or Toxicology and a B.S. in Pharmacy are preferred but not essential. Send résumé and four references to: **Dr. W. M. Bourn, Head, Division of Pharmacology and Toxicology, School of Pharmacy, Northeast Louisiana University, Monroe, La. 71209. NLU is an Equal Opportunity Employer.**

POSTDOCTORAL POSITION

For **Biochemist or Cell Biologist** interested in the regulation of sterol and polyprenol biosynthesis. Salary \$15,600 to \$20,000 depending on experience. Contact:

**A. A. Kandutsch, Ph.D.
The Jackson Laboratory
Bar Harbor, Maine 04609**

POSTDOCTORAL POSITION in population genetics, in the newly established Genetics Program at the Southwest Foundation. Opportunity to pursue independent research and to collaborate with Drs. Jean W. MacCluer, Bennett Dyke, and John L. VandeBerg in a variety of ongoing projects. Training in statistics desirable. Current and prospective areas of interest within the program include: (i) identification of genetic factors contributing to susceptibility to atherosclerosis; (ii) maintenance of genetic variability and investigation of inbreeding effects within the Foundation's baboon colony; (iii) investigations of genetic variation in reproductive performance in a variety of species; and (iv) development of models for predicting the incidence of genetic diseases in human populations. Send résumé, statement of research interests, and names of three references to: **Personnel Manager, Southwest Foundation for Research and Education, P.O. Box 28147, San Antonio, Texas 78284. We are an Equal Opportunity/Affirmative Action Employer.**

POSTDOCTORAL POSITION available in molecular biology of maize. Experience with enzymology, nucleic acids; and general molecular techniques preferred. Send résumé and three letters of reference immediately to **Dr. J. G. Scandalios, Department of Genetics, North Carolina State University, Raleigh, North Carolina 27650. An Affirmative Action/Equal Opportunity Employer.**

The Michigan State University (MSU)—Department of Energy (DOE) Plant Research Laboratory (PRL) seeks well-qualified candidates for **POSTDOCTORAL RESEARCH ASSOCIATE** positions. The PRL is an interdisciplinary research institute located on the Michigan State University campus, devoted to the study of physiology, biochemistry, and biophysics of plants. Current research areas include genetics and molecular biology, membranes and mechanisms of hormone formation and function, flowering, photobiology, photosynthesis thermophysiology, syntheses and structure of glycoproteins and cell walls, nitrogen and sulfur metabolism, enzyme regulation, and developmental patterning. Organisms used include mycoplasmas, thermophilic bacteria, blue-green algae, cellular slime molds, and mosses, in addition to flowering plants. Salaries start at \$13,500 per year. Appointments are for 1 year starting fall 1981 or thereafter; renewable once. The number of appointments is dependent on available funds. To apply for positions submit a curriculum vitae and three letters of reference to:

**Dr. Charles Antzen, Director
MSU-DOE Plant Research Laboratory
Michigan State University
East Lansing, Michigan 48824**

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POSITIONS OPEN

POSTDOCTORAL RESEARCH position for neurochemical studies in the central and peripheral nervous system. Two positions are available. One involves a study of the mechanisms of muscarinic cholinergic receptor regulation in heart in response to physiologic and pharmacologic intervention in vivo and in situ. The second involves a study of the regulation and identification of cyclic AMP-dependent protein kinase substrates in the central nervous system. Salaries are \$14,000 per year. Send résumé and names of three references to the following: **Dr. Robert Roskoski, Jr., Head, Department of Biochemistry, LSU Medical Center, New Orleans, La. 70112. An Equal Opportunity Affirmative Action Employer.**

POSTDOCTORAL RESEARCH appointments are available in the program of Microbiology/Immunology of Northeastern Ohio Universities College of Medicine to study herpes simplex virus glycoproteins, virus-cell recognition, and antihypertensive drugs in the laboratory of Dr. Kenneth S. Rosenthal; or the genetics, physiology, and enzymology of DNA topoisomerases in the laboratory of Dr. Richard E. Depew.

Please send curriculum vitae and names of three references to:

**Office of the Vice Provost
Northeastern Ohio Universities
College of Medicine
Rootstown, Ohio 44272**

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APPLIED CHEMICAL KINETICS CALIFORNIA INSTITUTE OF TECHNOLOGY ENVIRONMENTAL ENGINEERING SCIENCE

POSTDOCTORAL RESEARCH FELLOW position available July 1981 for kinetic and reactor design studies of homogeneous and heterogeneous autoxidation catalysts. Experience in one or more of the following areas is necessary: dioxygen activation, homogeneous or heterogeneous catalysis, aqueous phase reaction kinetics, reactor design theory, organometallic synthesis, and solid supported catalysts. A Ph.D. degree in chemistry, biochemistry, or chemical engineering is required. Send detailed curriculum vitae, names of three references, and relevant publications to: **Professor Michael R. Hoffmann, W. M. Keck Laboratories (138-78), California Institute of Technology, Pasadena, Calif. 91125.**

POSTDOCTORAL POSITION. Available immediately. Ph.D. in biophysics, biochemistry, or biology. Individual will have an opportunity to work in a research area on the molecular and cellular aspects of radiobiology of low-LET and high-LET (fast neutrons) radiations, interactions between hyperthermia and radiation, or between chemicals and radiation. Experience in mammalian cell cultures and radiation biology desirable.

Please send résumé and references to: **Dr. Frank Q. H. Ngo, Radiobiology Laboratory, Cleveland Clinic Foundation, 9500 Euclid Avenue, Cleveland, Ohio 44106.**

POSTDOCTORAL POSITIONS are available in a recently established NIMH research training program in Behavioral Biology of Primates at Emory University, the Yerkes Primate Research Center, and the Georgia Mental Health Institute. The goal of the program is to train scientists to investigate the biological mechanisms of behavior in nonhuman primates. Successful applicants will demonstrate a serious commitment to a multidisciplinary research approach. Areas of emphasis include social behavior, ethology, endocrinology, psychopharmacology, and several aspects of neurobiology. Participating faculty are from the departments of anatomy, anthropology, biochemistry, biology, medicine, pharmacology, physiology, psychiatry, psychology, and sociology, as well as the Georgia Mental Health Institute and the Yerkes Regional Primate Research Center of Emory University. Eligibility is limited by federal regulations to U.S. citizens or aliens holding permanent residency visas. Send curriculum vitae, statement of research and training goals, three letters of reference, and other supporting documents to **Chairman, Postdoctoral Training Committee, Yerkes Regional Primate Research Center, Emory University, Atlanta, Georgia 30322.** Deadline for applications is 1 September 1981 for fellowships with an earliest possible starting date of 1 December 1981. *An Affirmative Action/Equal Opportunity Employer.*

RESEARCH ASSOCIATE POSITION in a Developmental Neurobiology Laboratory. Candidate should have extensive experience with axoplasmic tracer techniques and a background in neuroembryology. Write to **Dr. Joseph Altman, Department of Biological Sciences, Purdue University, West Lafayette, Ind. 47907.**

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Contact or send resume to E. C. Tompkins, Ph.D., Director of Toxicology and/or Gordon S. Dean, Ph.D., President.

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POSITIONS OPEN

POSTDOCTORAL TRAINEESHIP available 1 September 1981 in laboratory investigating the evolutionary ecology of insect parasitoid-host relationships including life history and reproductive strategies, interstrain variation, host defenses, and foraging tactics. Part-time teaching in ecology or evolution completes the traineeship. Salary \$14,000 to \$16,000. Send résumé and three letters of reference by 15 July to: **Dr. P. C. Chabora, Chairman, Department of Biology, Queens College, City University of New York, Flushing, N.Y. 11367. C.U.N.Y. is an Affirmative Action/Equal Opportunity Employer.**

The Division of Neurological Surgery, University of North Carolina School of Medicine, is seeking applicants for the position of **RESEARCH ASSISTANT PROFESSOR** to develop and direct basic and clinical research in the immunobiology of brain tumors. Prospective candidates should have several years of postgraduate (M.D. or Ph.D.) experience in recovery and identification of systemic and intratumoral immune-related cells, analysis of immune cell function in tumor-bearers, serologic analyses of tumor cell-surface antigens, and/or hybridoma technology. Qualified individuals should submit curriculum vitae and three letters of recommendation to: **M. Stephen Mahaley, Jr., M.D., Ph.D., Professor and Chief, Division of Neurosurgery, 148 Clinical Sciences Building 229H, University of North Carolina, Chapel Hill, N.C. 27514. An Equal Opportunity/Affirmative Action Employer.**

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RESEARCH STAFF POSITIONS. We are seeking several scientists (assistant to senior level) to expand a multidisciplinary research program relevant to the cellular and molecular mechanisms of carcinogenesis and mutagenesis. The program, housed in new facilities located in a scenic wooded environment near Austin, Texas, includes research in genetics, somatic cell mutation, DNA repair, plasma membrane structure/function, and dietary modifiers of carcinogenesis. Expansion in the above or other areas, including molecular genetics (gene cloning), cell growth control, differentiation, and carcinogen metabolism will be considered. Rank and salary will be commensurate with experience and qualifications. Applicants should submit curriculum vitae, bibliography, names of three potential references, summary of current grant support, and a brief description of their research plans to **Dr. A. C. Griffin, Director, Science Park-Research Division, The University of Texas System Cancer Center, P.O. Box 389, Smithville, Texas 78957. Equal Opportunity/Affirmative Action Employer.**

Two **RESEARCH POSITIONS** open in primate behavior: (i) psychopharmacology and neurochemical aspects of emotion and motivation and (ii) social behavior. Send curriculum vitae and names of references to **R. W. Goy, Director, Wisconsin Regional Primate Center, University of Wisconsin, 1223 Capitol Court, Madison, Wisconsin 53706. Starting date and level negotiable. Equal Opportunity/Affirmative Action Employer.**

RESEARCH TRAINING IN SALIVARY SECRETION

Positions are available 1 July 1981 for research training in the biochemistry, cell biology, microbiology, physiology, and/or pathology of salivary secretion. Applicants should have Ph.D. or a professional degree (M.D., D.D.S., D.V.M., or equivalent) and must be U.S. citizen or have permanent visa. Graduate programs leading to Ph.D. or M.S. are available. Stipends, \$13,380 to \$18,780, depending on experience.

Send curriculum vitae and statement of research interests to **Dr. Patricia Keller, Department of Oral Biology, SB-22, University of Washington School of Dentistry, Seattle, Wash. 98195.**

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1550

POSITIONS OPEN

STAFF POSITION RESEARCH PHYSIOLOGIST

The **REHABILITATIVE ENGINEERING RESEARCH AND DEVELOPMENT CENTER** of Edward A. Hines VA Hospital seeks a qualified individual to participate in ongoing studies of the pathophysiology of spinal cord injury and mechanisms for spinal cord regeneration.

The incumbent must be skilled in animal surgery and be thoroughly familiar with the instrumentation and electrophysiological techniques for recording gross potentials from muscle, peripheral nerve, spinal cord, and cortex. Familiarity with the neuroanatomy of the spinal cord and neurophysiology of somesthetic pathways would be helpful.

We prefer a candidate with a Ph.D. or M.S. in neurosciences or bioengineering who also has experience in techniques for fabrication of microelectrodes and programming of digital computers (PDP8/PDP11) for the acquisition and analysis of neurophysiological data.

The initial appointment will be for a term of 14 months, which may be extended up to 4 years. Salary range is \$22,486 to \$32,048 depending on qualifications.

Submit inquiries with curriculum vitae and names of references to: **Dr. John Trimble, RER&D Center, Box 20, Hines, Illinois 60141. VA Hines Hospital is an Equal Opportunity Employer M/F/H. U.S. citizenship required.**

CONFERENCES

**The New York Academy of Sciences
Conference on
Neurotensin, A Brain and Gastrointestinal Peptide
The Barbizon-Plaza Hotel, New York City
24 to 26 March 1982**

The conference is cochaired by **Charles B. Nemeroff** and **Arthur J. Prange, Jr.** (University of North Carolina School of Medicine). Neurotensin is an endogenous peptide found in brain and gastrointestinal tissue; it produces a variety of effects after systemic or direct central nervous system injection in laboratory animals. Neurotensin is generally acknowledged to be a neurotransmitter/neuromodulator candidate in the central nervous system and a putative hormone in the periphery.

This conference will bring together investigators from a variety of disciplines to discuss the anatomy, biochemistry, physiology, pharmacology, and behavioral actions of neurotensin. The conference will feature invited lectures and a limited number of poster presentations. Preference in selection of poster sessions will be given to young investigators and to novel and rigorous studies. The deadline for submission of abstracts is 1 January 1982. The abstracts should include the name of the author(s), institution, and a 100- to 200-word summary of the work to be presented in the poster. Send abstracts for poster sessions to: **Charles B. Nemeroff, M.D., Ph.D., or Arthur J. Prange, Jr., M.D., Biological Sciences Research Center, 220 H, University of North Carolina School of Medicine, Chapel Hill, North Carolina 27514. Send inquiries about details of the program and registration to: Conference Director, The New York Academy of Sciences, 2 East 63 Street, New York, N.Y. 10021.**

FELLOWSHIPS

POSTDOCTORALS—MOLECULAR GENETICS

Two postdoctoral fellowships are immediately available in the area of research dealing with gene organization and regulation in *Neurospora crassa*. Principal emphasis is on studies of the *qa* gene cluster which controls the catabolism of quinic acid. The entire *qa* cluster has now been cloned in an *Escherichia coli* plasmid. Continuing studies of the *qa* system involve the utilization of techniques such as restriction analysis and subcloning of hybrid *E. coli* plasmid DNA, *N. crassa* transformation experiments utilizing this hybrid DNA, southern and northern blot analyses, the use of in vitro translation systems, and other combined genetic and biochemical procedures in order to characterize this system as completely as possible at the molecular level. Previous experience with one or more of these techniques is desirable but not essential. For further information, write or telephone 404-542-5469. **Norman H. Giles, Ph.D., Department of Molecular and Population Genetics, University of Georgia, Athens, Georgia 30602.**

FELLOWSHIPS

POSTDOCTORAL FELLOWSHIP MOLECULAR OR DEVELOPMENTAL BIOLOGIST

A postdoctoral position will be available 1 September 1981 in the laboratory of **William R. Jeffery** at the University of Texas at Austin. The position will be to study the molecular basis of localization phenomena during early embryonic development and/or the structure and role of messenger ribonucleoprotein. Credentials and the names of three references should be sent to: **Dr. William R. Jeffery, Department of Zoology, University of Texas, Austin, Texas 78712.**

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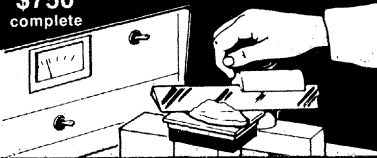
THE AUSTRALIAN NATIONAL UNIVERSITY invites applications from persons with Ph.D. degrees, or equivalent, for appointment to 14 **RESEARCH FELLOWSHIPS** in the following fields in **THE JOHN CURTIN SCHOOL OF MEDICAL RESEARCH** from early 1983. **Department of Biochemistry** (Head: Professor F. Gibson): Electron transport, energy-transducing ATPase, molecular biology, multifunctional enzymes, and phosphate transport gene expression. **Department of Clinical Science** (Acting Head: Dr. M. A. Denborough): Cell regulation malignant hyperpyrexia, asthma, atheroma, and haemostasis. **Department of Experimental Pathology** (Acting Head: Dr. I. K. Buckley): Inflammation, wound healing, blood vessels, tumour growth, and cell movement. **Department of Human Biology** (Head: Dr. R. L. Kirk): Tissue typing, genetic markers, biochemical characterization of genetic variants, and population genetics. **Department of Immunology** (Head: Professor B. Morris): Lymphocyte metabolism, reproduction, transplantation biology, disease resistance, and development of immune responsiveness. **Department of Microbiology** (Head: Professor G. L. Ada): Histocompatibility antigens, viruses, carcinogenesis, and immunity to and epidemiology of viral infections. **Department of Pharmacology** (Head: Professor D. R. Curtis): Mammalian central transmitters, pain and analgesia, mammalian sympathetic synapses, and nervous growth factors. **Department of Physical Biochemistry** (Head: Professor L. W. Nichol): Biological macromolecules, interacting protein systems, self-associations, protein conformation and hydration, and secretory and blood proteins. **Department of Physiology** (Head: Professor P. O. Bishop): Vision, physiological, anatomical, immunological, and ophthalmological studies, and contraction of skeletal muscle. **Medical Chemistry Group** (Head: Dr. D. J. Brown): Pteridines, heterocyclic amplifiers, and metal complexes. **Experimental Neurology Unit** (Director: Professor R. Porter): Spinal cord, receptors, synaptic transmission, and control of movement. Salary range: Research Fellow \$A19,821 to \$A25,871 per annum. Present exchange rate \$A1 = \$U.S.1.13. Appointment for 2 years with the possibility of extension to a maximum of 5 years. Applications welcomed from those able to take leave from their own institutions. Superannuation, reasonable appointment expenses, and housing assistance. The University reserves the right not to make an appointment or to make an appointment by invitation at any time. Applications close with the Registrar, P.O. Box 4, Canberra ACT 2600, Australia on 15 July 1981.

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Papers published in *Science* often receive far more attention than papers published in specialty journals. As a consequence, the rate of submission of papers is high—about 5000 manuscripts are submitted each year. The rejection rate of about 80 percent contrasts with that of most specialty journals, which is usually about 30 percent. Most of the material submitted to *Science* is of good quality and worthy of publication, and virtually all the scientific papers are eventually published somewhere. In selecting papers for *Science*, the editors must consider the needs of a broad audience. Insofar as the input of manuscript permits, preference is given to items that seem to be of general significance.

General Information

Four types of signed papers are considered: Articles, Reports, Letters, and Technical Comments. The author's membership in the AAAS is not a factor in selection. Papers are considered with the understanding that they have not been published and are not under consideration elsewhere. Authors will usually be notified of acceptance, rejection, or need for revision in 6 to 8 weeks (Reports) or 8 to 10 weeks (Articles).

Outside reviews. Almost all Articles and Reports, including those solicited by the editor, are sent to two or more outside referees for evaluation. Referees suggested by authors are used at the discretion of the editors. Papers that depend on statistical inferences for their conclusions may be sent to statisticians (in addition to other referees) for review.

Length limits. Papers that exceed the length limits cannot be handled expeditiously and in some cases will be returned without review. The limits are stated below in number of pages based on standard-size pages (8½ by 11 inches) typed with double spacing throughout (including the references and notes) and with 1-inch margins.

1) Articles: Up to 20 pages of text, including the references and notes, and

one table or figure for approximately every three manuscript pages.

2) Reports: Up to seven pages of text, including references and notes, and two tables or figures that together will occupy no more than half a printed page.

3) Letters: Up to 250 words.

4) Technical Comments: Up to two pages of text, including references and notes.

Selection of Manuscripts

1) Articles: About half the Articles published in *Science* are solicited by the editor. Both solicited and unsolicited Articles undergo outside and in-house review. Articles are expected to (i) provide a review of new developments in one field that will be of interest to readers in other fields, (ii) describe a current research problem or a technique of interdisciplinary significance, or (iii) present a study of some aspect of the history, logic, philosophy, or administration of science or a discussion of science and public affairs. Readers should be able to learn from a technical Article what has been firmly established and what are significant unresolved questions; speculation should be kept to a minimum. Preference is given to Articles that are well written, well organized, and within the length limit. Balance of subject matter in *Science* is an important consideration when a choice is made between acceptable Articles.

2) Reports: Reports are selected on the basis of reviewers' comments and an in-house review. Reports are expected to contain solid research results or reliable theoretical calculations. Preference is given to those that describe departures or discoveries that will be of broad interdisciplinary interest or of unusual interest to the specialist. In making the final selection, the editors take into consideration (i) the reviewers' comments: reports most likely to be accepted are those that receive persuasive outside reviews favoring publication; (ii) clarity of presentation within the prescribed length

limit; and (iii) subject matter in relation to that of other papers on hand. An attempt is made to balance the subjects of Reports so that one discipline is not overrepresented to the exclusion of others.

3) Letters: Letters are selected for their pertinence to material published in *Science* or because they discuss significant problems of interest to most scientists. Letters of a highly technical nature are usually transferred to the Technical Comments section. Letters pertaining to material published in *Science* may correct errors, provide support or agreement, offer different points of view, clarify, or add information. Outside reviewers may be consulted on questions of accuracy. Insinuations and conjecture about another author's motives, abilities, or intelligence are considered inappropriate for publication. The selection of letters is intended to reflect the range of opinions received.

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Submit an original and two duplicates of each manuscript together with a letter of transmittal giving:

- 1) the name(s) and telephone number(s) of the author(s);
- 2) the title of the paper and a statement of its main point;
- 3) the names, addresses, telephone numbers, and fields of interest of four to six persons in North America but outside your institution who are qualified to referee your paper;
- 4) the names of colleagues who have reviewed your paper; and
- 5) the fields of interest of readers who may want to read your paper.

Manuscript Preparation

Typing. Use double spacing throughout the text, tables, figure legends, and references and notes.

Units of measure. Use metric units. If measurements were made in English units, give metric equivalents.

Symbols and abbreviations. Define all symbols, abbreviations, and acronyms.

References and notes. Number references and notes in the order in which they are cited in the text. Place references cited only in tables or figure legends after the text references. Gather all acknowledgments into a single, brief statement at the end. Use *Bibliographic Guide for Editors & Authors* (American Chemical Society, Washington, D.C.) for abbreviations of journal titles. For journals not listed there provide the full title. Use the following forms:

For a journal paper: H. Smith, *Am. J. Physiol.* **98**, 279 (1931).

For a book: F. Dacheille and R. Roy, *Modern Very High Pressure Techniques* (Butterworth, London, 1961), pp. 163-180.

For a paper in a compilation: F. Dacheille and R. Roy, in *Reactivity of Solids*, J. H. de Boer, Ed. (Elsevier, Amsterdam, 1960), p. 502.

For unpublished material: A. Giraud, paper presented at the American Nuclear Society Conference, Washington, D.C., November 1976.

Illustrations. For each illustration submit three copies of a quality suitable for reproduction. Label each on the back with the name of the author and the figure number. Plan figures for the smallest printed size consistent with clarity. Color may be used if necessary but authors are billed accordingly. Cite all illustrations in the text and provide a brief legend for each.

Tables. Type each table on a separate sheet, give it a number and title, and cite it by number in the text. Give each column a heading. Indicate units of measure in parentheses in the heading for each column, and do not change the unit of measure within a column.

Equations and formulas. Use quadruple spacing around equations and formulas that are to be set off from the text. Define all symbols.

Special Requirements and Procedures

1) Articles: Provide a title of one or two lines of not more than 26 characters and spaces each; a brief author note giving your position and address; and a summary of 50 to 100 words. The summary should convey to the general reader the main point of the paper and outline the results or conclusions. The introduction should portray the broad significance of the work, and the whole text should be intelligible to scientists in different disciplines. Explain all technical terms likely to be known in only one field. Insert short subheadings at appropriate places in the text to mark your main ideas. Provide a reference list in accord with *Science* style. Reference lists should not be exhaustive; citation of a single review article can often replace many references. A maximum of 40 references is suggested.

2) Reports: Provide a title of one or two lines of not more than 54 characters and spaces each, and an abstract of 50 to 75 words. The abstract and the first portion of the report should portray for the general reader the results described and their significance. The body of the report should be intelligible to scientists in other fields of expertise. Complete documentation need not be presented but should be available in cited references.

3) Letters: Letters should be short (up to 250 words) and to the point; they should be carefully phrased, free of technical jargon, and nonrepetitive. When a Letter refers to an Article published in *Science* the original author is usually given an opportunity to reply. Letters are frequently shortened and edited. Letters are acknowledged by postcard; authors are notified if their letters are accepted for publication. Letters must be typed with double spacing.

4) Technical Comments: Technical Comments on Reports or Articles are published at the end of the Reports section. When a Technical Comment is accepted for publication the authors of the

original paper are usually given opportunity to reply.

5) Book Reviews: Instructions accompany review copies when they are sent to reviewers.

Printing and Publication

Editing. Before being sent to the printers, papers are edited to improve accuracy and effectiveness of communication. When changes are needed because the author's meaning is not clear, the editor may consult the author by telephone; when the editing is extensive, the manuscript may be returned to the author for approval or further adjustment before the type is set.

Proofs. One set of galley proofs is provided for each paper. Alterations should be kept to a minimum and marked only on the proofs. Extensive alterations may delay publication.

Scheduling. Papers are not scheduled for publication until *Science* has received corrected galley proofs from the authors. The median delay between acceptance of papers and mailing of galley proofs to authors is 4 to 8 weeks (allowing for editing and typesetting); the median delay between receipt of authors' galley proofs by *Science* and publication is 4 to 6 weeks (allowing for proofreading, layout, and paging). There may be additional delays in publication for papers with tables or figures that present problems in layout and for papers accompanying cover pictures.

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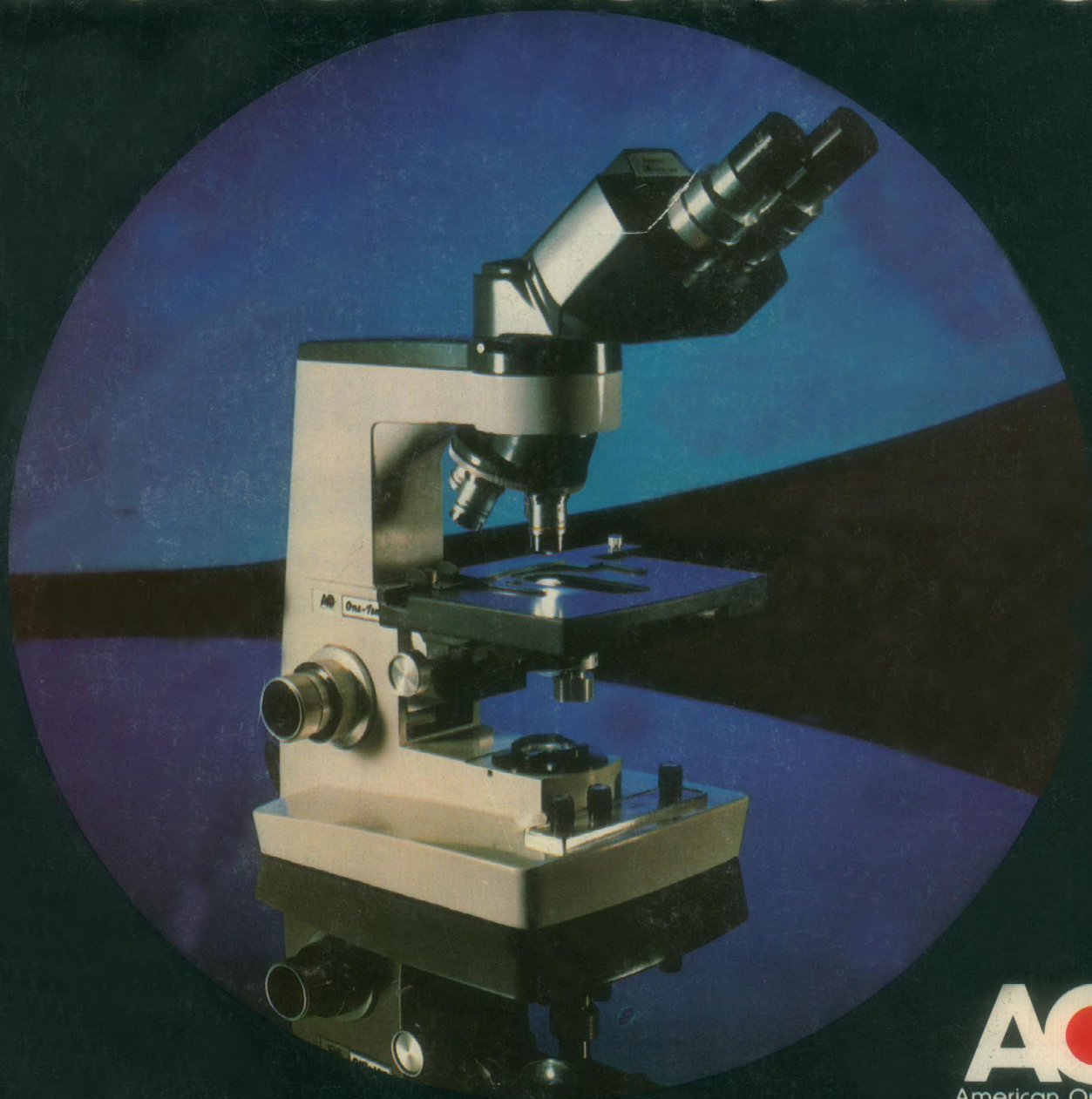
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