Bioinformatics

See bioinformatics recruitment advertisements in this issue of SCIENCE. Organizations recruiting bioinformatics professionals:

- Abbott Laboratories
- Astra Pharma Inc.
- Baylor College of Medicine
- CuraGen Corporation
- Digital Gene Technologies, Inc.
- Gene Logic
- Glaxo Wellcome
- Millennium
- Pfizer
- Pioneer Hi-Bred
- SmithKline Beecham
- Stanford University
- Washington University
- Zeneca Pharmaceuticals

Also see these Next Wave Bioinformatics Careers sponsors online at http://sci.aas.org/nextwave:

- Base4
- Genentech
- Incyte Pharmaceuticals
- NIH, Office of Education
- Pfizer

POSTDOCTORAL POSITION

GENOME-BASED BIOLOGICAL RESEARCH

Stanford University

Applications are invited for a POSTDOCTORAL position to develop novel whole-genome approaches to the study of eukaryotic biology. Emphasis on use of the sequencing database to analyze previously uncharacterized genes. Current work focuses on use of microarrays and DNA chips for studying gene expression, genotyping, complete-genome deletion strains, and protein-protein interactions. Send curriculum vitae and names of three references to: Dr. Ronald W. Davis, Ph.D., Department of Biochemistry, Stanford University School of Medicine, Stanford, CA 94301.

SCIENCE

• VOL. 273 • 12 JULY 1996
Join Our Innovative Pharmaceutical Research Team

Zeneca Pharmaceuticals is a worldwide leader in the discovery, development and marketing of innovative pharmaceuticals. We are searching for the brightest and best scientists to join our international research team. These scientists will devote themselves to the discovery and development of innovative products to conquer currently unmet medical challenges. Demonstrated excellence in the areas of bioinformatics, genomics, and molecular and cellular biology is of particular interest during this phase of expansion of our research capabilities.

Bioinformatics Analysts

We are currently seeking individuals to join our International Bioinformatics Group. Successful candidates will deliver cutting edge bioinformatics capabilities to our drug discovery efforts by contributing to problem definition, application evaluation, integration, as well as influencing Bioinformatics Strategy.

For more information, please contact us at:

Zeneca Pharmaceuticals
1800 Concord Pike
Wilmington, DE 19850-5437
USA
Attn: Dan Lawlor, Human Resources Department

Austin Knight UK Ltd.
98 King Street
Manchester, M2 4WD
UK
Attn: Bill Cogle, Director, Consultancy Services

A Business Unit of Zeneca Inc.
An Equal Opportunity Employer M/F.

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**BIOINFORMATICS SECTION MANAGER**

You will lead computer specialists in software R&D for bioinformatics. This will include implementing and developing strategies for new technologies/algorithm, operating a distributed UNIX network, and leading software efforts in C, relational data and the web. You will also collaborate with biologists and chemists, provide user support, and act as the scientific computing liaison.

We require a Ph.D. in Biology, Molecular Biology or Chemistry and 4 years of research experience in Biology/Molecular Biology, including a background supporting software development in a medical or research environment. We also require 2 years of project leadership/supervisory skills.

Excellent interpersonal and communications skills are a must.

With 50,000 employees worldwide and over $10 billion in annual sales, we've established ourselves as a respected and innovative leader in the health care industry. We offer an outstanding compensation and benefits package including profit sharing and a stock retirement plan. In addition, we are located in an attractive suburban setting approximately 30 miles north of Chicago. For confidential consideration, please send your resume with salary history to: Abbott Laboratories, Job #96-UHB-1662, DS83, AP6B, 100 Abbott Park Rd., Abbott Park, IL 60064. Abbott is an Affirmative Action Employer/Smoked Free Environment.

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**Genomics, Breakthrough Discoveries**

*Genome Therapeutics Corp.* is a proven leader in the field of genomics and a major contributor to the Human Genome Project. Our focus is to identify and characterize genes involved in common diseases and to translate our discoveries into therapeutic breakthroughs. OTC is a fast-growing and financially successful biotechnology company—in the past year we have initiated a $12 million and a $43 million alliance to develop genome-based drugs and vaccines. Challenging and rewarding opportunities exist for:

### Microbial and Human Disease Gene Discovery

#### Microbial Genome Analysts

Scientists with broad knowledge of microbial physiology and significant experience with computational sequence analysis methods to do sequence analysis/annotation. Work at the interface between computing and molecular biology in the search for useful gene targets for developing novel anti-microbials. Junior and senior positions are available. Job Code: 283

#### Human Genome Analyst/Programmer

Develop software tools for cDNA Sequence Analysis, Differential Gene Expression Studies, and Sequence Annotation projects. Requires experience in C/C++, Perl, web interfaces, and programs to access sequence databases. Experience with molecular biology or genomics and broad knowledge of protein function is desirable. Job Code: 264

#### Statistical Geneticist

Statisticians with expertise in mapping genes for complex disorders to contribute to identification of genes for important human diseases. Requires experience in developing appropriate study designs for analysis of complex traits and experience with non-parametric methods, linkage analyses, and related analytical techniques. The ideal candidate will be actively involved in developing new strategies for mapping complex disorders. The individual will be expected to assume a leadership position in the human genetics group. Ph.D. with 1-2 years’ post-doctoral experience required. Job Code: TK1

#### Linkage Analysis Programmer/Analyst

Provide computational support for Human Linkage Analysis projects. Work closely with scientists to analyze data and develop tools for pedigree data management, error checking, and data exchange. Requires experience with data management, UNIX, C, and Perl. Experience with Linkage Analysis, Macintosh, Pascal, or Fortran is desirable. Job Code: 252

### Scientific Computing

#### Software Engineers

Provide flexible software support to research and production groups in molecular biology. Projects may have UNIX, mathematical, or specialized data content. Must be able to work independently or as part of a team on large and small applications. Requires a B.S.C.S./B.S. or equivalent, 2+ years' professional programming experience, solid knowledge of C, and some experience with UNIX. Experience with any of the following is desirable: C++, Perl, Java, Unix, databases, client/server, Macintosh, robotics, instrument interfaces, and molecular biology. Job Code: 229

#### Database Programmers and Administrator

Develop database applications to support DNA sequencing and disease mapping projects. Requires experience in relational databases, UNIX, C/C++, and web interfaces. Experience with molecular biology, Macintosh, Sybase, or Perl is desirable. Job Code: 262

#### Macintosh Programmer

Develop Macintosh applications to support a variety of genomics projects. Applications include both OUI and data analysis components. Requires experience with Macintosh programming, C/C++, and web interfaces. Experience with molecular biology, instrument interfaces, or Perl is desirable. Job Code: 266

#### Senior Systems Software Specialist

Design and implement coherent system management approach for a rapidly growing multiprocessor network of UNIX servers and workstations. Requires in-depth knowledge of UNIX, TCP/IP, NFS, NIS, X-Windows, and related protocols. Specific experience with Digital UNIX or Solaris would be helpful, but demonstrated interest and ability in achieving reliable and scalable systems configurations is essential. Experience in a scientific research setting a plus, as is some familiarity with VMS. Job Code: 268

#### UNIX Specialist

Administer and implement rapidly growing UNIX computing environment. Requires a minimum of 1-2 years' experience with NFS, NIS, TCP/IP, X-windows, and related utilities. Experience with Macintosh and network support is desirable. Job Code: 197

Join OTC and enjoy the discovery and developments of progressive science, as well as a comprehensive salary and benefits package. Please send or fax your resume or curriculum vitae to: Human Resources, Job Code ______, Genome Therapeutics Corporation, 100 Beaver Street, Waltham, MA 02154; Fax: (617) 892-9035; or see http://www.cric.com. We are an equal opportunity employer M/F/V/H.
**Molecular Biology/Bioinformatics**

Astra is a pharmaceutical company in a phase of rapid growth. Operations, which are highly international, encompass research, production and marketing of pharmaceuticals through subsidiaries, agents and licensees around the world. The Group has approximately 17,000 employees, of whom 6000 are in Sweden. Sales in 1995 totalled 7 billion Canadian dollars.

Astra Pain Control in Sweden is a research company within the Astra Group with about 270 employees. Its products dominate the world market for local anesthetics. The company has recently established a research and development centre in Montreal, a division of Astra Pharma Inc. Canada, and is actively recruiting for the following position:

**Astra Pain Control in Canada**, is looking for a Principal Research Scientist to work in the area of molecular biology. Applications are invited for a 2 year post-doctoral position in the Department of Molecular Biology of Astra Pain Research Unit, Montreal.

We are looking for a Ph.D. level molecular biologist or biochemist with special interest in gene cloning. A background in bioinformatics is essential.

Practical experience of any of the following would be desirable: management of sequence databases, data mining techniques or development of software tools. We expect that the candidate will implement and develop bioinformatics tools to facilitate the discovery of novel genes involved in neuronal control of pain perception.

Astra offers a professional work environment to the successful candidate. If you are motivated by the challenges of this position, please send your résumé, quoting reference BH-MB, to: Astra Pharma Inc., Human Resources Dept., 1004 Middlegate Road, Mississauga, Ont. L4Y 1M4. Fax: (905) 275-2950.

We thank all applicants for their interest, however, only those being considered will be contacted.

No telephone enquiries or agencies, please.

An Equal Opportunity Employer.

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**Washington**

The Institute for Biomedical Computing (http://ibc.wustl.edu) is an independent faculty of Washington University with seven tenure track members and over 30 actively collaborating faculty from medical, biological, mathematical, engineering, and computer science disciplines. Current research areas at the Institute include computational molecular biology, molecular design, RNA structure prediction, quantitative image analysis, optical sectioning microscopy, and molecular biophysics.

**Biomedical Engineering** is a newly formed department in the School of Engineering and Applied Sciences. Genome Analysis and Computational Molecular Biology have been identified as targets for growth in the department.

**Faculty Positions in Computational Molecular Biology/Genome Analysis**

The Institute for Biomedical Computing and Department of Biomedical Engineering at Washington University in St. Louis invite applications for two tenure track faculty position at the rank of Assistant Professor for scientists (Ph.D. or equivalent) engaged in novel applications of computing to solve problems molecular biology and molecular medicine.

Successful candidates will be expected to establish an independent extramurally funded research program; to interact with and teach students at the undergraduate and graduate levels; and to participate in the newly created department of biomedical engineering at Washington University. Particular attention will be given to candidates using experimental data to test and validate computational techniques.

The deadline for applications is September 1, 1996. To apply, send a curriculum vitae, a copy of each of your most significant publications, and a brief statement of research interests to:

Dr. David States, Director
Institute for Biomedical Computing, Washington University
700 South Euclid Ave., St. Louis MO 63110

Fax: (314) 362-0234, Email: states@ibc.wustl.edu

Washington University is an Equal Opportunity Employer. Women and minorities are encouraged to apply.

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**Bioinformatics**

CuraGen Corporation

CuraGen Corporation is a dynamic and expanding genomics company. Our mission is to develop new therapeutics based on the discovery of disease-related genes from the human genome. CuraGen's interdisciplinary research team includes expertise in genomics, molecular biology, biochemistry, statistical mechanics, computational methods, mathematics, microfabrication, and spectroscopy. Active collaborations with major academic and pharmaceutical laboratories complement our own resources and facilities. We seek creative and motivated individuals with the dedication and ambition to succeed in an entrepreneurial setting. Recording positions are available at all levels.

**Genomics: Director, Group Leaders, Research Scientists and Associates**

Joining a group using CuraGen's world-class genotyping and expression analysis facility with integrated bioinformatics (GenoScope™), you will be contributing expertise in molecular medicine, multiplex and quantitative PCR, genotyping, linkage analysis, and positional cloning to discover gene responsible for major complex disorders. Job Code G-SC.

**Bioinformatics: Group Leaders, Research Scientists**

Your team controls the flow of samples and information for large-scale genomics studies, provides access to public and proprietary genomic databases through our WWW-based GenoScope™ platform, performs system and database administration, and develops novel discovery algorithms. Job Code B-SC.

**Instrument Development: Group Leaders, Research Scientists, Engineers, & Programmers**

You will design and build scientific instruments and software for high-throughput DNA analysis, crucial for the Human Genomes Project and genomic studies. Hardware projects require expertise in electrophoresis, laser excitation and detection optics, microfabrication, and instrument design. Software projects require expertise in numerical methods, image analysis, and hardware/graphical interfaces. Job Code D-SC.

CuraGen's compensation package includes medical coverage and opportunities for equity participation. Extensive collaborations with Yale University (10 miles away), the Yale Comprehensive Cancer Center, Cornell University, and the MIT/Whitehead Genome Center provide excellent opportunities for academic interactions and publications. CuraGen is a winner of two prestigious Advanced Technology Program awards from NSF and also receives funding from the National Institutes of Health, National Cancer Institute, and National Center for Human Genome Research.

To apply for a position at CuraGen, please send your resume and a statement of your career goals to:

CuraGen Corporation
Human Resources, Job Code #
322 E. Main St.
Brattleboro, VT 05305

or e-mail to jobs@curagen.com. Visit our homepage on the internet, curagen.com.

CuraGen Corporation is an EEO/AA employer.
SERIAL MANAGER-
BIOINFORMATICS TECHNOLOGY TRANSFER
Lead the group responsible for QA/QC, planning, support and transfer of Millennium’s leading-edge bioinformatics systems to our corporate Pharmaceutical Partners. Work closely with biologists, computer scientists, software engineers and program managers to ensure successful implementation and use of Millennium’s proprietary technologies. Requires 5+ years’ successful program management experience in a software technology-based environment. MS in Engineering or Computer Science and significant Biology background required.
Job Code: 712TT

GROUP LEADERS-
STRATEGIC BIOINFORMATICS SYSTEMS
Lead a group focused on development of strategic, fully-integrated software for Millennium’s Research Information Backplane. MS/PH. D. in Computer Science or equivalent experience. Minimum 3 years’ experience managing state-of-the-art software development efforts, plus in-depth technical background in OOAD/OOP’s and/or bioinformatics algorithms development. CORBA or other distributed object technology a plus. Job Code: 712GL

We have a challenging opportunity for a pro-active professional to join us at our headquarters in Des Moines, Iowa as:

Research Information Analyst

We are looking for a highly motivated information analyst to lead software development activities and teams in support of our agricultural genetics research and product development activities. As a successful candidate, you will use 6+ years scientific information management expertise to manage development teams and establish future applications development. You will also depend on your scientific training to interact with personnel, scientists, and directors to effectively enhance research activities, prioritize information needs, develop allocate resources, and identify additional requirements. Your ability to excel in a research and product development environment and analyze statistical/quantitative data regarding plant genetic/molecular biology technologies is essential. In addition, our selected candidate must be capable of managing multiple activities and possess strong interpersonal and communication skills. A Ph.D. or highly advanced experience in Plant Genetics or a related field is required.

We offer competitive salaries and excellent, comprehensive benefits such as 401(k), tuition, and relocation reimbursement. Des Moines is a prospering heartland city that ranks well above the national averages in affordability and education. Our location provides a mix of beautiful open spaces and city life advantages. For confidential consideration, please send 3 copies of your resume and cover letter indicating job number by August 1, 1996 to: Jon Day, JOB # 96-0029, 6900 NW 62nd Avenue - Box 212, Johnston, Iowa 50131-0212.

Pioneer Hi-Bred International, Inc. is the world leader in agricultural genetics. Founded in 1926, we are a publicly held company that invests more than $115 million in research and product development. Pioneer brand products are grown in almost every crop producing continent in the world.
Pharmacia & Upjohn, Inc., a worldwide manufacturer of pharmaceutical, agricultural and healthcare products, is seeking an outstanding Cellular Electrophysiologist at the Bachelor’s or Master’s level in the Cardiovascular Pharmacology unit.

Primary responsibilities include routine whole-cell and single channel patch clamp studies of freshly isolated heart cells and smooth muscle cells, from both animal and human hearts; transient-expression studies of cloned cardiac and smooth muscle ion channels transfected in cultured mammalian cell lines; and data analysis using the P-clamp software for presentations and publications.

Candidate must have extensive experience in whole-cell and single channel patch clamping of freshly isolated heart cells, and preferably, of freshly dissociated human heart cells. Strong expertise on protocol design, data acquisition and analysis of whole-cell and single channel experiments is essential. A good background knowledge of cellular biophysics and cardiac ion channels and channel-drug interactions is highly desirable. Good written and oral communication skills are required.

Pharmacia & Upjohn offers a competitive salary, benefits and relocation assistance commensurate with the expected contribution. For confidential consideration, please send your resume/CV to: Pharmacia & Upjohn, Inc., Corporate Recruiting, Position #320, 7000 Portage Road, Kalamazoo, MI 49001.

Pharmacia & Upjohn is an equal opportunity employer with a commitment to workplace diversity. E-mail to: RECRUIT@PWINET.UPJ.COM
The Division of Cardiovascular Diseases of the Mayo Clinic and Foundation invites applications for an established investigator position at the rank of Associate or full Professor. Applicants should have an M.D. or Ph.D. degree and an established record of accomplishment in basic cardiovascular research such as in molecular or cellular biology which focuses upon endothelial, vascular smooth muscle or cardiac myocyte biology. Excellent institutional resources and long-term support are available. Written applications including CV, three letters of recommendation and a description of research interests should be sent to: John C. Burnett, Jr., M.D., Cardiovascular Chair for Research, Director, NIH Cardiovascular Research Training Program, Mayo Clinic, 200 First Street, SW, Rochester, MN 55905. Applications will be considered until September 1, 1996. Mayo Foundation is an affirmative action and equal opportunity educator and employer.

Chair
Department of Pharmacology
Medical College of Ohio
Toledo, Ohio

The Medical College of Ohio invites applications for the position of professor and chair of the Department of Pharmacology. Candidates must have a Ph.D. or M.D. degree (or their equivalents) and have an outstanding record of scientific accomplishments, research funding, graduate and medical education, and evidence of administrative and leadership ability. The successful candidate will lead a productive department with research strengths in signal transduction, neurotransmitters and ion channels, and teaching commitments in the medical and graduate schools.

The Medical College of Ohio is a free-standing, public institution with outstanding modern educational, research and clinical facilities. We seek an energetic and interactive chairperson who will promote the future growth of the department and the missions of the institution. To apply, send a curriculum vitae and the names of three references to:

Maurice Manning, Ph.D., D.Sc.
Chairman, Pharmacology Search Committee
Department of Biochemistry and Molecular Biology
Medical College of Ohio
P.O. Box 10008
Toledo, Ohio, 43699

Further details are available at the MCO home page address: http://www.mco.edu

Review of applications will begin September 3 and will continue until the position is filled.

The Medical College of Ohio is an affirmative action/equal opportunity employer.
Cell Genesys is genetically engineering the human immune system to create innovative therapies for serious diseases. Currently, we are seeking a PhD/MD to help advance new therapeutic technologies in the gene therapy field.

Your principal responsibilities in this position will include examining the nature of host immune responses to gene therapy viral vehicles and designing approaches to limit any host immune responses. You will also participate with other team members on common cell biology issues. Candidates will need postdoctoral experience with an emphasis on viral immunology and experience in one or more of the following areas: T cell biology, cellular/molecular immunology, cancer biology, and/or gene therapy. Previous team leadership experience is a plus.

We offer a competitive salary, excellent benefits and equity participation in one of the world's most desirable locations. For immediate consideration, send your resume with cover letter telling us about yourself to Human Resources, Cell Genesys, Inc., 322 Lakeside Dr., Foster City, CA 94404. We are an equal opportunity employer.

EXECUTIVE DIRECTOR
BIOLOGICAL SCIENCES CENTER (BSC)
DEsert RESEARCH INSTITUTE (DRI)
REno, NEVAda

BSC seeks scientist of international distinction to lead a multifaceted biological sciences faculty and staff of 50 researchers. DRI has 400 researchers who conduct over $24 million in worldwide environmental research annually. Successful candidate will have the ability to develop budgetary and research strategies that will provide a reliable, long-term and diversified funding base at the multimillion dollar level, and to direct the operations of BSC's newly completed Frits Went Laboratory. Requires doctorate in the biological sciences or related discipline; 10 years in scientific research beyond the doctoral degree; proven record of noteworthy peer-reviewed publications; demonstrated experience with controlled-environment facilities; strong budgetary and strategic planning skills; successful management of multi-disciplinary and multi-institutional research programs; ability to manage and guide research that enhances DRI's worldwide recognition; strong interpersonal, team leadership, administrative and scientific skills. Salary is state-funded, negotiable and commensurate with qualifications. DRI offers an excellent benefits package. Initial review of applications begins 7/26/96 and continues until position is filled. Submit curriculum vitae, letter describing how qualifications meet position requirements, statement of research interests and 5 references to: Recruitment Office, Desert Research Institute, University & Community College System of Nevada, P.O. Box 19040, Las Vegas, NV 89132-0040. An Affirmative Action/Equal Opportunity Employer hiring only U.S. citizens and persons authorized to work in the U.S.

The University of Sydney
AUSTRALIA

LECTURER/SenIOR LECTURER IN
Eukaryotic Molecular Genetics
AND PART-TIME SCIENTIFIC
DIrectOR OF SUPAMAC
School of Biological Sciences
Reference No: 26/02

Applications are invited for a Lectureship/Senior Lectureship in Genetics with special interests in molecular genetics of eu karyotic cells. The appointee will also teach molecular and general genetics at all undergraduate levels, be expected to supervise research students and will have the opportunity to make a significant contribution to enhancing molecular biological research throughout the School of Biological Sciences.

A good general knowledge of molecular and general genetics is essential, as is a detailed knowledge of specific areas of eukaryotic molecular genetics. Applicants must possess a PhD or equivalent, have proven research ability, demonstrated administrative skills, have lecturing experience at tertiary undergraduate level, and present evidence of good teaching practices, communication skills, ability to work cooperatively with others, and research potential.

Half the appointee's time will be devoted to the role of Scientific Director of the Sydney University and Prince Alfred Hospital Macromolecular Analysis Centre (SUPAMAC) for at least three years. SUPAMAC is a core service facility for nucleic acid and protein research housed at the National Innovation Centre, Australian Technology Park, near the main campus of the University of Sydney. The appointee will have extensive experience in genomic analysis and more particularly, high-throughput sequencing, microsatellite and linkage studies, gene or gene-expression arrays. Additional skills in protein chemistry and/or mass spectrometry are considered highly desirable, as is previous experience running a core biomolecular service facility. The appointee must take on the responsibility of ensuring that the highest quality service and results are obtained by users. The appointment would suit an individual with extensive analytical skills wishing to transfer to a career in University teaching and research.

The position is available from 30 June 1996 for a period of three years. There is the possibility of further offers of employment for up to a further nine years, subject to funding and need. Membership of a University approved superannuation scheme is a condition of employment for new appointees. For further information contact: Assistant Professor C. B. Gillies, phone (02) 9388 2451; fax 9388 2471; email cgillies@bio.usyd.edu.au or Professor D. J. Patterson phone 9388 2474; fax 9388 2486; email dp@bio.usyd.edu.au

Salary: Lecturer A$43,042 - A$51,113 p.a.
Senior Lecturer A$52,726 - A$60,797 p.a.
(Level of appointment and responsibility will be commensurate with qualifications and experience)

Closing: 8 August 1996
The INSTITUTE OF MEDICINE offers

Post-doctoral fellowships and guest research fellowships

for studies on brain function and brain biochemistry using functional Magnetic Resonance Imaging/Spectroscopy (fMRI/IMRS), Magnetoencephalography (MEG) and Positron emission tomography (PET).

The research interest is focused on neuroscience using modern functional imaging techniques. The MR research group operates a state-of-the-art 1.5 Tesla, whole body scanner capable of echo planar imaging. The MEG research group will be operating a whole head 147-channel system. The PET research group will be equipped with a 3D system. All groups will provide opportunities for clinical studies and for basic technology development.

Applicants for MR research positions should have an M.D. (Neurology, Radiology) and/or Ph.D. (Physics, Psychology, Mathematics, Computer Science) and experience with MR techniques for the assessment of the central nervous system.

Applicants for the MEG and PET research positions should have a M.D./Ph.D. and a strong biomedical background.

The KFA is an equal opportunity employer and strongly encourages women applicants.

Salary and social security benefits are based on the provisions of the Federal Employees Collective Salary Agreement (BAT).

Please send curriculum vitae, experience profile with research interests and names of three referees to:

FORSCHUNGSZENTRUM JÜLICH GmbH
IME, Director: Prof. Dr. med. H. W. Müller-Gärtner
applications to be sent to:
Personal- und Verwaltungsabteilung – Personalbetreuung –
D-52425 Jülich, Germany

VISITING FELLOWSHIPS 1998
Humanities Research Centre
The Australian National University

Applications are invited for Visiting Fellowships in the Humanities Research Centre in 1998. Each year the Centre concentrates upon a special theme. In 1998 the theme will be "Home and Away: Journeys, Migrations, Diasporas." The Centre intends to organize four conferences around this theme with two being held early in the year (mid-March-April) and the other two in Spring (September). These conferences are tentatively entitled: "Black Diasporas" (in conjunction with the Australian and New Zealand American Studies Association); "Romanticism and the Asia-Pacific" (to be held jointly with the National Library of Australia and the National Gallery of Australia); "Scatterings of Empire: Anglo-Celtic Migrations of the Pacific Rim" (to be held jointly with the Centre for British Studies, Adelaide); and "Ireland and Australia, 1798-1998" (Joint HRC and Tenth Irish-Australian Studies Conference to be held in Melbourne). Applications from scholars working in any area of the humanities are welcomed, as a proportion of each year's Fellowships is reserved for those without special interest in the year's theme; the majority of Fellowships, however, will be awarded to those whose work is relevant to the annual theme and its conferences. Fellows are expected to work at the Centre, but are encouraged also to visit other Australian universities. Grants usually include a travel component and a weekly living allowance. Prospective applicants must obtain further particulars and application forms from the Centre Administrator, Humanities Research Centre, The Australian National University, Canberra, ACT, 0200, AUSTRALIA, fax: (61) 6 248 0054. E-Mail: administration.hrc@anu.edu.au or Web address http://www.anu.edu.au/HRC/Home.html Applications should reach the Secretary, ANU, by 31 October 1996. Ref: HR 18.6.1 The University is an Equal Opportunity Employer.

PROFESSORSHIP

Toyota Technological Institute (TTI), established in 1981 by a donation from the Toyota Motor Corporation, offers undergraduate and master's programs. TTI also has doctoral programs in Information Aided Technology and Future Industry-oriented Basic Science and Materials.

To strengthen education and research in the Department of Information Aided Technology, TTI is currently seeking a full professor in the field of Information Science, Artificial Intelligence, or Control Systems. Although the targeted start date to join this community is negotiable, the preferred start date would be April 1, 1997. The selected individual will organize a unit laboratory that will consist of 1 professor, 1 associate professor, 2-3 postdoctoral research associates and students. Japanese communication skills are preferred.

Support for research start-up expenses and an annual research budget will be provided, in addition to a salary and fringe benefits package.

Qualified applicants are invited to mail their curriculum vitae, a statement of research interests and a list of publications by October 15, 1996 to: Dr. M. Nagasawa (Vice-President).

TOYOTA TECHNOLOGICAL INSTITUTE
2-12 Hisakata, Tempaku, Nagoya, Japan 468
Fax Inquiries: Japan 81-52-809-1721
TTI is an Equal Opportunity Employer.
Public Announcement Regarding an Industrial Science and Technology Frontier Program Project on “Human Media”

Announced by the New Energy and Industrial Technology Development Organization on July 12, 1996

In order to promote the research and development of industrial technology, the New Energy and Industrial Technology Development Organization (NEDO) would like to inform all interested companies and research organizations regarding the research and development project described below. This new project is being undertaken as part of the Industrial Science and Technology Frontier Program of the Agency of Industrial Science and Technology, Ministry of International Trade and Industry of Japan.

Theme of the Research Project
“Human Media”

Outline of the Research and Development Work to be Entrusted
The goal of this project is to develop human-oriented multimedia technologies as an information infrastructure, whereby any user can utilize computers at will and communicate with others. This will be realized by integrating such technologies as knowledge media technologies, which provide knowledge representation; virtual reality media technologies, which provide more advanced multimedia presentation; and subjective information (kansei) media technologies, which can correspond to an individual user’s judgment criteria.

Procedures for Application
(1) Qualification Criteria
All companies or research organizations who meet the following qualification criteria may submit an application to participate in the above project.

1. The applicant must be a company or organization having human resources who are experienced and well qualified to carry out the research and development in the field covered by or related to the project.
2. The applicant must be in sound financial condition and have the ability to manage finances as necessary to fully carry out the project work.
3. The applicant must be able to comply with NEDO’s instructions, if such are necessary, to fully carry out the project work.
4. The applicant must have attended the explanatory meeting held by NEDO as set forth in item (2) below or been represented at the meeting by a responsible agent or representative who is capable of accurately conveying the contents of the meeting in detail.

(2) Explanatory Meeting
An explanatory meeting will be held on the date shown below in order for NEDO to fully explain the details of the project’s research and development work to be entrusted and the application documents to be submitted. All companies or research organizations who are interested in submitting an application to participate in the project are required to attend this meeting or to send an agent or representative to attend on their behalf. Japanese will be the only language used during the meeting.

Date: Thursday, July 18, 1996
Time: 11:00 to 12:00
Place: NEDO’s Head Office, Meeting Room 360
31st Floor
Sunshine 60 Building
1-1, Higashi-Ikebukuro 3-Chome
Toshima-ku, Tokyo 170

(3) Further Information
For further information regarding the research and development work to be entrusted under the above project, please contact NEDO by telefax as follows:

New Energy and Industrial Technology Development Organization
Contract Division, Accounting Department
28th Floor, Sunshine 60 Building
1-1, Higashi-Ikebukuro 3-Chome
Toshima-ku, Tokyo 170
Telefax: +81-3-5992-1184
This announcement is valid until July 18, 1996.
Clinical/Non-Clinical Senior Lecturer in Basic Biology Applied To Population Studies

Applications are invited for this exciting new post to be attached to Professor Marmot's Research Group within the Department of Epidemiology, but also to be linked with the new Cruciform Project (Strategic Medical Research Institute) being developed by Professor Salvador Moncada at UCL.

The Department is at the forefront of research on the interaction of psychological and biological factors as explanations for socio-economic differences in disease occurrence. Research has been primarily epidemiological to date, but we are increasingly interested in biological pathways. Possible avenues of research include the influence of psychosocial factors on neuro-endocrine pathways, and on fibrinogen an other haemostatic parameters. We now require a Senior Lecturer to help take this research forward.

Applicants should have a strong track record in biomedical research. The incumbent will be expected to develop a group bridging the basic molecular, biochemical and pharmacological studies within the Cruciform Project and the epidemiological studies within the Department; and identify important areas of biological research relevant to understanding the origins of diseases and risk factors in the population. He/she will work closely with the epidemiological team to ensure incorporation of the appropriate biological measures into the large scale studies. Similarly it is likely that he/she will wish to take advantage of the access to samples and existing data to explore novel biological pathways and hypotheses. This new and exciting area of research affords excellent opportunities for a scientist wishing to broaden, expand and apply his/her research. Based within the Department of Epidemiology, the incumbent may also wish to supervise individuals working at the bench within the Cruciform Project.

Candidates should have: a PhD or MD and appropriate postdoctoral experience in Cardiovascular Science, Neuroscience, Neuroendocrinology or Psychoneuroimmunology; excellent interpersonal and organisation skills; the capability of developing an independent area of research and leading a research team in the future. Appointment will be on the RAI/II or Clinical/Non-Clinical Lecturer/Senior Lecturer scale according to age and experience. Job descriptions available from Ms Catherine Conroy, Department of Epidemiology and Public Health, 1-19 Torrington Place, London WC1E 6BT or via E-mail (c.conroy@ucl.ac.uk). Applications consisting of a CV (including a telephone number and the names and addresses of 2 referees) to be submitted to P. Phibbs.

Closing date: 16 August 1996.
**VIROLOGIST**  
**Molecular Virology**

Interferon Sciences, Inc. (ISI) is a leading biopharmaceutical company located in the heart of the pharmaceutical industry in central New Jersey. ISI focuses on the development of therapeutic products using state of the art technology. ISI is currently manufacturing a natural human leukocyte interferon approved by the FDA for treatment of viral diseases.

The Research & Development Department has positions open at the postdoctoral, MS and BS levels in the areas of molecular virology. For postdoctoral position, experience in working with the animal or human RNA viruses is required. Working knowledge of basic virological techniques, virus growth, PCR, DNA/RNA isolation and detection is necessary. Experience working with clinical serum samples containing human viruses is a plus.

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Interferon Sciences, Inc.  
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**POSITIONS OPEN**

**ASSISTANT OR ASSOCIATE PROFESSOR**

The Department of Physiology and Pharmacology, School of Medicine, Oregon Health Sciences University (OHSU), invites applications for a full-time, TENURE-TRACK position at the level of Assistant or Associate Professor. The department will hire the most competitive individual based on his or her research program and letters of reference, but would prefer someone with training and experience in state-of-the-art pharmacology. The principal research interests in the department are the physiology, pharmacology, and toxicology of the cardiovascular, nervous, and reproductive systems. The successful applicant will be expected to develop and maintain a laboratory of excellence in the education of medical and graduate students and to teach cardiovascular pharmacology.

Candidates holding a doctoral degree in a relevant discipline should apply by sending a letter of interest, a statement of research interests and teaching experience, curriculum vitae, and the names and addresses of three professional references to: Dr. George D. Olsen, Chair of Search Committee, Department of Physiology and Pharmacology, L221, The Oregon Health Sciences University, 3181 S.W. Sam Jackson Park Road, Portland, OR 97239. Application deadline is October 15, 1996. OHSU is an Affirmative Action/EQUAL OPPORTUNITY EMPLOYER.

**DIRECTOR**

**ECOSYSTEM PROTECTION**

Center for Marine Conservation (CMC) seeks proven leader to direct CMC’s Ecosystem Protection Program in Washington, D.C. Plan, implement, and coordinate program. Provide scientific expertise on ecosystem conservation. Supervise staff, identify emerging marine conservation issues, and organize scientific workshops. Represent CMC. Secure adequate funding for the program. SENIOR LEVEL position requiring: Ph.D. in marine science or policy, eight years of experience including three years at senior level. Send cover letter with curriculum vitae by July 31, 1996 to Sharwood Tryon, Director of Operations, CMC, 1725 DeSales Street, NW, Suite 600, Washington, DC 20036. Equal Opportunity Employer.

**ASSISTANT PROFESSOR**

**MICROBIOLOGY**

Applications are invited for a TENURE-TRACK 12-month position in the Department of Microbiology, University of South Dakota School of Medicine. Preference will be given to applicants with research interests in immunology, but outstanding candidates in other fields may also be considered. The successful candidate must develop and conduct a competitive, independent research program, and participate in the instruction of medical, graduate, and undergraduate students. Competitive state-supported and start-up funds. Qualifications include the Ph.D. degree and at least two years of postdoctoral experience. Curriculum vitae and names of three references should be sent to: Search Committee, Department of Microbiology, University of South Dakota School of Medicine, 414 East Clark Street, Vermillion, SD 57069-2390. Consideration of applications will begin August 15, 1996 and continue until a suitable candidate is identified. Equal Opportunity Employer.

**FACULTY POSITION**

The Departments of Biochemistry, Internal Medicine, and Surgery at Wayne State University School of Medicine invite applications for a joint TENURE-TRACK faculty position, rank to be determined. This position will place emphasis on molecular biology as it relates to pharmaceutical research. A Ph.D. with relevant experience and teaching or research experience in molecular biology is required. A curriculum vitae, the names of at least three references, and a brief outline of future research interests should be sent by September 1, 1996 to: Dr. John Yates, Chair, Department of Surgery, 6304 E. Grand Blvd., Detroit, MI 48201. Wayne State University is an Equal Opportunity/Affirmative Action Employer.

**POSTDOCTORAL ASSOCIATE**

**Molecular and Cell Genetics**

Position available immediately for recent Ph.D. for projects concerning the identification of novel genes involved in the development of lung or ovarian cancers. Experience with recombinant DNA techniques and genomic analysis preferred. A Ph.D. with a curriculum vitae and names of two references to: Joseph R. Testa, Ph.D., c/o Human Resources Department, Fox Chase Cancer Center, 7701 Burholme Avenue, Philadelphia, PA 19111. Equal Opportunity Employer.

**POSTDOCTORAL POSITION**

The United States Department of Agriculture (USDA), Agricultural Research Service (ARS), Beltsville Human Nutrition Laboratory, is accepting applications for a permanent, full-time RESEARCH CHEMIST, NUTRITIONIST, PHYSIOLOGIST, or related discipline. The objective of this program is to develop nutritional models of human energy metabolism for (1) prediction of energy expenditure and body composition, and (2) to use these models to identify factors that promote the maintenance of healthy body weight and composition. Candidates must have a strong working knowledge of human nutrition, biochemistry, kinetics, physiology, mathematics, statistics, and computer programs. Salary is based on qualifications. This position is located in Beltsville, Maryland. Applicants must have a minimum of three years of experience in a research setting in the above disciplines. Experience with mathematical modeling and computer applications is an asset. Applicants must be U.S. citizens. Salary range is $36,782-72,099. For a copy of Announcement Number DB-6-045 and an application package, please call: Bonita Yates, USDA, ARS, Human Resources Division, Telephone: 301-344-8452. Specific questions regarding the position should be directed to: Dr. Richard Lomax, Telephone: 301-504-9014. The closing date for this announcement is September 9, 1996. USDA, ARS is an Equal Opportunity/Affirmative Action Employer.

**MICROSCOPE/IMAGE ANALYSIS SPECIALIST**

The Oregon Regional Primate Research Center seeks a microscope/image analysis SPECIALIST to oversee operational aspects of the morphological core service facility that supports a variety of anatomical and physiological basic science research programs. Primary duties include maintenance and operation of a new laser scanning confocal microscope and image analysis work stations, as well as training and orientation of research staff with imaging technologies and image analysis software. This position requires a B.S. degree (or equivalent) in the life sciences and a working knowledge of microscopy and computer hardware (either Windows PC or Macintosh platforms). Experience with image analysis software, confocal microscopy, or electron microscopy is desirable, but not required. Candidates with advanced degrees are encouraged to apply. Please send your résumé and a list of three references to: Morphology Search Committee, Oregon Regional Primate Research Center, 505 NW 185th Avenue, Beaverton, OR 97006. Equal Opportunity Employer.

The Department of Physiology and Biophysics, Mayo Foundation, is seeking an investigator who is investigating the mechanism of cellular storage and release of secretory products. The successful candidate will have a strong background in biophysics and gel electrochemistry and expertise in applying supersonic interfaces to cell and cell organelles. Isolated heart preparation is expected and experience in pulsed laser microscopy as related to imaging ions at biological interfaces is essential. Shown expertise in measuring ionic currents in excitable cells by electrophysiological methods is necessary. Must be able to program in LABVIEW for Windows. Candidates must have a Ph.D. in biophysics or an equivalent degree, with a minimum of three years of Postdoctoral experience in electrophysiology. Please send résumé to: Dr. Joseph Szurszewski, Chairman, Department of Physiology and Biophysics, Mayo Foundation, 200 First Street S.W., Rochester, MN 55905. Deadline: July 19, 1996. Mayo Foundation is an Affirmative Action, Equal Opportunity Educator and Employer.

**POSTDOCTORAL POSITION**

**In Immunology**

Positions are available to study various aspects of antigen processing and presentation. Applicants should have a recent Ph.D. or M.D. degree and experience in immunology, cell biology, and/or molecular biology. Send curriculum vitae and cover letter, including the names of three references to: Peter Jensen, M.D., Department of Pathology and Laboratory Medicine, Room 7309 WMB, University of Washington School of Medicine, Atlanta, GA 30322. Emory University is an Affirmative Action/Equal Opportunity Employer.

**POSTDOCTORAL TRAINING**

Position in an NIH-supported program available at the University of Washington to study the molecular basis of oral microbial pathogenesis. A Ph.D. or equivalent degree, in microbiology required. U.S. citizens or permanent residents only. Send curriculum vitae to: Dr. Richard Lamont, Oral Biology, Box 357132, University of Washington, Seattle, WA 98195-7132. Email: lamont@u.washington.edu

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**SCIENCE**  
**VOL. 273**  
**12 JULY 1996**
POSTDOCTORAL POSITION
Clinical Pharmacology/Pharmacokinetics of Antitumor Agents

The Mayo Cancer Center conducts an extensive developmental therapeutics program for the treatment of cancer. Our laboratory characterizes the pharmacology and metabolism of new agents through studies in humans. Subsequently identified agents are characterized in Phase I and Phase II clinical trials, and in conjunction with Children’s Cancer Group pediatric clinical trials. The laboratory is also funded to conduct preclinical pharmacology, toxicology, and drug metabolism studies in drug development and validation of action studies with new agents. Candidates should have a background in pharmacokinetics, metabolism, and/or pharmacology. Candidates with postdoctoral experience will be considered for current and future funded appointments. Applications including curriculum vitae, summary of research interests and experience, and names of three references should be forwarded to: Dr. Matthew M. Ames, Chair, Division of Developmental Oncology Research, Department of Oncology, Mayo Clinic and Foundation, Rochester, MN 55905. Mayo Foundation is an Affirmative Action/Equal Opportunity Employer and Educator.

POSTDOCTORAL FELLOW
LSU Medical Center Stanley S. Scott Cancer Center

A POSTDOCTORAL POSITION is available for a gene therapy project to develop recombinant adenoviral vectors for cancer treatment using recombinant adenovirus in animal models. The candidate should have a solid background in molecular biology. Experience in hematopoietic or immunology would be beneficial. A Ph.D. or M.D. is required. Send curriculum vitae and description of research objectives to: LSU Medical Center, Stanley S. Scott Cancer Center, 2025 Gravier Street, New Orleans, LA 70112. Attention: Employment Ad, Administrative Coordinator. LSU Medical Center is an Equal Opportunity/Affirmative Action Employer.

THE NEUROSCIENCES INSTITUTE
SAN DIEGO

Cellular Neurophysiology

Applications are invited for the POSTDOCTORAL POSITION of Junior Fellow in Experimental Neurobiology in the cellular neurophysiology laboratory of a mammalian neocortex. Applicants should have a background in electrophysiology, preferably with brain slice and patch-clamp expertise. Fellowships will receive stipends appropriate to their qualifications and experience. Send curriculum vitae, statement of research interests, and names of three references to: Dr. Ronald B. Langdon, The Neurosciences Institute, 10640 John J. Hopkins Drive, San Diego, CA 92121. FAX: 619-626-2299.

POSTDOCTORAL FELLOWSHIP
The Johns Hopkins University School of Medicine

Applications are invited for a two-year research POSTDOCTORAL FELLOWSHIP in molecular and cellular biology of intestinal ion transport. Research deals with structure/function studies of a family of intestinal Na+/H+ exchangers whose interest and potential for molecular biology and pharmacology approaches is required. Candidates should send a curriculum vitae and three letters of reference to: Mark Donowitz, M.D., Departments of Medicine and Physiology, Johns Hopkins University School of Medicine, 725 North Wolfe Street, Baltimore, MD 21205-2195.

POSTDOCTORAL RESEARCH POSITIONS

Available in cell and molecular biology/immunology for studying the cellular mechanisms of pathological bone resorption or immunoregulation of autoimmune arthritis, and the pro- and anti-inflammatory gene therapies of these diseases. Experience in molecular biology or cell biology is desirable. Applicants should send curriculum vitae, brief summary of research experience, names of current preceptor/advisor, and at least one other referee to: Tibor T. Gimt, M.D., Ph.D. Prof., Departments of Biochemistry and Orthopedic Surgery, Rush University at Rush-Presbyterian St. Luke’s Medical Center, 1653 West Congress Parkway, Chicago, IL 60612.

A POSTDOCTORAL POSITION is available for candidates with experience in molecular biology and cell biology. The work will include research in vascular smooth muscle, with specific interest in phospholipase A2 and isoforms of phospholipase C. Individuals experienced in biochemical and molecular techniques are encouraged to send a letter of interest. Please send your curriculum vitae and three references to: Edward F. LaBelle, Ph.D., Bockus Research Institute, The Graduate Hospital, One Graduate Plaza, Philadelphia, PA 19146. An Equal Opportunity Employer.

STOCKHOLM UNIVERSITY
POSTDOCTORAL POSITIONS
Drosophila Immune Reactions

TWO POSITIONS are open to study the molecular mechanisms that trigger the antibacterial defense in Drosophila. Approaches include molecular, immunological, and genetic screens for factors, receptors, molecules, transcription factors, and other trans-acting factors, using reporter gene fusions and inducible blood cells in tissue culture. The Arrhenius Laboratories of Stockholm University is hunting research groups involved in different aspects of innate immunity, as well as several other molecularly and immunologically oriented labs. The positions are for one year, with possible extension for another year. Salary: 70,112. Applications should be received at the Arrhenius Laboratory, Stockholm University, S-106 91, Sweden. Phone: +46-8-16 15 70; Email: dan@molbio.uu.se

POSTDOCTORAL POSITION
SYNTHETIC ORGANIC CHEMISTRY

One POSTDOCTORAL POSITION available in cancer research laboratory with emphasis on the design, synthesis, characterization, and evaluation of novel anti-tumor agents. Current studies include development of mechanism-based protease inhibitors and novel tryptophan analogs targeted at carcinoid disease. This position is funded by NCI training grant and/or NIH ROI grant; successful candidate will have full eligibility to apply for external support. Applications including curriculum vitae, a summary of research interests/experience, and names of three references should be forwarded to: Dr. Matthew M. Ames, Chair, Division of Developmental Oncology Research, Department of Oncology, Mayo Clinic and Foundation, Rochester, MN 55905. Mayo Foundation is an Affirmative Action/Equal Opportunity Employer and Educator.

POSTDOCTORAL POSITIONS
CORNELL UNIVERSITY MEDICAL COLLEGE
Molecular Biology of Adenovirus Gene Transfer Vectors

Recent Ph.D. in molecular biology, microbiology and immunology, or biochemistry to study the biology of Adenovirus Transduction for Gene Transfer. Specific interests include receptor targeting and entry pathways, vector stabi lization in the nucleus, and immune response to gene transduction by adenovector. Send curriculum vitae and three letters of reference to: Dr. Erik Falck-Pedersen, Department of Microbiology Box 62, Cornell University Medical College, 1300 York Avenue, New York, NY 10021. FAX: 212-746-8587; Email: efalckp@mail.med.cornell.edu.

Two POSTDOCTORAL POSITIONS available to study the interaction of C-reactive protein with cell surface receptors. Project includes isolation and cloning of receptor molecules, and analysis of signaling pathways. Ph.D. required, with experience in molecular biology, immunology, or signaling preferred. Submit a letter of interest, Curriculum vitae, and three references to: Dr. Teri R. Du Clos, Department of Medicine, or Dr. Carolyn P. Beri, Department of Microbiology, University of New Mexico, Albuquerque, NM 87131. Email: tduculos@aol.com; FAX: 505-256-2877. Equal Opportunity Employer.

Two POSTDOCTORAL POSITIONS are available immediately in an NIH-supported research program to study signal transduction mechanisms mediating effects of insulin and other polypeptide hormones on hepatic gene expression. Experience with reporter gene/transfection models, and/or small GTP binding activation, protein-protein interactions, and kinase/phosphatase assays desirable. Send curriculum vitae and names of three references to: Dr. Terry G. Usterrman, Endocrinology Section (M/C 640), University of Illinois College of Medicine at Chicago, 1819 West Polk Street, Chicago, IL 60612-7333. FAX: 312-455-5877. An Equal Opportunity Employer.

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Marketplace ads continue on page 278
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