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# PRODUCTS & MATERIALS

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A mAb directed against a cytoplasmic antigen of human hepatitis C virus is available. The mAb identifies antigen-positive cells localized in tissues infected with Type C viral hepatitis. It is used on formalin- or Bouin's fixed paraffin-embedded materials, as well as on frozen sections and cytology specimens. **Signet Laboratories. Circle 139.**

## Pure mRNA Isolation

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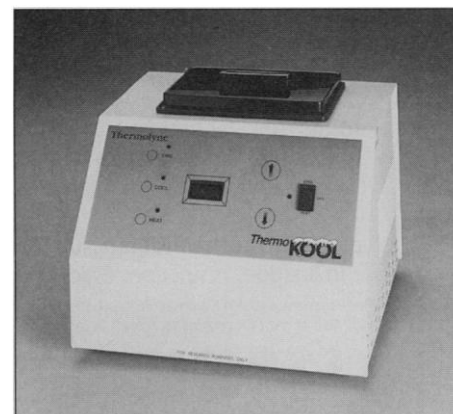
scriptase polymerase chain reaction, Northern blot analysis, subtractive hybridization, and cDNA library construction. **Dynal. Circle 140.**

## Micromanipulator

TransferMan is a micromanipulator that can be fastened onto all commonly used microscopes. It can be installed and equipped by the user. It can be used for positioning holding capillaries or for transferring cells, and many different types of tools can be moved easily and precisely under the microscope. Operation via four self-explanatory keys is extremely simple. The integration of coarse and fine manipulators, together with one-handed operation, facilitates everyday work routines. Recurrent operational steps, such as locating work points, can be automated by simply storing up to two positions. **Eppendorf. Circle 141.**

## Heating and Cooling Dry Bath

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top. Interchangeable blocks hold a variety of microcentrifuge tubes including 1.5 ml, 0.5 ml, and 0.2 ml. **Barnstead/Thermolyne. Circle 142.**

### Interleukin-12 Reagents

Six new products for research involving interleukin-12 (IL-12), an important regulator of cellular immune response, include recombinant mouse IL-12, three monoclonal anti-mouse IL-12 antibodies, and two monoclonal anti-human IL-12 antibodies. The antibodies can be used for enzyme-linked immunosorbent assay, neutralization, protein immunoblotting, and radioimmunoassay in human or mouse systems. **Genzyme Diagnostics. Circle 143.**

### Bibliographic Management Software

Bookends Web for the Macintosh is a complete bibliographic management system with World Wide Web capabilities. It allows colleagues to share references and bibliographies over the Internet. Users can manage references, notes, and citations and generate bibliographies in virtually any format. Users can publish references on a home page, where colleagues can search through this bibliographic information and retrieve information. **Westing Software. Circle 144.**

### Molecular Weight Standards

ElectroPure is a new line of chemical reagents for protein and nucleic acid applications. The line includes pre-stained and unstained molecular weight markers for SDS gel electrophoresis. All molecular weight markers in these mixtures are of the highest purity; no minor bands or contaminants will interfere with molecular weight determination. **Owl Scientific. Circle 145.**

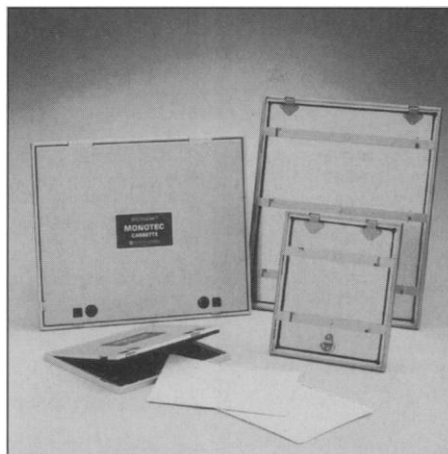
### DNA Microheating System

The TruTemp DNA Microheating System, composed of a heated chamber and lid, is specially designed to provide fast heat-up and consistent controlled temperatures. This innovative dual heating system denatures DNA samples at 95°C from ambient in less than 12 min. For hot-start polymerase chain reaction protocols, reaction mixtures can be quickly and precisely heated to the starting temperature, maintained for the addition of the last reagent, then moved to the thermocycler. The TruTemp can provide hours of incubation of probe solutions with target cells at the selected temperature for

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### Autoradiography Cassettes and Screens

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### Literature

*Protease Inhibitors* is an eight-page guide that characterizes more than 5 dozen protease inhibitors, including those that react with the active sites of serine, cysteine, and aspartic acid. **Sigma Chemical. Circle 148.**

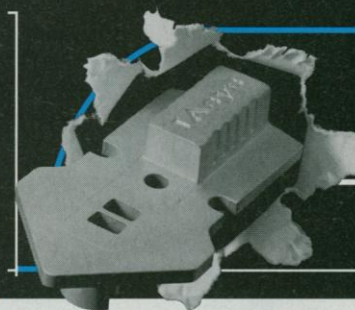
*PCR Systems, Reagents & Consumables* is a brochure on polymerase chain reaction products. **Perkin-Elmer. Circle 149.**

*Mobile Phase Management* is a 16-page brochure that describes how to improve liquid chromatography system performance, convenience, and productivity with automated solvent filtering, on-line degassing, and other mobile phase handling products. **Alltech Associates. Circle 150.**

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## The leader in Bioinformatics continues to set the pace.

At SmithKline Beecham, genomics is increasingly at the forefront of discovery. Along with this commitment has come the clear understanding that bioinformatics is the linchpin of the new brand of data-intensive molecular biology that will take us into the 21st century.

Excellence in bioinformatics, and thus genomics, does not come without a tangible investment to assemble a critical mass of the best and brightest in this emerging field. We at SmithKline Beecham have already proven our commitment. The group of 30 scientists and engineers now in place is slated to double within a year, while the range and extent of unique data resources available to them is unprecedented.

In addition to providing tools, data, and services to bench scientists and strategic alliance partners, Bioinformatics is greatly expanding its role. The recently established Research group will be expected to make fundamental new contributions to the field, developing the algorithms and technology to keep SmithKline Beecham at the leading edge. A computational Discovery group

will be charged with finding and characterizing new genes and gene families in all manner of sequence resources on a grand scale, using state-of-the-art tools. Another group will support a new initiative to sequence the genomes of a large number of bacterial pathogens, an effort that will provide exciting and utterly novel opportunities for comparative genomics and functional analyses. All this is in addition to continuing the groundbreaking work that has already been done with nearly a million expressed sequence

tags, providing a fascinating window on the human genome.

Career opportunities in Bioinformatics at SmithKline Beecham span the broad range from support roles to basic research resulting in novel patents and publications. We are currently seeking computational biologists at the Master's and Ph.D. levels, at every level of experience, including senior managers and researchers with proven records in academic or industrial research. Positions are available in both our Philadelphia and London locations. Areas of particular interest include support of high-throughput sequencing, database search, sequence analysis, automated annotation, knowledge management, sequence/structure/function, genetics, and mapping.

Besides giving you the chance to make drug discovery history, SmithKline Beecham also offers a competitive compensation/benefits/relocation package and an environment in which to grow and excel. For confidential consideration, please send resume and salary requirements to: SmithKline Beecham Pharmaceuticals, Department S7/1, P.O. Box 2645, Bala Cynwyd, PA 19004. We are an Equal Opportunity Employer, M/F/D/V.

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## Bioinformatics

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## BIOINFORMATICS

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**BIOINFORMATICS PROGRAMMER**—Experienced programmers in bioinformatics wanted. Must possess working knowledge in user interface design and bioinformatics tools such as FASTA, BLAST, etc. (Job Number 212)

Please forward your résumé with job number referenced to: Gene Logic, Inc., 10150 Old Columbia Road, Columbia, MD 21046.

### 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.

## BIOINFORMATICS

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Department of Molecular and Human Genetics  
Baylor College of Medicine

The Department of Molecular and Human Genetics at the Baylor College of Medicine (BCM) is seeking an outstanding individual at the level of ASSISTANT/ASSOCIATE PROFESSOR in the area of genome informatics. In addition to developing a vigorous independent research program, the individual is expected to interact with the BCM Human Genome Sequencing Center in developing support for large scale DNA sequencing, to develop collaborations with the genetics faculty, and to contribute to the overall development of a strong informatics infrastructure within the Department. Interested individuals are invited to send a curriculum vitae and research plan outline to:

Richard A. Gibbs, Ph.D.  
Associate Professor and Director  
BCM Human Genome Sequencing Center  
Department of Molecular and Human Genetics  
Baylor College of Medicine  
One Baylor Plaza  
Houston, TX 77030  
Telephone: 713-798-6539  
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### UNIVERSITY OF MINNESOTA FACULTY POSITION GENE THERAPY PROGRAM

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Send a current curriculum vitae, statement of research interests and intentions, and the names and addresses of three references before September 15, 1996 to:

Richard A. King, M.D., Ph.D.  
Director, Division of Genetics and Metabolism  
Department of Medicine  
UMHC Box 485  
420 Delaware Street, S.E.  
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### ASSISTANT PROFESSOR

The Department of Biochemistry, Robert Wood Johnson Medical School, invites applicants for the position of ASSISTANT PROFESSOR. The successful applicant will be expected to establish and maintain a vigorous and independent extramurally funded research program. Applicants interested in structural biology or the mammalian cell cycle are especially encouraged to apply. The position requires a Ph.D. or equivalent degree and extensive postdoctoral training. Applicants should send curriculum vitae, brief description of proposed research, and pertinent reprints, and should arrange to have three to four letters of reference sent to: Search Committee Chairman, Department of Biochemistry, Robert Wood Johnson Medical School, University of Medicine and Dentistry of New Jersey, 675 Hoes Lane, Piscataway, NJ 08854-5635. UMDNJ is an Affirmative Action/Equal Opportunity Employer, Minority/Female/Disabled/Veteran, and a member of the University Health System of New Jersey.



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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 technology/algorithms, 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.

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### 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: 263**

#### 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

Scientist 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: TK2**

### Scientific Computing

#### Software Engineers

Provide flexible software support to research and production groups in molecular biology. Projects may have GUI, mathematical, or specialized data content. Must be able to work independently or as part of a team on large and small applications. Requires a BSCS/EE 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, GUI, 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 GUI 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 multiplatform network of UNIX servers and workstations. Requires facile 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**

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## 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. Rewarding 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 (GeneScape™), you will be contributing expertise in molecular medicine, multiplex and quantitative PCR, genotyping, linkage analysis, and positional cloning to discover genes 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 GeneScape™ 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 to the Human Genome 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 #ID-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 NIST 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 us:*

CuraGen Corporation  
Human Resources, Job Code #  
322 E. Main St.  
Branford, CT 06405

or e-mail to [jobs@curagen.com](mailto:jobs@curagen.com). Visit our homepage at <http://www.curagen.com>. CuraGen Corporation is an EEO/AA employer.

## 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:

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 biocomputing 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.*



## Washington

WASHINGTON UNIVERSITY IN ST. LOUIS

Institute for Biomedical Computing

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.

### Postdoctoral Position in Computational Genome Analysis

A postdoctoral position with Prof. David States is available immediately in the Institute for Biomedical Computing at Washington University in St. Louis to work in the area of computational genome analysis. Research will focus on the development of novel algorithms and software tools for the analysis of molecular sequence data and for the automation of primary and tertiary structures.

The successful candidate must be highly motivated and able to work independently providing project leadership and management. Opportunities for collaboration with large scale sequence projects and human genome mapping and sequencing centers are available. Knowledge of programming and the statistical analysis of quantitative data are essential.

The deadline for applications is September 1, 1996. To apply, send a curriculum vitae, a copy of each of three 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](mailto:states@ibc.wustl.edu)

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

# MILLENNIUM



Join the premier Bioinformatics group and a team of cutting edge developers in genomic research. We are setting the standard for a new millennium of innovative biotechnology applications used to break new ground in understanding & treatment of major diseases.

Millennium is a rapidly growing company poised to become the world's leader in gene-based drug discovery. Located in Cambridge, MA, and overlooking the Charles River, Millennium provides a stimulating and rewarding work environment.

We reward all individuals who join our team with a competitive compensation and benefits package that includes stock ownership. Please send your resume, including job code, to:

**Millennium,  
Human Resources,  
640 Memorial Drive,  
5th Floor, Cambridge, MA 02139;  
FAX (617) 225-0884;  
Internet: hannon@mpi.com**

Millennium seeks & cultivates a diverse workforce through equal opportunity employment & a collaborative team approach.

## SENIOR 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/OOPL's and/or bioinformatics algorithm development; CORBA or other distributed object technology a plus. **Job Code: 712GL**

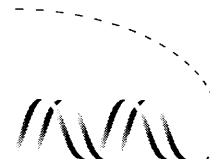
## SENIOR COMPUTATIONAL FRAMEWORKS & COMPONENTS DEVELOPER

Qualified candidates have significant experience & outstanding skills in software component & framework design & implementation. VisualWorks Smalltalk required. Responsible for providing critical infrastructure components that will form the foundation of all application development efforts. Strong communication skills are essential. Experience developing distributed object systems (CORBA) is a plus. 10+ years' experience & MSCS/MSEE or equivalent required. **Job Code: 712STF**

## COMPUTER SCIENTIST GENETIC ANALYSIS SYSTEMS

Develop an integrated system to support our human genetics research groups. Candidates must have an interest in understanding human genetics & working with geneticists. BS CS/EE, applied mathematics or genetics background plus 5-10 years' relevant commercial software engineering experience. Experience in relational database design & programming (SQL), relational modeling of complex domains, OO design & programming, object-relational interfaces, client-server technologies & integrated systems. **Job Code: 712SWG**

ALL CANDIDATES should be self starters with demonstrated ability to work independently in a team environment to translate user requirements into functional systems. Excellent oral & written communications skills a must. & interest in or willingness to learn Biology required.



MILLENNIUM PHARMACEUTICALS, INC.

## DATABASE SOFTWARE ENGINEER BIOINFORMATICS

### THE TECHNOLOGY CAREER OF TOMORROW!

Genomics is revolutionizing drug development, gene therapy, and our entire approach to healthcare and human medicine. Translating genomics discoveries into practical biomedical results through bioinformatics applications presents the challenge of the decade. *Bioinformatics* offers the career path of the future for the ambitious data professional.

DIGITAL GENE TECHNOLOGIES, INC. —the La Jolla-based leader in *total gene expression technology*—seeks highly motivated and creative professionals to join the company's leading-edge *bioinformatics* group in developing and expanding the genomics database of tomorrow in a wide range of profitable and significant medical, industrial, and academic applications based on DGT's systematic survey of gene expression patterns and function.

Current opportunities include a Database Software Engineer position. This position involves Sybase and Powerbuilder for PC/UNIX applications, and requires a BSCS or equivalent, and a minimum of 3 years of database experience. A background in biology is critical and familiarity with genomic databases would be a plus. Other opportunities accommodate different computer professionals. Compensation and benefits are exceptional.

Career-minded professionals with ambition to pioneer the Technology Frontier of Tomorrow should apply by sending or faxing resume, letters of reference, and salary history to:

**DIGITAL GENE TECHNOLOGIES, INC., 11149 North  
Torrey Pines Road, Suite 110, La Jolla, California 92037,  
fax: (619) 552-8625, e-mail tom@dgt.com**

EOE



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 will 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.

Pioneer is an equal opportunity employer M/F/D/V.

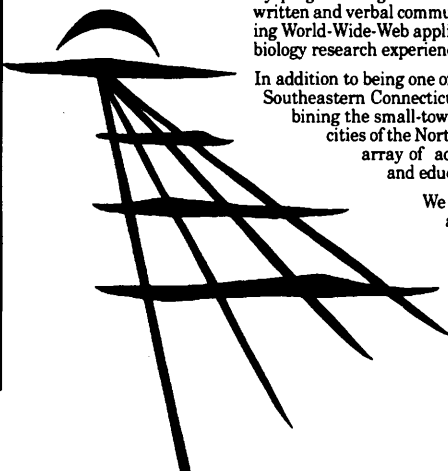
Scannable resumes preferred



PIONEER HI-BRED INTERNATIONAL, INC.



At Pfizer,  
we're taking  
medicine  
to new  
frontiers.



Pfizer believes that the greatest breakthrough drugs and life-enhancing treatments are yet to be discovered and are seeking individuals to help accomplish this. We are a leading developer of novel drug therapies and life-enhancing health care products. Our state-of-the art research facilities and continuing investments in R&D make it a place to support individuals who are working hard to make a real difference. If you are that individual, please read on.

## BIOINFORMATICS

The Department of Molecular Sciences is seeking a Ph.D. scientist in the area of bioinformatics to join our Genetic Technologies group. This group is engaged in challenging research to discover new drug targets in major therapeutic areas. You will lead a growing team of scientists to develop and apply computational tools for molecular biology, working in close collaboration with drug discovery project teams. Expertise in current computational sequence analysis methods for database searching, gene and protein structure prediction, and pattern discrimination is essential. A strong background in database and utility programming in a Unix/Macintosh environment coupled with excellent written and verbal communications skills are required. Experience in developing World-Wide-Web applications is also desirable. Candidates with molecular biology research experience are preferred.

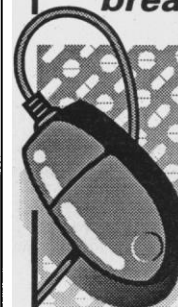
In addition to being one of the world's finest corporate scientific communities. Southeastern Connecticut is a highly desirable place to live and work, combining the small-town life of New England with easy access to the major cities of the Northeast. The Groton-New London area provides a wide array of advantages in addition to many cultural, recreational and educational amenities.

We offer a competitive salary/benefits program, as well as a generous relocation package. For confidential consideration, please forward your resume suitable for electronic scanning (i.e., eliminate italics, bullets, bolds, underlines and staples) to: Employee Resources, Ad#1130, Pfizer Inc, Central Research Division, Eastern Point Road, Groton, CT 06340. We are an equal opportunity employer M/F/D/V.



Central Research

## Intensive technical breakthroughs



At Glaxo Wellcome, the world's largest pharmaceutical company, we believe in maximizing the potential offered by new technologies in every area of our operations. Our Bioinformatics group is a leader in the field, and we are seeking highly motivated

candidates to join this interdisciplinary team of molecular biologists and computer scientists in one of the following openings.

## BIOINFORMATICS SOFTWARE DEVELOPERS

\*An opening exists for an individual to develop and implement bioinformatics software for the management and analysis of physical mapping/positional cloning and sequence data. Will also provide software support for positional cloning and sequencing projects. Requires a BS/BA in Computer Science or Biology with a minimum of 3 years relevant experience in bioinformatics application software and 2 years experience in C programming on UNIX systems. A strong interest in research and excellent teamwork, interpersonal and communication skills are required. Knowledge of object oriented technology is desired. Refer to Job #ASC1167-2 on all resumes.

\*Another opening exists for an individual to assist in the design and development of bioinformatics software in support of our Genetics Initiative and Systems Based Research, with a focus on nucleotide and protein sequence analysis. Requires BS/BA in Computer Science or Biology with a minimum of 2 years relevant experience in bioinformatics application software. Experience in C programming on UNIX systems, and knowledge of object oriented technology and/or Macintosh programming is required. Biology background preferred. Candidate must possess excellent teamwork, interpersonal and communication skills. Refer to Job #ASC1166-2 on all resumes.

The rewards of working at Glaxo Wellcome include excellent salaries, a flexible benefits package, a beautiful headquarters campus, ultra-modern facilities, and an excellent location in the Raleigh-Durham area of North Carolina. Additional Bioinformatics positions are available in our U.K. location, in Steyenne. For confidential consideration, send your resume, indicating the position title, job # and salary history, to: **Human Resources Department, Glaxo Wellcome, P.O. Box 13398, Research Triangle Park, NC 27709.** (No Phone Calls or Agency Referrals, Please) An Equal Opportunity Employer M/F/D/V

**GlaxoWellcome**

Working Together For A Healthier World

## Single Cell Cardiac Electrophysiologist

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



Pharmacia & Upjohn



**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.*

#### **Scientific Review Administrator**

Opening Date: 7/1/96

Closing Date: 7/29/96

Announcement Number: CA-96-1915

GS-601-13/14

The Grants Review Branch, Division of Extramural Activities of the National Cancer Institute (NCI), National Institutes of Health (NIH), is seeking to recruit an individual to join a multidisciplinary group of Scientific Review Administrators (formerly Executive Secretaries) engaged in managing the review of research grant applications submitted to the NCI. These activities are based in suburban Maryland, but some travel is involved. Candidates should have independent research expertise in current and emerging technologies in cell and molecular biology related to cancer, with an emphasis on molecular genetics. Candidates should be familiar with the NIH grant review and support process. Candidates must be United States citizens. The salary range for this position is \$52,867 to \$81,217. To obtain information on the application procedures and documents required for consideration for this position, candidates may contact the **National Cancer Institute, Office of Human Resources and Consulting Branch** at (301) 402-2789. To obtain a fax of this information, call 1-800-728-5627 or (301) 594-2953 and enter Fax ID# 1880. *Selection for this position will be based on merit, with no discrimination for non-merit reasons such as race, color, gender, national origin, age, religion, sexual orientation, or physical or mental disability. The NCI/NIH is an equal opportunity 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.

The mission of Human Genome Sciences is to identify and develop drugs and diagnostic products based on its leadership position in the discovery and expression of novel genes from human, animal, plant, and microbial origin.

#### **Researchers, Ph.D./M.D.**

Several positions are available for Ph.D./M.D. applicants with demonstrated expertise in cell biology or pharmacology to conduct studies in small animals with novel therapeutic proteins. Although expertise in a particular field is desirable, a willingness to be creative in animal model development is also essential. Requires at least 5 years laboratory experience in one or more of the following fields: chronic inflammation (joint, pulmonary and/or dermal), autoimmunity or wound repair/cell protection.

HGS encourages the pursuit of academic excellence and offers a competitive benefits package including educational reimbursement, subsidized health club membership, 401(k) plan with employer match, and more. Look for us at [careers.hgsi.com](http://careers.hgsi.com) or send/fax



your resume to Human Resources Department,  
Human Genome Sciences, Job Code #MA-712,  
9410 Key West Avenue,  
Rockville, MD 20850.  
FAX: (301) 309-1845.

## **HGS**

**Human Genome Sciences, Inc.**

*Dedicated To Discovery For Health*



## CELL GENESYS

### ASSOCIATE SCIENTIST

**A**s a leading research and development company,

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.



CELL GENESYS



### 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.**

## GLOBAL CAREER OPPORTUNITIES



### 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: A25/02

Applications are invited for a Lectureship/Senior Lectureship in Genetics with specific interests in molecular genetics of eukaryotes (vertebrate, invertebrate or lower eukaryotes). 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 should possess extensive experience in genomic analysis and more particularly, high through-put 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 Associate Professor C B Gillies phone 61 2 351 2688; fax 61 2 351 4771; email cgillies@bio.usyd.edu.au or Professor D J Patterson phone 61 2 351 2848; fax 61 2 351 4119; email djp@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

**Method of application for academic positions:** Three copies of the application, quoting Reference No, curriculum vitae, list of publications and the names, addresses and fax numbers of at least three and not more than five confidential referees to: The Personnel Officer, (Sciences Group), Carslaw Building, (F07), The University of Sydney, NSW, 2006 Australia

Equal employment opportunity and no smoking in the workplace are University policies. The University reserves the right not to proceed with any appointment for financial or other reasons.

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/fMRS), 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 und 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); "Scatterlings 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](mailto: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.*

## UNIVERSITY COLLEGE LONDON MEDICAL SCHOOL

*Department of Epidemiology  
and Public Health*

## **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.

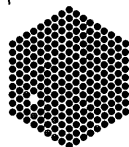
The Department is at the forefront of research on the interaction of psychological and biological factors as explanations for socio-economic differences in disease occurrence. Research has been primarily epidemiological to date, but we are increasingly interested in biological pathways. Possible avenues of research include the influence of psychosocial factors on neuro-endocrine pathways, and on fibrinogen and 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 RAIII/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.

*Working towards Equal Opportunity*



## **EMBL - Hamburg Outstation**

The European Molecular Biology Laboratory (EMBL), an international research organization with its Headquarters Laboratory in Heidelberg (Germany), Outstations situated in Grenoble (France), Hamburg (Germany) and Hinxton (UK) and a Research Programme at Monterotondo (Italy), has the following vacancy at the Hamburg Outstation for a

### **HEAD OF OUTSTATION**

#### **Protein Crystallography Group Leader**

The Outstation has developed advanced instrumentation for the utilization of synchrotron radiation in structural molecular biology, making use of its special properties, principally high intensity, high degree of collimation and wavelength tunability. The source is DORIS, a dedicated synchrotron ring, running a positron current with excellent stability and life time. There are currently 4 beam lines for protein crystallography, two for small angle scattering and one for EXAFS. The personnel in Hamburg currently includes 27 staff directly funded by EMBL together with about 10 pre- or post-doctoral fellows. The Head of Outstation is responsible for the continued successful functioning of this EMBL facility.

The position requires scientific, personal and managerial skills, reflecting the tasks that it entails. These include:

- Oversee the scientific and technical coordination of the in-house activities of the current four groups (protein crystallography, EXAFS, small angle scattering and instrumentation).
- Provide and ensure support for the large number of external visitors who come to use the facilities (more than 300 in 1995). Supervision and support of the data collection by these groups on the X-ray beam lines is a major activity during available beam time, about 30 weeks per year.
- Operate a research group in protein crystallography in the Outstation and carry out independent scientific research.
- Promote interaction with the rest of EMBL, including the Structural Biology Programmes in Heidelberg and Grenoble. The Head of Outstation is expected to participate in a Steering Committee that will help plan EMBL's activities in structural biology.

Candidates should have a Ph.D., several years of experience in macromolecular crystallography and significant research accomplishments. Experience in the use of synchrotron radiation would be advantageous. They must demonstrate ability and willingness to run an independent group, to interact with and support a wide range of visitors.

The contract will be for 5 years in the first instance. This can be renewed, depending on circumstances at the time of review.

Closing Date: All applications should be received by 15th October, 1996.

EMBL is an inclusive, equal opportunity organization.

Please send CV, quoting reference no. 96/30, to:

**The Head of Human Resources, Postfach 10.2209, D-69012 Heidelberg, Germany. Fax: +49 6221 387555  
email: jobs@EMBL-Heidelberg.de**



# 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 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.

ISI offers excellent compensation and benefit packages. Qualified candidate should send his or her resume, indicating appropriate position, to:

Personnel Department  
Interferon Sciences, Inc.  
783 Jersey Ave.  
New Brunswick, NJ 08901

**INTERFERON SCIENCES, INC.**

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## Sr. Research Assistant

A research institute has a senior position available to assist with the management of a barrier operated transgenic facility.

Your responsibilities will include training and directing staff activities, maintaining supplies, handling record-keeping and performing other related duties. Candidates must possess a B.S. degree, minimum of 4 years of equivalent experience (AALAS level qualifications will be considered), excellent communication skills and demonstrated management abilities.

Please submit resume and salary history/requirements to:  
NAS Reply Service, P.O. Box 55002, Dept. 7LA008, Sherman Oaks, CA 91413. Affirmative Action/Equal Opportunity Employer. Veterans, disabled persons, minorities and women are encouraged to apply.

## 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 rank 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 research in pharmacology. The principal research interests in the department are the physiology, pharmacology, and toxicology of the cardiovascular, nervous, and reproductive systems. The successful candidate will be expected to participate 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 97201-3098.** 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, administer, and direct 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: **Sharon 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 salary 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/Affirmative Action 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 an emphasis on molecular biology as it relates to photodynamic therapy. A Ph.D. with relevant postdoctoral 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: **David Fromm, M.D., Chairman, Department of Surgery, 6C /UHC, 4201 St. Antoine, Detroit, MI 48201.** Wayne State University is an Equal Opportunity/Affirmative Action Employer.

### POSTDOCTORAL ASSOCIATE Human Molecular 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 genome analysis preferred. Submit 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.

## POSITIONS OPEN



The United States Department of Agriculture (USDA), Agricultural Research Service (ARS), Beltsville Human Nutrition Research Center (BHNRC), Diet and Human Performance Laboratory, is accepting applications for a permanent, full-time **RESEARCH CHEMIST, NUTRITIONIST, PHYSIOLOGIST**, or related discipline. The objective of this position will be to develop mathematical 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 maintenance of healthy body weight and composition. Candidates must have a strong working knowledge of human nutrition, biochemistry, kinetics, physiology, mathematics, statistics, and computer programming. A Ph.D. in the nutritional sciences or related discipline with emphasis on energy metabolism is desired. Experience with mathematical modeling and computer application are essential. *Applicants must be U.S. citizens.* Salary range is \$37,094 to \$68,729. 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 may be directed to: **Dr. Joseph Judd, Telephone: 301-504-9014.** The closing date for this announcement is September 9, 1996. USDA, ARS is an Equal Opportunity/Affirmative Action Employer.

### MICROSCOPY/IMAGE ANALYSIS SPECIALIST

The Oregon Regional Primate Research Center seeks a microscopy/image analysis **SPECIALIST** to oversee operation of a biological morphology 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 offline 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 computers (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 resume 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 individual 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 strong electric fields to cells and cell organelles. Demonstrated experience in pulsed laser microscopy as related to imaging ions at biological interfaces is essential. Shown expertise in measuring oxidizable molecules with carbon fiber electrodes 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 resume 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 Employer 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 WMRB, Emory University 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. Experience in molecular biology 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: [lamon@u.washington.edu](mailto:lamon@u.washington.edu).

## POSITIONS OPEN

### 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 in conjunction with NCI-sponsored adult 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 pre-clinical pharmacology, metabolism, and mechanisms of action studies with new agents. Candidates should have a strong background in pharmacokinetics, metabolism, and/or pharmacology. Candidates with postdoctoral experience will be considered for a more advanced appointment. 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 Educator and Employer.

### 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, cancer vaccines, and immunotherapy. The candidate should have a solid background in molecular biology. Experience in hematopoiesis or immunology would be beneficial, but is not required. Ph.D. or M.D. 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: Debbie Etz, 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 to study cellular and synaptic physiology in mammalian neocortex. Applicants should have a background in electrophysiology, preferably with brain slice and patch-clamp experience. Fellows will receive stipends appropriate to their qualifications and experience. Submit a 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: 619-626-2099.

### POSTDOCTORAL FELLOWSHIP

The Johns Hopkins University School of Medicine

Applications are invited for a two-year RESEARCH POSTDOCTORAL FELLOWSHIP in molecular and cell biology of intestinal ion transport. Research deals with structure/function studies of a family of intestinal Na/H exchangers. Interest and previous experience in molecular biology approaches is required. Candidates should send a curriculum vitae and names of two referees 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 prospective immuno- and gene therapies of these diseases. Experience in molecular biology, immunology, or cell biology is desirable. Applicants should send curriculum vitae, brief summary of research experience, names of current preceptor/adviser, and at least one other referee to: **Tibor T. Glant, 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 December 1, 1996 to study lipid-derived second messengers in vascular smooth muscle, with specific interest in phospholipase A<sub>2</sub> and isoforms of phospholipase C. Individuals experienced in biochemical and molecular techniques are invited to send a curriculum vitae and names of three references to: **Edward F. LaBelle, Ph.D., Bockus Research Institute, The Graduate Hospital, One Graduate Plaza, Philadelphia, PA 19146.** An Equal Opportunity Employer.

## POSITIONS OPEN



### 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 cell surface receptors, signal 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 house five interacting 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 up to three years. They are funded by a Scientific Prize from the Göran Gustafsson Foundation for Research in Natural Sciences and Medicine.

The candidate should have a strong background in genetics, molecular biology, or immunology. Send curriculum vitae and two letters of recommendation to: **Dr. Dan Hultmark, Department of Developmental Biology, Stockholm University, S-106 91 Stockholm, Sweden.** FAX: +46-8-16 15 70; Email: dan@molbio.su.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 antitumor agents. Current studies include development of mechanism-based protease inhibitors and novel tryptophan analogs targeted at carcinoid disease. This position funded by NCI training grant and/or NIH R01 grant; successful applicant will meet eligibility requirements for 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 Educator and Employer.

### 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 gene transduction *in vitro* as well as *in vivo*. Interests include receptor targeting and entry pathways, vector stabilization in the nucleus, and immune response to gene transduction by adenoviral vectors.

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. Terry W. Du Clos, Department of Medicine, or Dr. Carolyn Mold, Department of Microbiology, University of New Mexico, Albuquerque, NM 87131.** Email: tduclos@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, analysis of small GTP binding activation, protein:protein interactions, and kinase/phosphatase assays desirable. Send curriculum vitae and names of three references to: **Dr. Terry G. Unterman, Endocrine 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.

## POSITIONS OPEN

### ENVIRONMENTAL SCIENCE

FOUR POSTDOCTORAL positions with the following research interests are available beginning July 1, 1996, through Murray State University's Center for Reservoir Research. Research is primarily on Kentucky Lake and its watersheds. All positions will remain open until filled. Zooplankton Ecology: Research will focus on plankton community ecology and structure using an extensive database and experimental and molecular techniques. Environmental Chemistry: Research will focus on organic compound composition/cycling in sediments and overlying water. Hydrologic Modeling: Research will focus on detailed investigation/modification of existing hydrologic, thermal, biological/nutrient, and sedimentological models utilizing digital image processing and GIS. Microbial Ecology: Research will focus on microbial diversity and activity utilizing molecular biotechniques. For further information, contact: **David White, Center for Reservoir Research, Murray State University, Murray, KY 42071.** Telephone: 502-474-2272; Email: DSWHITE@MSUMUSIK.MURSUKY.EDU. Murray State University is an Equal Education/Employment Opportunity/Minority/Female/Disabled/Affirmative Action Employer.

### POSTDOCTORAL RESEARCH ASSOCIATE

Immediate opening. Candidates for later start also encouraged to apply. Work in human immunoglobulin genes and autoantibodies, using combinatorial Ig library and phage display. Candidate should have experience in molecular biology and protein purification. Salary variable on experience. For further information and to send curriculum vitae: **Dr. D. Rubinstein, Division of Hematology/Oncology, Boston University, 88 East Newton Street, Room E-501, Boston, MA 02118.** Telephone: 617-638-7514; FAX: 617-638-7065.

POSTDOCTORAL POSITION available to study signal transduction. Research focuses on kinase/phosphatase regulating NF- $\kappa$ B, CD28 signaling, JNK kinase cascade and apoptosis (MCB, 15:4260, 1995; JBC, 271: 631 and 8971, 1996) by molecular biology, biochemistry, and 2-hybrid system. Applications should be addressed to: **Dr. Tse-Hua Tan, Department of Microbiology and Immunology, M929, Baylor College of Medicine, Houston, TX 77030.** Baylor College of Medicine is an Affirmative Action/Equal Opportunity/Equal Access Employer.

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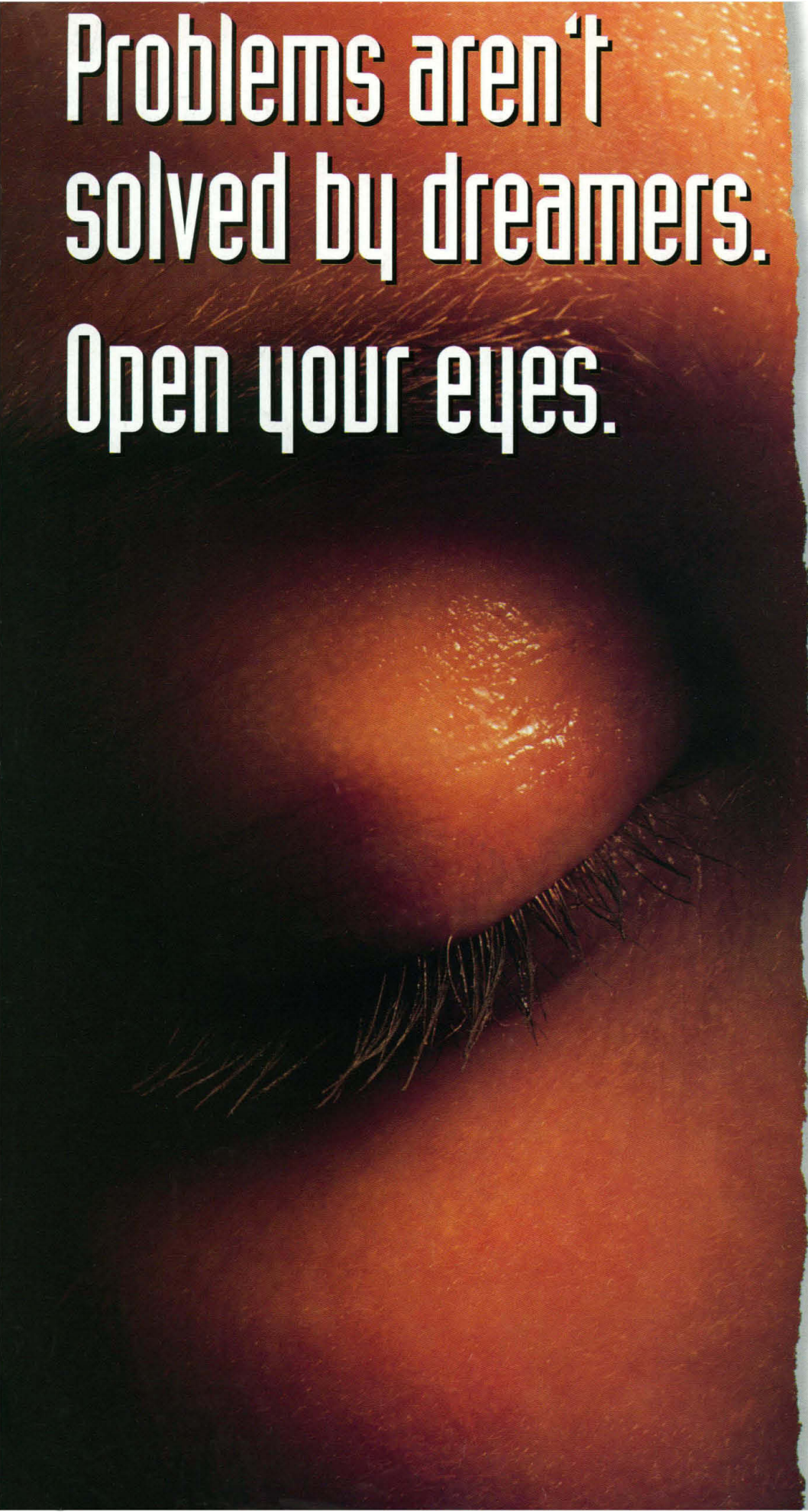
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