PRODUCTS & MATERIALS

assurance of positive transformants and more convenient post-cloning manipulations. National Biosciences, Inc. Circle 135.

Laminar Flow Enclosure

The VLF24 is a low-cost polymerase chain reaction work environment that provides laminar flow protection and ultraviolet lighting to prevent the contamination of

DNA Synthesis Chemistries

UltraFAST DNA synthesis chemistries, for use with ABI synthesizers from Perkin-Elmer, significantly reduce the time for postsynthesis cleavage and deprotection, which makes up the largest block of oligonucleotide processing time. Users can reduce the time for on-line cleavage and off-line deprotection from 2.5 hours to 10 min. **Beckman Instruments. Circle 133.**

-

Reversible Gel Stain

The 5 Minute Reversible Gel Stain is a single-step protocol for staining protein bands in sodium dodecyl sulfate–polyacryl-amide gel electrophoresis gels. Destaining is not necessary to see the protein bands. The stain is based on copper ions that produce

colorless images of protein bands against a semi-opaque background. The stain has greater sensitivity than Coomassie blue, and gels can be destained for transfer or electroelution. Geno Technology. Circle 134.

Cloning Kits

The 3G Blue Cloning Kit is a prokaryotic system to assist in cloning polymerase chain reaction (PCR) products quickly and efficiently. It is based on the creation of heteroduplex PCR products with a 5'-GGG overhang. The heteroduplex is easily generated with sets of related PCR primer pairs supplied by the manufacturer. The TC Blue Cloning Kit is based on the *T*-A principle with an enhancement to the low efficiencies associated with *Taq*-generated 3' G or 3' C overhangs. This new design provides a greater



nucleic acid samples by airborne particulates or earlier experiments. The ultraviolet lighting inactivates DNA and RNA contamination within minutes to ensure reliable results during sample preparation for nucleic acid amplification. Sample protection is provided



Circle No. 59 on Readers' Service Card

to better than class 100 by bathing the work surface with 0.12- μ m of filtered air. The VLF24 provides true laminar air flow and ensures nonturbulent air flow over the entire working area. The air is filtered through a prefilter and high-efficiency particulate filter for maximum sterility. **Misonix. Circle 136.**

Antibodies

A rabbit polyclonal antibody to brain-derived neurotrophic factor can be used in immunohistochemistry and immunoblotting. The neurotrophins are a family of growth factors acting principally on a wide range of neurons. The antibody works on various species including rat and human. Chemicon International. Circle 137.

Affinity-purified antibodies are available specific for the parathyroid hormone receptor. They have been used successfully in protein immunoblotting and immunohistochemistry. **Berkeley Antibody Co. (BAbCO). Circle 138.**

A polyclonal antibody specific for HIV-1 recognizes protein immunoblot bands p17, p24, p45, p53, p55, p64, gp120, and gp160. Antigenix America. Circle 139.

FT-IR Microscope Mounts

EZ-Spot Micro-Mounts are for use with Fourier transform-infrared (FT-IR) microscopes. They have 12 discrete sample wells that allow the user to mount up to 12 isolated microsamples on a single slide for reflection-absorption spectroscopy measurements. The wells not only provide isolation but make it easier to locate the sample on the microscope stage. They are available in two versions, aluminum and gold coated. Spectra-Tech. Circle 140.

Genomic Hybridization Software

MultiFluor CGH is software for automated comparative genomic hybridization (CGH) analysis. The IBM-compatible, Windowsbased software is for analyzing digitized images of CGH metaphase spreads for gains and losses of genetic material. MultiFluor CGH automatically calculates fluorescence CGH ratios for all chromosomes in a metaphase spread, then presents results graphically for detailed assessment. The program chooses appropriate chromosomes using built-in exclusion criteria, accurately calculates the central axis of each chromosome out to the telomeres, performs local background corrections, normalizes intensity measurements, and standardizes chromosome lengths for comparison of data from multiple metaphase spreads. Following analysis, chromosome images are arranged in the CGH-Karyotype Window according to length. **Biological Detection, Inc.** Circle 141.

Labeled Probe Amplification Kit

FluorAmp is a kit for the amplification of probes directly labeled with fluorescein. Users can restore weak or quenched fluorescein signals on direct or hapten-labeled probes, eliminate repeat hybridizations, and salvage poor sample preparations. **Oncor. Circle 142.**

Dissolved Oxygen Probe

The DO-166 Dissolved Oxygen Probe can measure dissolved oxygen as easily as pH, using any standard pH meter. The probe plugs directly into any standard pH meter and can



measure dissolved oxygen from 0 to 14 ppm with readability of 0.1 ppm. The probe eliminates the time-consuming wet chemistry involved with the Winkler method. Lazar Research Laboratories. Circle 143.

Positive Selection Cloning Vector

Zero Background Cloning Kits allow positive selection of inserts via disruption of a highly lethal gene. The kits feature pZERO cloning vectors; when an insert is cloned into pZERO, only recombinants are permitted to grow. The vectors eliminate background and ensure positive results without vector dephosphorylation or blue/white color screening. **Invitrogen. Circle 144.**

DNA Isolation Kits

The Nucleobond AX ion exchange cartridges are designed so that even the largest plasmids can be purified in high yield. Using a large piece of DNA reduces both time and cost when doing chromosome mapping for cytogenetic phenotyping or positional cloning. The Nucleobond AX procedure is quick and easy and the DNA is ready for further manipulations including restriction analysis, subcloning, amplification, and sequencing. **The Nest Group. Circle 145.**

DNA Sample Isolation Device

A new blood collection matrix can isolate DNA prior to polymerase chain reaction (PCR) in less than 35 min without the use of hazardous reagents. Blood components that inhibit amplification such as hemoglobin remain on the matrix when the DNA is released. Eluted DNA is suitable for both standard and long-range PCR. The innovative matrix is offered in a card device with four 3/8-inch sample collection circles. One device yields enough DNA for 60 10- μ l PCR reactions, more than enough for immediate, confirmatory, and archival purposes. Schleicher & Schuell. Circle 146.

.

Literature

HPLC and CE Supplies Catalog provides comprehensive information on a complete line for these separation techniques. **Perkin-Elmer. Circle 147.**

Chirex: The Innovative Direction in Chiral Separations is a guidebook that introduces the concepts of chirality and chiral separation by high-performance liquid chromatography. It explores in detail the approach to column selection and method development. Phenomenex. Circle 148.

Amresco Acrylamides provides information on new gels and describes a complete line of high quality acrylamide matrices available in powder, liquid, and premixed forms. **Amresco. Circle 149.**

Sigma Chemical Company 1996 lists more than 34,000 biochemicals, organic compounds, reagents, and general laboratory products. It features nearly 2000 new products, including ACS reagents, antibodies, enzymes, cell biology reagents, and electrophoresis gels and reagents. Sigma Chemical Co. Circle 150.

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

Think of us as your research foundation.

When you're probing or recording at the singlecell level, there's no room for error, or vibration.

Our patented Gimbal Piston[®] Air Isolator System effectively eliminates both vertical and horizontal floor vibration. When it's combined with our unique, highly damped, stainless steel laminate tops or steel honeycomb, spillproof CleanTop[®], you are assured of unequalled performance.

That's why leading researchers worldwide specify TMC vibration isolation systems: laboratory tables, optical tables, table-top



and floor platforms. Each component of these precision systems is designed to assure the most effective vibration protection possible for your most critical applications.

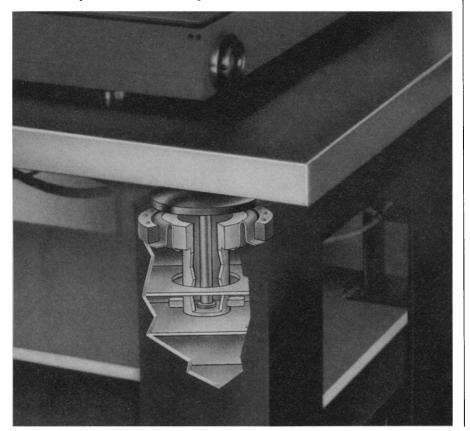
For support you can count on, move up to TMC vibration isolation systems. Contact our Technical Sales Group today.



Technical Manufacturing Corporation 15 Centennial Drive • Peabody, MA 01960, USA

Tel: 508-532-6330 • 800-542-9725 Fax: 508-531-8682 EMail: sales@techmfg.com

Vibration Solutions



Circle No. 21 on Readers' Service Card



Electrophoresis Brought To Life



Spot the difference...

The power of 2-D electrophoresis is now brought to both analytical and preparative scale applications. Using Oxford GlycoSystems' Investigator™ 2-D electrophoresis system, you can move easily from 1st dimension isoelectric focusing (IEF) to 2nd dimension PAGE gels, then to blotting and sequencing your target protein.

...an obvious choice

Investigator 2-D systems are the most widely used complete 2-D electrophoresis systems.

- DuracryI[™] high performance gels
- Dedicated reagents
- High resolution and reproducibility
- Integrated temperature control system
- Up to 10 gels per run
- Preparative gels

With a capacity of up to 1 mg protein total, and recovery of up to 10 μ g from a single spot, you'll find the Investigator the obvious choice.

For a FREE information pack on how Investigator™ systems can improve your electrophoresis applications contact us today.

Oxford GlycoSystems

USA and Canada: Tel: (617) 533 0100, Fax: (617) 533 0101, Tollfree: 1-800 722 2597 UK and Europe: Tel: +44 (0)1235 553066, Fax: +44 (0)1235 554701, Tollfree: 0800 212061 Tollfree to UK from: Switzerland 155 2739; France 0590 86 08; Germany 0130 81 37 48 Japan: Tel: 3-3862-2108, Fax: 3-3866-5165

Circle No. 20 on Readers' Service Card

READY FOR A CAREER CHANGE?

Turn to page 1154 for...

EXCITING TIMES IN A TOUGH MARKET: Career Opportunities in Biotechnology and Pharmaceuticals in the United States and Europe

The special advertising supplement in this issue looks at the changing world of scientific career opportunities in the biotechnology and pharmaceutical fields. This special section also includes recruitment advertisements.

And Plan on Attending...



PhD, MD/PhD, MS and BS Scientists:

Cambridge, MA on the MIT Campus: March 1 interviewing, 11 am - 4 pm; March 2 interviewing, 12 pm - 4 pm.

To preregister, please submit your resume or CV via fax: (202) 289-6742, or via e-mail: bioscience@aaas.org. Please remember to bring multiple copies of your CV or resume with you to the Career Fair. For more information, please call (202)326-7018 or see our web page at http://www.aaas.org (choose SCIENCE from the menu.)

Upcoming Career Fairs...

San Francisco, CA on the Stanford Campus in Palo Alto, May 3-4.

La Jolla, CA at The Scripps Research Institute, October 4-5.



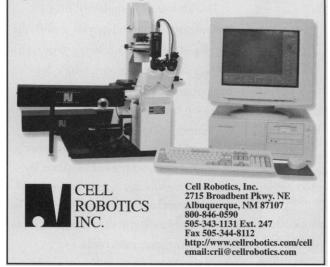
NEW

Control your cellular world with an optical trapping workstation from Cell Robotics...

The ideal multi-user platform for performing cell micromanipulations and microdissections.

The Cell Robotics Workstation combines the accuracy and precision of the LaserTweezers[®], LaserScissors[™] and CellSelector[™] into a fully integrated workstation for:

- Cell/cell interactions and neural networking
- Microdissection and cell fusion
- Single cell isolation
- · Laser-assisted reproduction research



Circle No. 68 on Readers' Service Card

AmpliCycle[™] Sequencing Kit

的行动的是一种的

Concession and the second

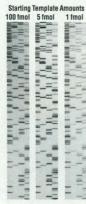
You've been looking at gels like this for years.

Now get results like this in just one hour.

1000

to restance and and

Wat and the second



DNA sequence obtained with the AmpliCycle Sequencing Kit and the GC-rich control template, pBSMB. 33P end-labeled primer.

For superior sequencing results directly from any template source-PCR products, plaques, colonies, ss or dsDNA—use the AmpliCycle™ Sequencing Kit from Perkin-Elmer.

This kit features AmpliTag® DNA Polymerase, CS, a novel enzyme specifically developed for cycle sequencing. It provides ladders with even band intensities, low background, and fewer false terminations using 32P, 33P, or 35S.

Accurate DNA sequences can be determined with as little as one hour exposure or from as little as 1 fmol of template. By adjusting the amount of template and label, protocols can be optimized for sensitivity or isotope conservation, with end-labeling or direct incorporation.

Perkin-Elmer's performance guarantee backs every AmpliCycle Sequencing Kit. The integrated resources of our Applied Biosystems Division offer the most comprehensive range of systems, technologies, and support in PCR, genetic analysis, nucleic acid synthesis, and protein research.

Now get sequencing results in just one hour. To order or to request more information, call 1-800-327-3002. Outside the U.S. and Canada, call or fax your local Perkin-Elmer representative.



Europe Langen, Germany Tel: 49 6103 708 301 Fax: 49 6103 708 310 Japan Tokyo, Japan Tel: (0473) 80-8500 Fax: (0473) 80-8505 Latin America Mexico City, Mexico Tel: 52-5-651-7077 Fax: 52-5-593-6223 Australia Melbourne, Australia Tel: (03) 9212-8585 Fax: (03) 9212-8502

Perkin-Elmer PCR reagents are developed and manufactured by Roche Molecular Systems, Inc., Branchburg, New Jersey, U.S.A.



Perkin-Elmer is a registered trademark of The Perkin-Elmer Corporation. AmpliCycle is a trademark and AmpliTag is a registered trademark of Roche Molecular Systems, Inc. The GeneAmp PCR process is covered by U.S. patent: owned by Hoftmann-La Roche, Inc. and F.Hoftmann-La Roche Ltd.

Advertising Supplement



CAREER OPPORTUNITIES IN BIOTECHNOLOGY AND PHARMACEUTICALS IN THE UNITED STATES AND EUROPE

n both the United States and Europe, the Human Genome Project has realigned the career market. As of mid-1993, the words *genomics* and *bioinformatics* began to appear regularly in employment talk. Ernst & Young's annual review, *Biotech96*, called 1995-1996 "The Year of the Gene," pointing

out that biotechs and large pharmas were spending large amounts of money for access to genomic information. What it all means is this: next to the continuing interest in cutting-edge chemistry, molecular biology, microbiology, genetics, and biochemistry, there is now an industrywide boom in information technologies. *Bioinformatics*, it's called, a word embracing myriad methods of transforming the tidal waves of genomic information into usable data from which to create the therapeutic agents of the future.

All this transformation is very much still in process. In many cases, people are needed to design software and hardware for the specific needs of their companies. And there is an ad-hoc atmosphere to all this, as companies learn by doing. The scientist with ground-up skills-the ability not just to operate a computer but also to design (or at least orchestrate) software for use in genomic and bioinformatic applications—is suddenly coveted, as much in Europe as in the United States. Below, we speak to people from Human Genome Sciences and Zeneca about careers in biotechnology and pharmaceuticals, and we also visit the Max Planck Institute for Molecular Genetics in Germany. To be sure, gene therapy and cell therapy have hardly lost their appeal: excellent scientists in those fields will find a warm welcome in the career marketplace. But genomics and bioinformatics have added a new set of needs-and a new group of scientists everyone wants.

HUMAN GENOME SCIENCES: "TWO HUNDRED EXTREME OPTIMISTS"

Human Genome Sciences (HGS) led the industry turn to genomics and bioinformatics when SmithKline Beecham paid \$125 million in June 1993 for first option rights on HGS human genomics discoveries. Since then, agreements with

by John Timpane

Takeda, MedImmune, Pioneer, and other companies have established HGS among the top biotechs. HGS has also been among the leaders in patenting its genetic discoveries, becoming one of the shapers of worldwide genetic patent law.

Barbara Mitchell, director of human resources, says that her company, "a group of 200 extreme optimists," is entering into a new phase, moving, like many other biotechs, from pure research into drug development. Alone and with partners, HGS is applying knowledge of human and micro-

"With the addition of bioinformatics, the job market has gotten much more complex. This is a whole area largely untapped for scientists looking to expand

their skills." – Barbara Mitchell (HGS)

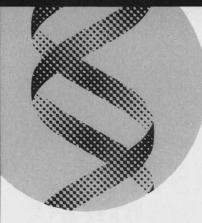
bial genes to the development of new pharmaceutical products. Such a move affects the kinds of careers available at HGS and throughout the industry.

Drug development is definitely where the entire biotechnology industry is heading. Larger companies that can do it themselves are gearing up for production. Smaller companies with good ideas are creating partnerships with the larger established pharmas, who are eagerly courting such partners. At the same time, the Human Genome Project has brought innovation to biologic research and drug design.

All those developments will affect the kinds of jobs available. "Backgrounds in biometrics and information science are—it seems overnight—suddenly at the top of our wish list," Mitchell says. "With the addition of bioinformatics, the job market has gotten much more complex. This is a whole area largely untapped for scientists looking to expand their skills." Scientists have used computers for two generations now, but Mitchell and HGS are looking for the extraordinary here. "We're looking for more than the ability merely to use a Mac or PC," she says. "We're looking for those with a scientific background as well as systems experience. We need PhDs who have excellent computer skills." continued...

1155

CUTTING EDGE SCIENCE



Genentech is a pace-setting company, internationally known for discovering, developing, manufacturing and marketing pharmaceuticals for significant unmet medical needs. We are the only biotech company with five marketed products and currently have the following excellent opportunities available in our South San Francisco headquarters.

Toxicologist

You will design, conduct and scientifically evaluate Safety Assessment studies conducted in animals or appropriate alternate test systems in support of U.S. and international marketing applications. Candidates will be expected to independently prepare comprehensive preclinical safety assessments in the support of these applications and to present and defend this data to regulatory authorities. The position involves working closely with project development teams to provide expertise on all investigational and regulatory safety issues involving protein and chemical therapeutics.

Gualified candidates will have a Ph.D. or equivalent in Toxicology and a minimum of 3 years' experience in the Pharmaceutical/ Biotechnology industry working with a wide variety of pharmaceutical agents and classes of compounds. Experience with protein therapeutics is highly desirable. Individuals with experience in the areas of endocrinology, cardiovascular pharmacology, oncology, neuro sciences, or immunology are encouraged to apply. Board certification in Toxicology is desirable. Job code NSDT

Scientist, Cell Banking & Testing

The successful candidate will work in a collaborative environment with a staff to optimize procedures in cell banking and develop state of the art cryopreservation and banking technology. You will also participate in cell characterization studies for regulatory filings in support of our strong development program. Some work under GMP's will be required.

We require a Ph.D. with at least 2 years' postdoctoral industrial experience and broad based experience in cell culture and molecular biology as well as cell genetics. Experience with GMP and regulatory filings would be a plus. Job code MCMD.

Scientists Pharmacokinetics and Metabolism (3 positions)

A highly motivated Scientist is needed to develop animal models to support the development of recombinant proteins and small molecule therapeutics. The scientist will collaborate with pharmacokinetics, metabolism and toxicology scientists in the interpretation of data and development of experiments to investigate the pharmacokinetics, pharmacodynamics, metabolism and toxicology of candidate therapeutic molecules in relevant animal modes. In addition, the individual will interface with research scientists to incorporate existing and emerging information on the drug's mechanism of action into the development of the drug. A Ph.D. in Pharmacology or a related discipline and experience in animal physiology/in vivo animal model development are required. Postdoctoral experience and 2-5 years of relevant industry experience are desirable. Job code NSPK

Applications are also invited for 2 Scientist positions in the Department of Pharmacokinetics and Metabolism. Your primary responsibility will include supporting preclinical and clinical development of recombinant proteins and small molecule therapeutics by designing, conducting, analyzing, and reporting pharmacokinetic/pharmacodynamic studies. To qualify you should be a scientist with doctoral level training in pharmacokinetics, pharmaceutical sciences or a related discipline and 2+ years of industrial or academic experience in pharmacokinetics. Excellent scientific, interpersonal and oral/written communication skills as well as the ability to work in a team environment are essential. Experience in the drug development process, regulatory submissions, and demonstrated canabilities in advanced pharmacokinetic data analysis are plusses. Job code NSDB

Genentech, Inc.

Research Assistants and Associates

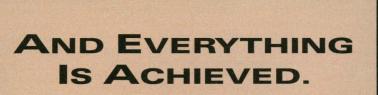
We have a number of opportunities for Research Assistants and Associates with a minimum of 1 year experience and a BS or MS degree in a relevant scientific discipline. You will work on research projects that require one or more of the following:

- Broad molecular biology skills: DNA sequencing and manipulation, Northern, Southern and Western blots, plasmid and vector construction, data analysis.
- Supervisory experience in a core facility.
- Cell culture, immunoprecipitation, FACS.
- Protein analysis, characterization and purification.
- Protein engineering, site-directed metagenesis and structures/ function analysis
- Clinical science: clinical chemistry, hematology, urinalysis. Medical Technologist (CA and/or ASCP) preferred.
- Biochemistry, computation methodology (i.e. force field methods), UNIX shell, C and/or Fortran programming.

Job code VSSRE

Join us an enjoy our exciting success and excellent benefits package that includes fully paid medical/dental/vision coverage, free health club membership, and Company stock purchase opportunities. For immediate consideration, please send your resume indicating appropriate job code to Genentech, Inc., Human Resources Dept., 260 Pt. San Bruno Blvd., South San Francisco, CA 94080. Genentech is an Equal Opportunity Employer. We value the contributions of our diverse workforce. Cold hard facts. Warm smiles. A soft touch. When it comes to the search for innovative pharmaceuticals at Eli Lilly and Company, these elements work in tandem to produce unprecedented results in our mission to improve health care. We believe that for every formula you memorize and every theorem you prove, it's just as important to understand the human factor in what it means to help people active lives. The women and men who make up our team of scientists at Lilly do.

They know that every innovative treatment they create and every cure and method of prevention they discover affects the way people all over the world manage disease and illness. That's why our scientists put both their minds and their hearts into achieving our goals at Lilly. Their WHEN SCIENTIFIC KNOWLEDGE AND HUMAN COMPASSION COME TOGETHER, ANYTHING IS POSSIBLE.



Silly Eli Lilly and Company KNOWLEDGE IS POWERFUL MEDICINE efforts have led us to become a \$6+ billion leader in the pharmaceutical industry, marketing products in 120 countries and employing over 26,000 individuals worldwide.

So bring your knowledge and compassion together with ours at Lilly and achieve everything you ever thought possible and some things you never even imagined.

We offer an excellent salary, comprehensive benefits and the chance to advance with a global leader. To be considered for current job opportunities fax resume to: (317) 276-9422 or E-mail to: resume@lilly.com Please note subject line must read resume. We are an equal opportunity employer dedicated to diversity and the strength it brings to the workplace.

Advertising Supplement

Even a year ago, the individual gene was the main focus of research. With genomics, scientists increasingly are able to look at the whole human genetic string rather than limiting their research to individual genes. When it comes to employment, biopharmaceutical companies increasingly value big-picture as opposed to narrowly focused genetic research. Whole-gene science, especially when connected to physiology or drug development, is the science of the moment. Chemistry and biology degrees are still popular with recruiters, but they are much more salable when joined with industrial or academic research experience. One hot degree is the BS or MS specifically in biotechnology. Johns Hopkins University has a popular MS program in biotech, as do schools such as the University of Maryland and the University of California at San Diego.

The move toward development has made a new range of scientists interesting to biotech companies. People with experience in clinical research and animal testing are very attractive. Pharmacologists are another group more in demand. Biochemists with experience in bioprocessing are paid very well and are frustratingly rare. "Many small to mid-size biotech companies are at the stage at which these people's skills are exactly what they need," Mitchell says. "We've just added a bioprocessing center, and we need experienced biochemists. They're getting harder and harder to find, either because not enough people are going into the field or because they get snapped up as soon as they hit the market."

Talk turns to research associates (RAs), whom Mitchell calls "the heart and soul of our organization." Undergraduates fresh from chemistry or biology BSs traditionally have started their science careers as RAs. They will always be needed. "Our difficulty," Mitchell says, "is in the middle group, where you're looking for more experience—the master's level scientist with a couple of years of experience who will stay with the job for a while. These people are hard to keep because once they start doing the science, they find they love it, and want to go back and get a better degree. It's hard to argue with that." This more-or-less permanent problem means that the experienced MS in relevant fields will always be attractive.

Another interesting area is patent law. Mitchell says that she has seen several scientists leave to study law "because the patent area in biopharmaceuticals is exploding—it's getting to the point where we realize we need people with both backgrounds." Mitchell calls this "an area that's exciting to think about" for hiring officers and job-seekers alike.

As for the science degree/MBA combination, Mitchell says that "even some discovery scientists with ten or fifteen years of experience are saying, 'I think an MBA would be a good idea for me' because they see a possible move away from strict research and toward development."

Mitchell echoes the concerns of other human resource officers at biopharmaceutical companies when she says, "We're seeing an awful lot of applicants who, frankly, aren't excellent. Many of them miss a few essential but basic things. We see many scientists who have good-looking CVs but can't articulate what they have been doing." It's the age-old issue of communication skills, which can still tend to get overlooked in undergraduate and graduate programsbut are increasingly important as science becomes increasingly collaborative. "So much of the work we do is in teams, where you have to bring scientists from other fields into the process," Mitchell says. "You have to be able to do that in words, and there still exists a big communication skills gap." Another common gap is in computer skills. Mitchell recommends that scientists now in school make a special effort to gain as much expertise in computer science as they can. "It's starting to be a differentiating factor between candidates, in both hiring and promotion," she says, "especially at beginning and mid-level positions."

Mitchell closes by pondering a much-bandied statistic: that those entering the job market today are likely to have an average of four or five different careers during their working lives. "I'm not sure you can claim that is completely true yet for the sciences," Mitchell says, "but I do know that there are more ways than ever of changing paths while still staying in science."

BIOCAREERS AND BIOINFORMATION: DAVID U'PRICHARD OF ZENECA

avid C. U'Prichard is executive vice president and director of research for Zeneca Pharmaceuticals. Among the most profitable of international pharmaceutical companies, Zeneca is, as U'Prichard puts it, going through "exciting times in an increasingly tough environment." Known and respected for its R&D effort and its pipeline, Zeneca is "very busy indeed in registering with regulatory agencies around the world." U'Prichard looks forward to "pushing through to the market half a dozen major new products in the next two years." Below, he reflects on the science employment market in the United States and worldwide.

What are some of the hot-button areas in biotech employment at this moment?

Bioinformatics is an area that is really booming. Admittedly, bioinformatics is rather a catch-all term subject to variable definitions. Generally, I can say that scientists coming on the job market with top-level skills in extracting useful information from genome databases-and linking that information to the universe of biomedical information—are worth a lot of money right now. It has been interesting in the last year to notice that many people without a classical biologics background, such as physicists and mathematicians, have been recruited into bioinformatics jobs. These are the people with superior skills in database analysis and management. Any way they get here, we can use them.

Just how good at computers do these scientists need to be?

Computer-literacy—especially in the bioinformatics area—-is still very

much in an evolutionary state. That's especially true in terms of software. If you have software production skills allied to an excellent science skill set, you'll be pretty well placed.

One hears about combinatorial chemistry a great deal lately.

Combinatorial chemistry—another term that embraces a variety of skills and functions—is increasingly important today. In general, contemporary chemistry, the current, cutting-edge set of chemistry skills—especially solidphase synthetic chemistry and information management skills—is very interesting to us and to other companies at the same phase of development. People who can combine combinatorial chemistry and informatics skills will be in great demand.

Now that biotechs are moving toward development, the pharmacologist appears to be newly attractive.

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.

If you want to explore unparalleled scientific and technical opportunities, enjoy greater individual responsibility and flexibility with new scientific disciplines, and be an integral part of an outward-looking team with a leading, dynamic international bioscience company, please contact us now.

Together, we can bring ideas to life.

Opportunities available in: Bioinformatics, Genomics, Molecular & Cellular Biology, Combinatorial Chemical Technology, Medicinal Chemistry, Pharmacology, Information Technology

Join Our Innovative Pharmaceutical Research Team



Contact us at: Zeneca Pharmaceuticals 1800 Concord Pike Wilmington, DE 19850-5437 USA Attn: Tom Kirchgasser Human Resources Department

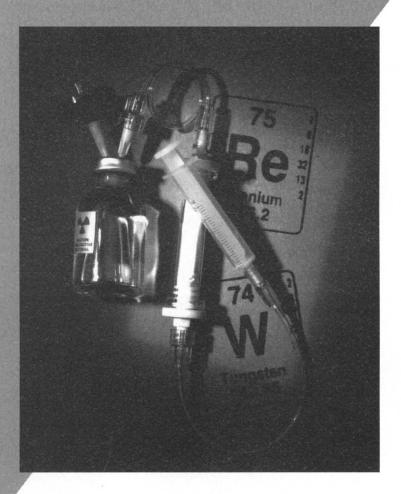
Zeneca Pharmaceuticals Mereside Alderley Park Macclesfield, Cheshire U.K. SK104TG Attn: Sheila Robertson Human Resources Department



Zeneca is an equal opportunity employer.

ELEMENTAL ALCHEMY

Fifty years ago, Oak Ridge National Laboratory pioneered the field of neutron science. Today, we're harnessing the neutron to produce radioisotopes to diagnose heart disease and treat cancer. To map stresses in jet turbines and space shuttle welds. To unlock the secrets of superconductors, magnetic materials, advanced polymers, and new pharmaceuticals.



If you like the idea of using world-class accelerators and research reactors to explore the mysteries of matter, send a resume to ORNL Staffing Office, P.O. Box 2008, Oak Ridge, Tennessee 37831-6216 or e-mail us at jko@ornl.gov. ORNL is an equal opportunity employer committed to building and maintaining a diverse work force.

> Oak Ridge National Laboratory A U.S. Department of Energy Laboratory Managed by Lockheed Martin Energy Research Corp.

Tenure Track And Postdoctoral Opportunities.

The following research training opportunities are currently available at the National Institutes of Health.

Tenure-Track Position Assistant Professor Equivalent

Molecular Cardiology

A position is available in the Cardiology Branch (Chief, Stephen E. Epstein, MD) for a medical scientist to direct an independent laboratory whose focus is to apply molecular techniques to areas of cardiology. The ultimate aim of the laboratory is to develop new molecular strategies for cardiovascular disease. Research experience in the areas of gene therapy or signal transduction in vascular cells is desirable. The candidate must be board-certified or eligible in Cardiology and have achieved independent research status as evidenced by publication in major peer-reviewed journals. Applications must be received within six weeks of the publication of this advertisement. Please submit a *curricular vitae*, a detailed statement of research interests, and have three letters of reference sent to the Scientific Director (OE-113), NHLBI, 10 CENTER DR MSC 1668, BETHESDA MD 20892-1668.

----- Postdoctoral Positions -----Molecular Biology and Biochemistry Hui Ge, PhD

Two positions are available to study transcriptional activation and transacting factors involved in coordination of transcription and pre-mRNA processing in eukaryotic cells. Applicants should have a strong background in molecular biology and biochemistry. Experience in protein purification or molecular cloning would be an advantage. Laboratory of Molecular Embryology (OE-113), NICHD, Building 18T, Room 101, 18 LIBRARY DR MSC 5430, BETHESDA MD 20892-5430, or e-mail geh@box-g.nih.gov.

Regulation of Viral Gene Expression Thomas Kristie, PhD

Herpes simplex virus is based as a model for the analysis of cellular and viral factors involved in the transcription of RNAPII genes. These studies focus on the molecular interactions involved in the regulated assembly of enhancerpromoter complexes and on the biochemical mechanisms of gene expression. Applicants should have experience in molecular biology and biochemistry and less than five years of postdoctoral experience. Laboratory of Viral Diseases (OE-113), NIAID, Building 4, Room 133, 4 CENTER DR MSC 0455, BETHESDA MD 20892-0455, Fax 301/480-1560, or e-mail Thomas Kristie@nih.gov.

Signal Transducing Proteins James H. Hurley, PhD

The structural foundations of cell signaling pathways are being explored by x-ray crystallography and protein engineering. The laboratory currently focuses on protein kinase C (*Cell* **81**: 917-924, 1995) and other regulatory enzymes which function in signaling at the plasma membrane. Candidates should have an experimental background in protein biochemistry or protein structure determination, a strong interest in x-ray crystallographic structure determination, and less than five years of postdoctoral experience. Laboratory of Molecular Biology (OE-113), NIDDK, Building 5, Room 435, 5 CENTER DR MSC 0580, BETHESDA MD 20892-0580, e-mail hurley@tove.niddk.nih.gov, or Web site http://www-ms1mb.niddk.nih.gov/.

Transcriptional Regulation Nancy H. Colburn, PhD

The role of AP-1, NFkB and related transcription factors in the cause and prevention of carcinogenesis is being studied using mouse and human cell culture as well as transgenic mouse models. Projects focus on 1) compositional and chromatin structure determinants and 2) molecular consequences of transcription factor activation and suppression. Strong molecular biology background and publications required. Laboratory of Viral Carcinogenesis (OE-113), NCI, FCRDC Building 560, Room 21-89, Frederick, MD 21702-1201, Phone 301/846-1342, Fax 301/846-1909, e-mail colburn@ncifcrf.gov.

Tumor Suppressor Genes W. Marston Linehan, MD and Richard D. Klausner, MD

A postdoctoral/staff scientist position is available to investigate the role of the recently identified human VHL tumor suppressor gene. Study of the subcellular localization, identification of associated proteins and the function of the VHL protein are underway (*Science* 269: 1402-1406, 1995). Applicants should have strong background in molecular biology, cell biology or protein chemistry and must have less than five years of postdoctoral experience. Urologic Oncology Section, Surgery Branch (OE-113), NCI, Building 10, Room 2B47, 10 CENTER DR MSC 1502, BETHESDA MD 20892-1502, Phone 301/496-6353, Fax 301/402-0922, or e-mail wml@helix.nih.gov.

Tumor Suppressor Genes: Prostate Cancer W. Marston Linehan, MD

A postdoctoral/staff scientist position is available to investigate the role of tumor suppressor genes in prostate cancer. Study of the molecular biological changes associated with hereditary and sporadic prostate cancer are underway. Applicants should have a strong background in molecular biology, cell biology or protein chemistry and must have less than five years of postdoctoral experience. Urologic Oncology Section, Surgery Branch (OE-113), NCI, Building 10, Room 2B47, 10 CENTER DR MSC 1502, BETHESDA MD 20892-1502, Phone 301/496-6353, Fax 301/402-0922, or e-mail wml@helix.nih.gov.

Additional Opportunities

The NIHEDNET Bulletin Board **POSTDOC** (fellowship positions) and **TENURE** (tenure track positions) conferences are accessed via a modem (301-402-2221 or 800-358-2221 with parameters set at 7, *Even*, 1) or the Internet using Telnet (*wylbur.cu.nih.gov*) or the World Wide Web (URL: *telnet:llwylbur.cu.nih.gov*). When connected to NIH, key in , *vt100* for terminal emulation, *F5E* for initials, and *AJL1* for account number. To view tenure track positions, *quit* the **POSTDOC** conference and *join* the **TENURE** conference.

An electronic version of the *Postdoctoral Research Fellowship Opportunities* catalog is accessed via the Internet using either the Gopher Information System (gopher.nih.gov) or the World Wide Web (URL: http://www.nih.gov). When connected with Gopher, select Grants and Research Information and then NIH Office of Education. When connected with WWW, select Grants and Contracts and then NIH Office of Education. If you have further questions, please contact the NIH Office of Science Education, Building 10, Room 1C129, 10 CENTER DR MSC 1158, BETHESDA MD 20892-1158, Phone 301-496-2427, Fax 301-402-0483.

To Apply

If you hold a graduate doctoral degree (e.g., PhD, MD/PhD) or a professional degree (MD, DO, DDS, DMD or DVM) accompanied by previous laboratory research experience, and would like to be considered for one of these positions, please send a cover letter, *curriculum vitae*, bibliography, and statement of research interests to the address listed with each position. In addition, please arrange to have letters of recommendation sent from three scientists who can provide an evaluation of your qualifications.



Office Of Science Education The NIH is an Equal Opportunity Employer

Advertising Supplement

Yes, indeed: as biotech companies mature and focus on downstream development, the classical pharmacology skillset becomes very important. In fact, there's a very interesting look back to genetics skills happening now—an increasing use of *in vivo* transgenic animal models to mimic disease states. Scientists with a combination of molecular biology and transgenic production skills, along with classical physiology and pharmacology skills, are tremendously attractive.

At traditional pharmaceutical companies, there has never ceased to be a strong recognition that pharmacologists have high value. If that recognition has been a bit slower in biotech, that's only because the industry wasn't yet at the production stage in general. The maturation of the biotech industry has caused people in biotech to appreciate what traditional pharmaceutical companies have always recognized—that these people are crucial.

Any comment on the phenomenon of "double-skilling"?

Generally, we have seen a growing market for it. Definitely there is increasing demand for patent attorneys with solid scientific pedigrees. People who have combined scientific ability with a background in business, law, computer science, or other technologies are clearly attractive. We've also seen an increasing number of MD/MBAs and MD/PhDs.

Assuming their scientific skills are excellent, what can jobseekers do to make themselves most attractive to prospective employers?

Gain some understanding of what the industry is all about. Know the major forces that drive and constrain the industry. That's very important. More concretely, experience in operating as part of a larger team of top-level PhD scientists is very valuable. Very concretely, get some practical exposure to industry research in your CV, even if that experience is short term. Many companies offer such programs. At our research and development site in Wilmington, Delaware, we have an arrangement that allows us to bring in people from local universities so that they can get a taste of the kind of research we are doing.

Communication skills are essential and, honestly, they have got to be worked on a bit. Our incoming scientists are further on the learning curve in this regard—but for scientists at large, it still remains a major piece of learning. Zeneca has a very strong training and development program that has a technical and a non-tech side—-we actively engage PhD scientists in a variety of training and development courses in communication and management skills.

Zeneca is in a prominent position in the industry, and many people are interested in new developments at your company. What are Zeneca's recruitment plans for the coming year?

We've articulated a new research strategy and are accordingly reshaping our skill base. That includes retraining our current people. It also means we're getting into a fairly major recruiting drive in discovery research, looking to recruit scientists in molecular biology, genomics, and bioinformatics in both the UK and the US. Our interests cover all levels, ranging from pretty senior appointments (coming from academic backgrounds at associate or full professor level) to laboratory scientists with MS and BS degrees. Zeneca is at the forefront of this worldwide movement among biopharmaceutical companies to re-engineer and rationalize the R&D process, especially in discovery--we've put a lot of effort into that, including hiring the best people.

REMAKING GERMAN SCIENCE: THE MAX PLANCK INSTITUTE OF MOLECULAR GENETICS.

BERLIN—"German bioscience has been transformed in the last eight months." A powerful statement, but Sebastian Meier-Ewert, group leader for Hans Lehrach's laboratory at the Max-Planck Institut für Molekulare Genetik, says that nothing less is the case.

In an initiative aimed at uniting industry, academic science, and government, Germany has set out to remake its image as a center for innovative science. "Genetic research has had a bad name in Germany," Meier-Ewert says. "Two years ago the government changed the laws governing such research, which in turn facilitated the initiation of the German Genome Project." The German government has committed itself to an investment of DM 50 million per year over the next eight years to help fund that work.

For its part, a consortium of the largest pharmas in Germany has undertaken a media campaign to improve German public opinion of drug research. "Lately we have seen the heads of these large drug companies on German television, giving interviews to explain why these changes would be good for the German economy," Meier-Ewert says. Such collaboration between industry and academic science is becoming increasingly common in Europe, as evidenced by a collaboration between Sandoz of Switzerland and the Max-Planck Institute in Berlin.

Driven by the new government support, Meier-Ewert and his fellow scientists are hard at work on their corner of the human genome. With a staff of over 100, their institute is one of 68 Max Planck Institutes throughout Germany. Among their most interesting technologies is a large-scale system to array large numbers (20,000-30,000) of clones on nylon filters. "These high-density membranes are essentially libraries on which we can do large numbers of simultaneous tests," says Meier-Ewert. "We have another automated system for detecting interactions at each clone on the membrane." Together with PCR and fluorescence techniques, these systems "try to generate as much information as possible, quantitate it, analyze it, and make it accessible to as many laboratories as quickly as we can." Collaboration within and without the institute is necessary at every step. The German Genome Project Resource Center, a separate unit within the Institut, then distributes the libraries worldwide for use by other scientists.

On another level, some of the most exciting technological innovations have come in the field of bioinformation. "Most of our other technologies have existed for a while," says Meier-Ewert, "but our information systems are evolving right now. We are developing new software to handle the large amounts of data created by our research."

The idea is to distribute libraries and data worldwide so that the information they generate will be compatible. "That reflects the philosophy of Dr. Lehrach," Meier-Ewert says. "He has long been committed to the efficient and fast sharing of new information about the Genome Project. He is involved in assembling an international data base that coordinates information from as many libraries as we can acquire." Besides its own libraries, the lab has procured others from laboratories around the world. "Our goal is to help the international Human Genome effort," Meier-Ewert says. "Sharing these data and technologies will speed the work, eliminate unnecessary duplication, and, we hope, help everybody achieve the goal of understanding the information within the genome."

CHEMICAL RESEARCH at Schering-Plough

The Schering-Plough Research Institute plans an expansion of its CHEMICAL RESEARCH DEPARTMENT which will enhance efforts for the discovery of novel organic compounds as new therapeutic agents.

Opportunities exist at our new state-of-the-art Drug Discovery Facility for talented scientists to work in an inspired interdisciplinary environment focusing on the treatment of cancer, allergies, cardiovascular, CNS and infectious diseases.

Positions are available in our Chemical Research Department for Scientists with PhD's and 0-8 years of experience, as well as Scientists with BS and MS degrees and 0-10 years of experience in synthetic organic chemistry. Background must include a thorough knowledge of modern spectroscopic and chromatographic techniques. We are also interested in individuals who have experience with high speed synthetic methods.

We offer an excellent compensation package including a competitive salary and comprehensive benefits. For prompt, confidential consideration, we invite you to forward a resume with salary requirements to: Human Resources, DS, K-15-1, MS#1255, Schering-Plough Research Institute, 2015 Galloping Hill Road, Kenilworth, NJ 07033-0539. We are an equal opportunity employer.



Using Science For Human Advantage

Lareer Resources

FASEB Career Resources

1996

FASEB JOB FAI

EXPERIMENTAL BIOLOGY '96

American Physiological Society, American Society for Pharmacology and Experimental Therapeutics, American Institute of Nutrition, American Association of Anatomists

Washington, DC & Convention Center & 14-17 April

BETHESDA, Maryland - FASEB Career Resources, specializing in biomedical career development, will conduct the first FASEB Job Fair of the year in concert with the Experimental Biology '96 meeting (April 14-17) at the Washington Convention Center, Washington, DC. The Job Fair offers confidential services and facilitates interviews to link biomedical scientists and professionals seeking training or permanent positions with potential employers from academe, government and industry. While the majority of candidates may be doctoral-level scientists or those seeking post-doctoral training, neither employers nor applicants are so limited. Those at a master's or bachelor's level are encouraged to participate in the Job Fair and other career development activities that will be provided. Job Fair participation is independent of registration for the Experimental Biology '96 meeting; interviewers and applicants may register just for the Job Fair.

Providing more "avenues and super highways" to assist you on your career development journey, FASEB Career Resources is pleased to announce that Career Development Seminars and Workshops have been added to our list of services available at selected FASEB and other scientific meetings. Scientific recruiters and human resources professionals will be available on-site to assist interested candidates by providing expert advice on improving their resumes and CVs, interviewing for impact, developing a "personal marketing campaign", and other related information on career development in the life sciences arena.

FASEB JOB FAIR PACKAGE INCLUDES:

- Computerized search and scheduling of on-site applicants
- Comfortable on-site interview facilities (at no additional cost!)
- Confidential message service; Job Board containing postings 1 of Positions Available; Career Development Seminars/Workshops
- Post-Fair support an OnLine "Position Available" listing and 5 1 referrals from our full database (currently 2,000+ available candidates enrolled) should you not identify the right candidate at the Job Fair.

1996 FASEB JOB FAIR SCHEDULE

EB '96 (APS/ASPET/AIN/AAA)	Apr 14-17	Washington
ASBMB/ASIP/AAI JOINT MTG	Jun 1-6	NEW ORLEANS
PROTEIN SOCIETY SYMPOSIUM	Aug 3-7	SAN JOSE
SOCIETY FOR NEUROSCIENCE	Nov 16-21	WASHINGTON

FASEB CAREER RESOURCES

9650 ROCKVILLE PIKE, BETHESDA, MARYLAND 20814-3998 301-530-7020 FAX: 301-571-0699 EMAIL: CAREER@FASEB.ORG TELNET APPSERV.FASEB.ORG 2301 INTERNET: GOPHER, FASEB, ORG (INTERNET: HTTP://WWW.FASEB.ORG/CAREERS AVAILABLE SPRING '96)

FEDERATION OF AMERICAN SOCIETIES FOR EXPERIMENTAL BIOLOGY (FASEB)

FASEB FAIR '96

	HOURS OF O	PERATIO	14	
	REGISTRATION, INTE	RVIEW SCI	HEDULING	and
	SUN, 14 APRIL		11 AM - 8	PM
	MON-TUE, 15-16 APR	UL.	8 AM - 5 P	М
	WED, 17 APRIL		8 AM - 3 P	M
	can only be arranged <u>afte.</u> recommended!	r sign-in; doin	g so early, th	erefore,
NEW C		IT SEMINA	RS	
	SUN, 14 APRIL		1 PM - 3 P	
	MON, 15 APRIL		12 PM - 2	PM
INTERVIE	ws			
	MON-TUE, 15-16 APR			
			9 AM - 3 P	М
	WED, 17 APRIL			
<u> </u>	FEE SCH	EDULE		
SILVER PL	FEE SCH NTS: JOB FAIR PAC S AN: INCLUDES ONE JOB FA	KAGES (ONE	A	LL OTHER
	FEE SCH NTS: JOB FAIR PAC S AN: INCLUDES ONE JOB FA	KAGES (ONE TUDENT IR PLUS CARI	A	LL OTHER
SILVER PL	FEE SCH NTS: JOB FAIR PAC S AN: INCLUDES ONE JOB FA	KAGES (ONE TUDENT IR PLUS CARI	A	LL OTHER
SILVER PL DATABASE	FEE SCH NTS: JOB FAIR PAC S AN: INCLUDES ONE JOB FA ADVANCE/DIRECT ENTRY* ON-SITE N: INCLUDES TWO JOB FAIL	KAGES (ONE TUDENT IR PLUS CARI \$30 \$40	a eers OnLine	LL ОТНЕВ \$40 \$50
SILVER PL DATABASE	FEE SCH NTS: JOB FAIR PAC S AN: INCLUDES ONE JOB FA ADVANCE/DIRECT ENTRY* ON-SITE N: INCLUDES TWO JOB FAIL	KAGES (ONE TUDENT IR PLUS CARI \$30 \$40 RS PLUS CAR	a eers OnLine	LL ОТНЕВ \$40 \$50
SILVER PL DATABASE	FEE SCH NTS: JOB FAIR PAC S AN: INCLUDES ONE JOB FA LISTING ADVANCE/DIRECT ENTRY* ON-SITE N: INCLUDES TWO JOB FAIH ELISTING	KAGES (ONE TUDENT IR PLUS CARI \$30 \$40 RS PLUS CAR	a eers OnLine	\$40 \$50
SILVER PL DATABASE GOLD PLA DATABASE PLATINUM	FEE SCH NTS: JOB FAIR PAC S AN: INCLUDES ONE JOB FA ADVANCE/DIRECT ENTRY* ON-SITE ISTING ADVANCE/DIRECT ENTRY* ON-SITE PLAN: INCLUDES THREE O ATABASE LISTING AND CAR ADVANCE/DIRECT ENTRY*	KAGES (ONI TUDENT IR PLUS CARI \$30 \$40 \$50 R MORE JOB EERS HARDC \$50	a eers OnLine eers OnLine fairs plus C	\$40 \$50 \$50 \$60 \$60 \$60
SILVER PL DATABASE GOLD PLA DATABASE PLATINUM ONLINE D	FEE SCH NTS: JOB FAIR PAC s AN: INCLUDES ONE JOB FA LISTING ADVANCE/DIRECT ENTRY* ON-SITE N: INCLUDES TWO JOB FAIL ELISTING ADVANCE/DIRECT ENTRY* ON-SITE PLAN: INCLUDES THREE O ATABASE LISTING AND CAR ADVANCE/DIRECT ENTRY* ON-SITE	KAGES (ONI TUDENT IR PLUS CARI \$30 \$40 \$40 \$50 R MORE JOB EERS HARDC	a eers OnLine eers OnLine fairs plus C	\$40 \$50 \$50 \$60 \$60 \$AREERS
SILVER PL DATABASE GOLD PLA DATABASE PLATINUM ONLINE D	FEE SCH NTS: JOB FAIR PAC s AN: INCLUDES ONE JOB FA LISTING ADVANCE/DIRECT ENTRY* ON-SITE N: INCLUDES TWO JOB FAIR ADVANCE/DIRECT ENTRY* ON-SITE PLAN: INCLUDES THREE O ATABASE LISTING AND CAR ADVANCE/DIRECT ENTRY* ON-SITE L FEES	KAGES (ONI TUDENT IR PLUS CARI \$40 \$40 \$50 R MORE JOB <i>EERS HARDC</i> \$50 \$60	a eers OnLine eers OnLine fairs plus C opy ad	\$40 \$50 \$50 \$60 \$60 \$70
SILVER PL DATABASE GOLD PLA DATABASE PLATINUM ONLINE D OPTIONAI CAREERS	FEE SCH NTS: JOB FAIR PAC s AN: INCLUDES ONE JOB FA LISTING ADVANCE/DIRECT ENTRY* ON-SITE N: INCLUDES TWO JOB FAIL ELISTING ADVANCE/DIRECT ENTRY* ON-SITE PLAN: INCLUDES THREE O ATABASE LISTING AND CAR ADVANCE/DIRECT ENTRY* ON-SITE	KAGES (ONI TUDENT IR PLUS CARI \$30 \$40 \$40 \$50 R MORE JOB EERS HARDC \$50 \$60 CLUDED IN PL	eers OnLine eers OnLine fairs plus C opy ad atinum)	LL OTHER \$40 \$50 \$50 \$60 \$60 \$70 \$20

EMPLOYERS: JOB FAIR PACKAGES (ONE YEAR ENROLLMENT)

ADVANCE ONSITE SILVER PLAN: INCLUDES ONE JOB FAIR WITH COMPUTERIZED SEARCH AND SCHEDULING OF ON-SITE APPLICANTS; CONFIDENTIAL MESSAGE SERVICE; POSTING OF ONE POSITION AVAILABLE DESCRIPTION AND CAREERS ONLINE DATABASE SEARCH-AND-REFERRAL ACCESS \$400 ACADEMIC/NONPROFIT/GOVERNMENT \$300 \$600 \$800 INDUSTRY/COMMERCIAL \$1200 RECRUITING AGENCIES \$900

GOLD PLAN: INCLUDES TWO JOB FAIRS WITH COMPUTERIZED SEARCH AND SCHEDULING OF ON-SITE APPLICANTS; CONFIDENTIAL MESSAGE SERVICE; POSTING OF ONE POSITION AVAILABLE DESCRIPTION (PER JOB FAIR) AND CAREERS ONLINE DATABASE SEARCH-AND-REFERRAL ACCESS ACADEMIC/NONPROFIT/GOVERNMENT \$500 \$700

INDUSTRY/COMMERCIAL	\$1000	\$1400
RECRUITING AGENCIES	\$1500	\$2100
PLATINUM PLAN: INCLUDES	THREE OR MORE JOB FAI	RS WITH COMPUTER-

IZED SEARCH AND SCHEDULING OF ON-SITE APPLICANTS; CONFIDENTIAL MESSAGE SERVICE "POSTING OF ONE POSITION AVAILABLE DESCRIPTION (PER JOB FAIR) AND CAREERS ONLINE DATABASE SEARCH-AND-REFERRAL ACCESS

OPTIONAL FEES		
RECRUITING AGENCIES	\$2300	\$3200
INDUSTRY/COMMERCIAL	\$1500	\$2100
ACADEMIC/NONPROFIT/GOVERNMENT	\$700	\$1000

\$25

\$50

ADDITIONAL POSTING (PER POSITION/PER JOB FAIR)

'NO INTERVIEW' POSTING (PER POSITION/PER JOB FAIR)

Bristol-Myers Squibb Company

Biotechnology Development Syracuse, New York

T

Le ever-expanding Biotechnology Development Group located in Syracuse, New York, is a key high technology laboratory facility of the overall Bristol-Myers Squibb pharmaceutical business. The leading upstate R&D facility is dedicated to discovery and developing new leading edge

technologies for the production of the many exciting new drug compounds and biopharmaceuticals in our extensive pipeline portfolio. Fermentation, enzyme technology, cell culture development, genetic engineering, protein chemistry and bioengineering represent exciting areas of biotechnology development under expansion. We are looking for highly skilled scientists to help us remain world leaders in these important biotechnology disciplines.

Analytical Services Labs Associate/Scientist

Implement automated methods for analytical testing, develop computer systems for data acquisition and analysis, sample tracking and reporting. Requires a B.S. with 5 years or an M.S. with 2 years experience, and a degree in chemistry, biology, or computer science and experience in analytical instrumentation and lab automation systems. Job# SY95073

Assistant Scientist

Perform quantitative tests on proteins and peptide products, and other method development and validation studies as needed. Requires a B.S. with 2 years experience and a degree in chemistry, biology or related field, with experience in HPLC of proteins/ peptides. GMP/GLP desirable. Job# SY95072

Enzyme Engineering Labs Associate Scientist

Assist Ph.D. scientist in monitoring highly instrumental bioreactors and analytical instruments in the optimization of enzyme reactions at semi-pilot plant scale. Requires a B.S. in chemical engineering or related discipline with at least 2 years experience or M.S. in biochemical engineering. Basic lab experience in handling enzymes and microorganisms also required. Job# SY96005

Genetic Engineering and Biological Process Development Scientist

Scientist

Design and implement purification processes for the recovery of pharmaceutical grade proteins; establish GMPs; develop process validation procedures; and supervise work of technicians/other scientists. Requires a Ph.D. in chemistry or biochemistry with 0 to 3 years postdoctoral experience in protein purification or chromatographic techniques. Job# SY95069

Assistant/Associate Scientist

Implement purification processes for the recovery of pharmaceutical grade proteins; develop and implement process validation procedures. Requires a B.S./ M.S. in chemistry or biochemistry with up to 3 years experience and some experience in protein purification or chromatographic techniques. **Job# SY95070-71**

Associate Scientist

Work as part of a team of scientists to evaluate new cell lines for the manufacture of biotherapeutics, to develop optimized media and inocula processes for large scale production. Requires a B.S./M.S. in biology or related field with a minimum of 2 years experience in mammalian tissue culture preferably in the development of biological pilot and manufacturing processes. Job# SY96008

We offer an excellent salary and comprehensive benefits. For consideration, forward your resume with salary requirements and Job #, to: Manager, Human Resources, Bristol-Myers Squibb Company, P.O. Box 4755, Syracuse, NY 13221-4755. Equal Opportunity Employer, M/F/D/V.





DISCOVERING THE FUTURE IN PHARMACEUTICALS

Hoffmann-La Roche's dedication to the future is evident in our commitment to the research, development and manufacture of pharmaceuticals worldwide. We currently have the following opportunities available for dedicated, experienced scientific professionals to join us in our U.S. headquarters in Nutley, New Jersey.

Metabolic Diseases

This highly-motivated research team focuses on molecular drug targets in the areas of non-insulin-dependent diabetes mellitus (NIDDM) and obesity. Genetics, genomics and bioinformatics form the basis for identifying disease-linked genes. Through a broad array of technologies, we explore the function and biological roles of corresponding gene products in disease initiation and progression, identify novel drug targets and develop innovative therapeutics. *For reference see: Science 269:546-549 (1995) and Cell* 83:1263-1271 (1995).

PRINCIPAL SCIENTISTS-CHEMISTRY

As part of a multi-disciplinary drug discovery team, the successful candidates will design and synthesize small peptide and non-peptide molecules based on the structure of lead compounds and structural information. Additional responsibilities include supervising scientists and coordinating synthetic efforts with team priorities, laboratory safety and hygiene. To qualify, you must have a Ph.D. in Organic Chemistry with a background in synthesis, modern instrumentation and separation techniques. Post-doctoral experience in bio-organic chemistry, drug design or molecular modeling is desirable. Superior communication, organizational and supervisory skills are required. (*Respond to: Dept. SS036GH*)

SCIENTISTS-CHEMISTRY

The successful candidates will conduct laboratory preparations of organic compounds for evaluation in the drug discovery program, establish work priorities, conduct synthetic reactions, isolate and characterize products, search computer literature and ensure laboratory safety and hygiene. To qualify, you must have a BS/MS in Synthetic Organic Chemistry or the equivalent and strong laboratory skills. Excellent oral and written communication abilities are required. (*Respond to: Dept. SS046GH*)

PRINCIPAL SCIENTIST-BIOCHEMISTRY

The selected candidate will lead a protein purification laboratory which will closely collaborate with all existing and future project groups. Specific duties will include conceiving, planning and developing innovative approaches to the purification and characterization of recombinant and native proteins, providing purification support for assay development and structural determinations and presenting written/oral reports as progress requires. The ideal applicant will possess a Ph.D. in Biochemistry, Biology or related field with 5 years experience in protein purification. Knowledge of chromato-graphic methods, scale-up, automation and computer skills required; demonstrated oral/written communication abilities are a must. (*Respond to: Dept. LH106TH*)

SCIENTIST-BIOCHEMISTRY

Responsible for purifying and characterizing native and recombinant proteins using innovative and state-of-the-art approaches, the successful candidate will also collaborate with project teams and provide protein biochemistry expertise. Qualifications include a BS/MS in Biochemistry or Biology with 3-5 years experience in protein purification and extensive hands-on laboratory experience in protein biochemistry. Strong oral/written communication skills are a must. (*Respond to: Dept. LH116KY*)

SENIOR SCIENTIST-MOLECULAR BIOLOGY

To support departmental drug discovery efforts, the successful candidate will handle the cloning and expression of various recombinant proteins requiring a variety of biological techniques (i.e., cDNA cloning, heterologous protein expression in E. coli, baculovirus and mammalian cells, site-directed mutagenesis, western, northern and southern blot analysis, immunoprecipitations and signal transduction studies). To qualify, you must have a BS/MS in Biology/ Molecular Biology and several years experience reflecting a background in molecular and cellular biology, cDNA cloning, recombinant protein expression, signal transduction and tissue culture. *(Respond to: Dept. SS056JK)*

SCIENTISTS-PHYSIOLOGY/PHARMACOLOGY

The selected candidates will assist in the planning, performance and analysis of behavioral and metabolic studies of appetite control in lean and obese rodents, including surgery, dosing, collecting blood samples and related analysis. The preferred candidates have a BS/MS in Animal Sciences, Biology, Psychology or Neurosciences. Experience in animal handling and small animal surgical skills are necessary. Strong organization, planning and time management skills are important. Computer experience is also preferred. (*Respond to: Dept. SS066FS*)

POST-DOCTORAL POSITIONS

Several opportunities exist for innovative research using molecular and cellular biology techniques to explore the functional and biological roles of genes, proteins and biochemical pathways associated with NIDDM and obesity. A Ph.D. in Molecular Biology/Cell Biology/Biochemistry, with extensive experience in molecular/cellular biology in the study of protein function, is required. (*Respond to: Dept. SS076PB*)

Biomolecular Structure Group SCIENTIST

We are seeking a Scientist to join an established Protein Chemistry Laboratory working on the purification and characterization of proteins for structural studies and drug design. The individual selected will implement experiments in analytical protein biochemistry; perform and optimize the chromatographic purification of proteins and carry out enzymatic modification reactions on proteins. The qualified candidate has a BS/MS in Chemistry, Biochemistry or a biological science supported by a minimum of 5 years relevant laboratory experience in analytical protein chemistry including protein electrophoretic techniques and HPLC. The ability to independently plan initial experiments, interpret results and devise follow-ups is a must; familiarity with automated chromatography instruments preferred. Strong scientific communication skills are essential. (*Respond to: Dept. SS086RP*)

Drug Metabolism & Pharmacokinetics POST-DOCTORAL POSITION

An opportunity currently exists for a recent Ph.D. in Biochemistry (0-2 years) to conduct studies to determine the pharmacokinetics and metabolic fate of protein therapeutics in animals. The selected candidate will have extensive experience in protein chemistry and biochemistry techniques (Scatchard binding, subcellular fractionation, PAGE, HPLC, etc.) and immunological methods (immunoprecipitation, ELISAs, etc.), supported by good oral/written communication skills. Additional experience in protein metabolism, molecular biology and/or animal handling is desirable. (*Respond to: Dept. SS096TG*)

We offer an attractive salary and benefits package in a state-ofthe-art work environment. For consideration, please send your resume with salary history/requirements, indicating appropriate response code information in the address, to: **Department**. *** Hoffmann-La Roche, Nutley, New Jersey 07110-1199.** PRINCI-PALS ONLY. We are an equal opportunity employer.

Roche Hoffmann-La Roche

A Member of the Roche Group

THE CUTTING EDGE OF SCIENTIFIC DISCOVERY

Headquartered in the San Francisco Bay Area, Arris Pharmaceutical Corporation is an innovative biopharmaceutical company using an integrated, teamoriented approach to drug discovery. Our focus is on the discovery & development of small molecule therapies. With so many collaborations & promising discoveries on the horizon, we have a number of exceptional opportunities for a select group of qualified professionals to join us at the forefront of scientific discovery.

We offer extremely competitive salaries, full benefits, attractive equity participation and career

advancement opportunities within a progressive, growing company, Please forward your resume to: Arris Pharmaceutical Corp., HR Department (Attn: Job#), 385 Oyster Point Blvd., Suite 3, South San Francisco, CA 94080.



Scientist

Receptor Molecular Biology

As a key member of an integrated drug discovery collaboration, you will study & explore the structurefunction relationships of human receptors and their ligands. We require a Ph.D.; at least 2 years of post doctoral experience; proficiency with rDNA techniques, including cloning & invitro mutagenesis; experience in characterization of receptor-ligand interactions; and practical knowledge of recombinant protein expression in prokaryotic & eukaryotic systems. (Job# SLG26)

Medicinal/Synthetic Chemists

Ph.D. and BS/MS level

Supported by state-of-the-art instrumentation, you will join a highly skilled Medicinal Chemistry group dedicated to the discovery of drugs which interact with targets of major therapeutic value. We're seeking motivated, active experimentalists with prior experience in synthetic organic, bioorganic or medicinal chemistry to carry out the design & laboratory-scale synthesis of organic compounds for pre-clinical evaluation. The positions require use of NMR, IR, MS, HPLC and routine compound isolation & characterization methodologies; strong written/verbal communication skills; a solid record of accomplishment as evidenced by publications; and the ability to work well independently, and as part of a team. Experience in multistep organic chemical transformations on gram scale is essential. Candidates for Scientist must have a Ph.D. with 1-3 years of post doctoral/industrial experience. Research Assistants and Associates with BS/MS training and 1-5 years of industrial experience are also strongly encouraged to apply. (Job# SMV26)

Research Associate

High Throughput Screening

As a key member of our dedicated High Throughput Screening Group, you will be responsible for maintaining various chemical and biological data bases. Additional duties include inventory and registration of organic compounds, processing/ archiving of data, and generation of reports. Candidates must possess a BS/MS in biological or chemical sciences; demonstrated experience working with databases; and strong organizational & written/spoken communication skills. (Job# RAGC26)

Scientist

High Throughput Screening Working closely with a team of chemists & biologists, you will actively participate in and support our drug delivery efforts through the application of High Throughput Screening of chemical compound libraries in Arris' target-directed programs. Joining a dedicated HTS Group already equipped with

state-of-the-art instrumentation & data processing capabilities, your responsibilities will include automation of biological assays, screening of compound libraries, analyses of experiments & data, and written/verbal presentations of findings. Candidates must possess a Ph.D.; 3-5 years of relevant industrial experience; extensive knowledge of biochemical pharmacology, assay development and automation, as evidenced by publications; and excellent written/verbal communication skills. (Job# SGC26)

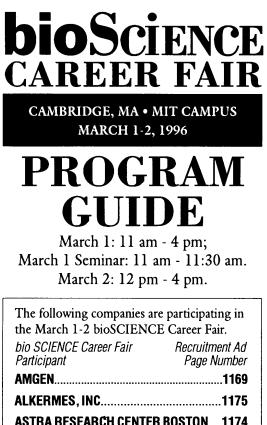
Senior Research Associate/ Research Associate

Receptor Molecular Pharmacology These positions will support drug discovery efforts through assay development and screening. Responsibilities include receptor based assay development & screening of compounds, analysis of data and written/oral presentation of findings. We require a BS or MS in biology of biochemistry; 2-6 years of relevant industrial experience with assay development and compound screening (automation experience is required for senior level and preferred for associate level); the proven ability to develop a broad range of receptor based assays; PC/Mac proficiency; and excellent written/verbal communication skills. (Job# RALG26)

Software Engineer/DBA

Our rapid growth has created an excellent opportunity for a skilled, hands-on DBA to administer & customize a broad range of relational databases. You will implement/administer Oracle & Daylight databases; design automatic routines for the accurate transfer of data between various relational data bases; and provide custom programming/technical support to our Combinatorial Chemistry Group. Candidates must possess a BS/MS in computer science or equivalent; a proven DBA track record using a UNIX system (SGI); extensive software engineering expertise; and strong communication skills. (Job# SEMV26)

ARRIS Pharmaceutical is an Equal Opportunity Employer.



the March 1-2 DIOSCIENCE	Calcel Fall.
bio SCIENCE Career Fair	Recruitment Ad
Participant	Page Number
AMGEN	1169
ALKERMES, INC	1175
ASTRA RESEARCH CENTER B	BOSTON1174
FDA/Center for Biologic	
Evaluation & Research	1172
GENETICS INSTITUTE	1168
GENOME THERAPEUTICS IN	C1175
HELIOS PHARMACEUTICALS	1175
MILLENNIUM PHARMACEUT	ICALS1170
PFIZER	1171
SCRIPTGEN PHARMACEUTIC	ALS1173
Participating companies as of 2/	15/96.

Future bioSCIENCE Career Fairs

San Francisco, CA on the Stanford Campus in Palo Alto, May 3-4, 1996.
La Jolla, CA at The Scripps Research Institute, October 4-5, 1996.

To pre-register

Please submit your resume or CV via fax: (202) 289-6742, or via e-mail: bioscience@aaas.org

For more information

Please call (202) 326-7018 or, access bioSCIENCE Career Fair Information On-Line: http://www.aaas.org (Choose SCIENCE Classified Advertising from the menu)



Since opening our doors back in 1990. Genetics Institute has

1980, Genetics Institute has discovered a prodigious number of novel regulatory proteins. To date, nine of these have advanced to human clinical evaluation or commercialization. Fueling the pipeline, are R&D programs addressing blood cell growth and differentiation, coagulation, tissue growth and repair and immune modulation among others.

Our success as one of the largest biotechnology employers in Massachusetts is greatly advanced by our collaborative work environment driven by values and focused on the future. It attracts and inspires some of the brightest people whose ideas establish us as a leader.

Few biotech companies have been able to sustain growth, financial strength and a steady flow of scientific breakthroughs. Genetics Institute has combined top talent, a world-class manufacturing facility, a solid financial profile and the most sophisticated resources to make the prospects for continued innovation unprecedented.

So when you consider why you chose the sciences, consider the company positioned to make an impact – Genetics Institute.

Staff Engineer

The successful candidate will assist in supporting rAHF purification and explore improvements to purification data acquisition and process monitoring. New methods for analyzing process data will be developed by this individual. An ability to mathematically model purification processes is required. A PhD with 0-2 years' experience or MS with a minimum of 5 years' experience in Engineering or related disciplines is also required. A background in process control as well as statistics is desirable. Must be able to interact well with manufacturing and process development groups. Job Code: PLA-S133

Scientific Staff

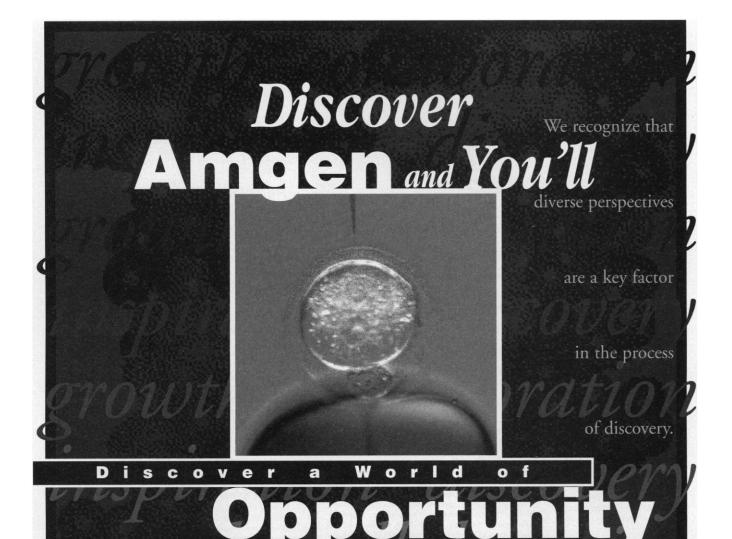
We are seeking a motivated Scientist to take charge of the animal models in the Cartilage Project within the Department of Bone and Connective Tissue Research. The successful applicant will possess a DVM or equivalent degree and have some basic surgical and laboratory experience. In addition, the ability to contribute to basic science in the field of cartilage metabolism is desired. Experience in the fields of biochemistry, molecular biology, and/or cell biology is a plus. **Job Code: MM-S39**

Genetics Institute offers a Post Doctoral Program along with a Summer Internship Program.

To be considered for employment or for our programs, please only forward original resumes, suitable for scanning, indicating job code, to: Human Resources Department, Genetics Institute, Inc., 87 Cambridge-Park Drive, Cambridge, MA 02140. Fax: (617) 498-8089 or (617) 876-8847.

Genetics Institute offers competitive salaries and benefits, including comprehensive health care, dental and life insurance, three weeks' paid vacation, 401(k) stock purchase plan, relocation assistance, tuition assistance, and an on-site exercise facility. Genetics Institute is dedicated to building strength through diversity.





Biotechnology is emerging as one of the most exciting and rewarding industries of the future. At Amgen, with over 16 years of ground-breaking advances behind us, we're standing on the threshold of new challenges. Beyond, lies unlimited potential for significant discovery. And boundless opportunity for achievement.

Opportunities currently exist for professionals ranging from BA/BS to PhD. in the areas of: PHARMACEUTICS, MEDICINAL CHEMISTRY, TOXICOLOGY and NEUROSCIENCE.

So, discover Amgen for yourself at our beautiful Thousand Oaks, Southern California headquarters — uniquely situated just one hour from both Santa Barbara and Los Angeles. Join our award-winning team today. A world of opportunity awaits you.

We recognize that diverse perspectives are a key factor in the process of discovery.

We offer a highly competitive compensation and benefits package that includes an on-site fitness center and 3 weeks' paid vacation. For immediate consideration, please stop by our information table or e-mail your resume to: jobs@amgen.com and indicate resume as your subject or mail your resume to: Amgen, Job Code: TOCAM, P.O. Box 2569, Thousand Oaks, CA 91319-2569. Please consult our on-line Job Bulletin Board at http://amgen.bio.com for information on other career opportunities available at Amgen. Principals only, please.

EEO/AA Employer M/F/D/V



SCIENCE • VOL. 271 • 23 FEBRUARY 1996

$\Lambda I L L E N N I U M$



At Millennium Pharmaceuticals, t Millennium we're not only asking medicine's most pressing questions for the new Millennium, we're answering them. By applying our expertise in genetics, genomics and bioinformatics we're identifying genes responsible for common, major diseases such as obesity, type II diabetes, cardiovascular disease and asthma. Using this knowledge, we employ comprehensive approaches to understand how genes function in disease initiation and progression. We're developing a new generation of diagnostic and therapeutic products capable of addressing major diseases at their root cause, rather than merely identifying and treating symptoms.

As a rapidly growing, privately held genomics company with significant medical and academic affiliations and pharmaceutical partnerships with Hoffman-La Roche, Eli Lilly, and Astra, Millennium is clearly poised to become the world's leader in gene-based drug discovery.

Millennium is distinguished by a clear determination to do more than locate genes responsible for disease: we're dedicated to answering questions about how diseases begin, progress, and can be treated ... and how talented professionals can achieve their ambitions. We reward all individuals who sustain our collaborative process by providing them with a competitive compensation package that includes stock ownership. See us at the **bioSCIENCE** Career Fair March 1 & 2 on the MIT Campus in Cambridge, MA. Or, if unable to attend, send your resume, indicating job code, to: Millennium, Human Resources, 640 Memorial Drive, 5th Floor, Cambridge, MA 02139; FAX (617) 225-0884.

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

Research Management

PROGRAM LEADERS

Work with research team to help manage overall research for disease programs funded by corporate partners. Provide scientific input to prioritize projects and set annual goals. Requires a Ph.D. and 5+ years of relevant post-doctoral experience. Job Code: RMPL

Scientists

HUMAN GENETICS SENIOR SCIENTIST/GROUP LEADER

Provide programmatic leadership for the company's human genetics effort as well as lead a disease-based human genetics study project. M.D. and/or Ph.D. required, as well as 5+ years' post-doctoral experience. Job Code: SMGS

POSITIONAL CLONING

Lead a group focused on the positional cloning of disease genes, including human and mouse models of complex genetic diseases. Ph.D. in Molecular Biology or Molecular Genetics. Job Code: SPC

Cellular Immunology

Lead a gene discovery effort to identify and characterize the biological function of novel genes as therapeutic targets for inflammatory respiratory disease. Ph.D. in Molecular Biology and strong skills in cellular and molecular immunology are required. Job Code: SCI

CELL BIOLOGY

Develop cell-based and biochemical assays to elucidate the function of novel genes discovered through differential display technology and positional cloning. Ph.D., a strong background in biochemistry and cell biology and molecular biology techniques are essential. **Job Code: SCB**

ONCOLOGY BIOLOGY

Study the molecular mechanisms of tumor development and progression. Ph.D. or MD and 2-3 years of experience in molecular oncology or a related field. Job Code: SONC

cDNA Core Group

Lead a group focused on the cloning of full-length cDNAs. Requires Ph.D. in Molecular Biology and experience in the construction and screening of plasmid and phage cDNA libraries and the ability to implement new technologies. Job Code: SCDN

Physiol ogy

Focus on the characterization, in animal models, of the function of novel genes involved in obesity. Ph.D. in Neurobiology or Neurophysiology with 2+ years' experience in analysis of animal models of CNS disorders. Job Code: SPHY

Research Associates

We have openings in the following groups; all require a BS or MS and 3+ years' related experien

POSITIONAL CLONING Job Code: RAPC TWO-HYBRID SYSTEM Job Code: RATH OBESITY BIOLOGY Job Code: RAOB **ONCOLOGY BIOLOGY** Job Code: RAON BIOASSAY Job Code: RAB GENE DISCOVERY Job Code: RAGD

Statistical Genetics

STATISTICAL GENETICIST/STATISTICIAN

Identify genes for complex traits with responsibilities to include simulation and segregation analyses and programming to support new approaches to data analysis. Ph.D. and experience in statistics, C programming, Perl, C++ and SmallTalk required. Job Code: SGS

Automation Technologu

SOFTWARE ENGINEER

Implement timely advanced solutions to gene identification and characterization challenges. BS in Engineering, Computing or Life Sciences and 4-7 years' software development experience required. Job Code: ATS

Bioinformatics/Computational Biology

COMPUTATIONAL BIOLOGY

DNA and protein sequence analysis, annotation and database curation. MS/Ph.D. in Biology. Experience with computational sequence analysis tools required. lob Code: BCB

COMPUTER SCIENTIST/ Algorithms/BioAnalysis

Develop and implement novel algorithms for analysis of DNA and protein sequences, and interpret laboratory data. Object-oriented programming (SmallTalk/C++), statistics and computational biology experience required. A Ph.D. in CS, EE, genetics or applied math and/or an MS with 5+ years' experience is desired. Job Code: BCC

SENIOR SOFTWARE ENGINEER/ CLIENT SERVER DEVELOPER

Develop database applications to support gene discovery efforts. BSCS or equivalent, minimum of 5 years' application development experience. Experience in UNIX, C or C++, object-oriented development. Job Code: BCS

SENIOR SOFTWARE ENGINEER/ **GENETIC ANALYSIS SYSTEMS**

Develop an integrated Smalltalk/Sybase system to support genotyping and human genetics research groups. BS in CS, EE, applied math or genetics with 5-10 years' professional software engineering experience. Job Code: BCSS

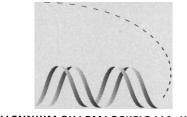
SENIOR QUALITY ENGINEER BSCS or BSEE and 3+ year's software quality assurance experience required. Automated test environments. Job Code: BCSQ

Systems Engineer

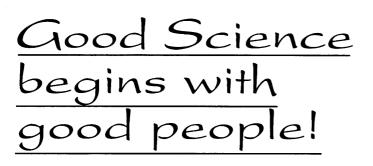
Maintain Mac/PC/UNIX network, support Mac OS (System 7.1, 7.5), Windows NT, Windows 95, and Novell. BSCS/BSEE preferred. Hands-on experience required. Job Code: BCSE

DATABASE ADMINISTRATOR

Sybase "System 10" database administration, including resource allocation, create/drop/enlarge databases, create and manage SQL server login accounts, and configure SQL servers. A BS in CS or EE and 3 years of Sybase DBA experience. lob Code: BCDA



MILLENNIUM PHARMACEUTICALS, INC.



To be an R&D scientist at Pfizer Inc is to focus on discovering innovative answers to the world's unmet pharmaceutical needs. Over the last few years, scientists working in Pfizer labs have discovered, developed and introduced more new chemical entities than can be said of any other pharmaceutical firm. Investing over \$1 billion annually in worldwide R&D, Pfizer is committed to the principle of workforce diversity and to being the industry's premier new-product innovator. Ihave any experience in any of the following areas, come discover what's in it for you.

Research Scientists - PhD

INFECTIOUS DISEASES INFLAMMATION PHARMACOLOGY ORAL CONTROLLED RELEASE SOLIDS RESEARCH & DEVELOPMENT LIQUIDS RESEARCH & DEVELOPMENT RESEARCH BIOCHEMICAL ENGINEERING COMPUTATIONAL CHEMISTRY NEUROSCIENCE - PSYCHOTHERAPEUTICS COMPUTATIONAL BIOLOGY

Scientists - BS/MS

ANALYTICAL/BIOANALYTICAL CHEMISTRY COMPUTER SKILLED EXPERIMENTALIST CARDIOVASCULAR DISEASES BIOPHARMACEUTICAL RESEARCH - DOSAGE FORMULATION MOLECULAR BIOLOGY PROTEIN CHEMISTRY

As a respected member of our staff, you will enjoy an excellent compensation package, a uniquely supportive environment, and opportunities for professional development. Our scenic shoreline location offers easy access to the many cultural, educational, recreational, and lifestyle advantages of New England. Relocation assistance is also available. To learn more about these exciting career opportunities please stop by our booth at the bioSCIENCE Career Fair, March 1-2, 1996. If you are unable to attend, please send resume suitable for electronic scanning (i.e., eliminate italics, bullets, bolds, underlines and staples) to: Employee Resources, Ad# 1076, Pfizer Inc, Central Research Division, Eastern Point Road, Groton, CT 06340.



We're part of the cure.

We are an equal opportunity employer M/F/D/V.



CHALLENGING BIOMEDICAL EMPLOYMENT OPPORTUNITIES

The Centers for Biologics and Drug Evaluation and Research are searching for outstanding Physicians and Scientists interested in a challenge by participating in the development and approval process for new biological and drug products. Physicians and scientists serve on multidisciplinary scientific teams of highly skilled professionals. Duties may include reviewing and evaluating investigational New Drug applications and biological product license or new drug applications; reviewing proposed labeling; evaluating adequacy of the methods, facilities and controls used for approval or nonapproval of applications. Some positions offer the unique opportunity to conduct biomedical research in combination with review responsibilities. These positions have a high degree of independence and involve complex medical, scientific, and regulatory issues. Opportunities for professional development may include further training, attendance at scientific meetings and conferences, and clinical activities.

Qualifications: *Physicians* must have completed all requirements for a Doctor of Medicine or Osteopathy Degree from an accredited institution. Graduates of foreign medical schools must submit a new copy of their permanent Educational Commission for Foreign Medical Graduates (ECFMG) certification. Physicians should be board eligible or certified in a primary specialty or have completed at least four year's residency training or possess equivalent experience. A background combining research experience with clinical medicine is preferred along with specialty training and expertise in one or more of the following areas: oncology, infectious diseases, hematology, rheumatology, epidemiology, pediatrics, pulmonary diseases, allergy, immunology, parasitic diseases, pathology, pediatric pulmonology, gastroenerology, or related disciplines. For *Scientists*, doctoral level degrees in biological or physical sciences, pharmacology, toxicology, or related disciplines, along with advanced training and/or experience in the development, manufacture or testing of biologics, drugs and/or antibiotics is desirable.

For all candidates, experience in the pharmaceutical industry along with computer applications would be desirable. In addition, candidates should have highly developed analytical, written and oral skills, as well as the ability to research problems and issues and to use mature judgment in problem solving.

Candidates for Civil Service or Commissioned Corps appointments must be U.S. citizens. Candidates for Fellowships may be either U.S. citizens or resident aliens eligible for citizenship within four years.

Location: Offices and laboratories are strategically located on the National Institutes of Health campus in Bethesda, Maryland, or in several locations throughout the Rockville, Maryland area.

Salary: For *physicians*, Civil Service salary range for GS-13 through GS-15 is \$61,490 to \$95,531. Physicans may also be eligible for either a Physicians Comparability Allowance of \$4000 to \$20,000 per annum, OR Physician Special Pay up to \$148,400 based on experience, qualifications, and medical specialty. For scientists (other than M.D.), Civil Service salary range for GS-11 through GS-15 is \$37,094 to \$95,531. Salary, benefits, research support, and level of responsibility are commensurate with education and experience. Also, positions may be filled by appointment in the U.S. Public Health service, Commissioned Corps, or in the Fellowship Program, with commensurate salary and benefits.

How to Apply: Interested candidates should send an Application for Federal Employment (SF-171). Optional Application for Federal Employment (OF-612), or current Curriculum Vitae along with bibliography, statement of regulatory/research interest, transcripts, and names of three references to:

FDA/Center for Biologics Evaluation & Research 1401 Rockville Pike Suite 200 N, HFM-50 Rockville, MD 20852–1448 ATTN: Recruitment (96026) FDA/Center for Drug Evaluation & Research Metro Park North I, HFD-64 7500 Standish Place Rockville, MD 20855 ATTN: Recruitment (960004)

FDA IS AN EQUAL OPPORTUNITY EMPLOYER AND HAS A SMOKE FREE ENVIRONMENT

The SCOVERY Power o

Established in 1993, SCRIPTGEN Pharmaceuticals has become a leading molecular therapeutics company by developing unique drug discovery technologies that represent breakthrough advances in the race towards effective therapies. Our proprietary, affinity-based screening system, ATLAS (Any Target Ligand Affinity Screen) allows novel protein targets to be screened in a high throughput mode, and our SCAN (Screen for Compounds with an Affinity for Nucleic Acid) and RNA transcripts technologies are facilitating the discovery of important drugs that regulate RNA. The success of these technologies, coupled with our advances in the therapeutic modulation of microbial gene transcription, has created expansion opportunities within our research organization. We are seeking the skills and expertise of highly motivated, team-oriented scientists who are ready to bring their innovative ideas to the brink of discovery.



f

PhD Molecular Biologists and Biochemists – 3 positions

∼ Candidate will have extensive experience in molecular biology, bacterial genetics and biochemistry, with a background in bacterial transcription factors and a strong commitment to independent research. Experience in cloning using subtractive hybridization methods and the expression and purification of biochemically active proteins. Job Code BAC1

└ Candidate must have a strong background in the physical and functional characterization of biologically active proteins. An extensive knowledge of protein structure & function and protein-ligand interactions. Experience with intracellular protein degradation, molecular modeling, and biophysical methods. Job Code AFF1

➤ Candidate will have extensive experience with yeast and/or mammalian in-vitro transcription systems, purification and characterization of yeast and/or mammalian transcription factors, and molecular cloning expression of eukaryotic proteins. Experience in cell culture and in-vivo gene expression analysis. Job Code FGL1

PhD Nucleic Acid Biochemistry

Successful candidates must have a strong background in RNA molecular biology. Extensive experience with in-vitro systems using synthetic RNA is essential. Knowledge of biophysical and RNA structure determination methods. Job Code AFF3

PhD Molecular Geneticist

A solid background in the molecular genetics of yeast or other fungi is required. Experience with pathogenic fungi including *Candida* spp. and *Aspergillus* spp. and an understanding of transcriptional regulation. Job Code FGL2

MS/BS Molecular Biologists and Biochemists – 4 positions

Candidate must have a strong background in cloning and the expression and purification of proteins, along with a deep commitment to team-oriented research. Experience in the implementation of high throughput screens desired. Job Code BAC2

 Candidate must have experience with biochemical assays using synthetic RNA and solid molecular biology skills including cloning and protein expression and purification.
 Job Code AFF4

← Candidate must have a background in protein biochemical methods including protein purification, gel electrophoresis, and functional assays. Experience with ligand binding interactions, high-throughput screens and immunoassays. Job Code AFF2

← Experience with protein purification, molecular cloning or enzyme analysis required along with bacterial, yeast or mammalian cell culture. Experience with high throughput drug screening desirable. Job Code FGL3

SCRIPTGEN offers very competitive salaries and benefits, along with equity participation. Please reference Job Code when responding. Forward letters, references and resume to: Human Resources, SCRIPTGEN Pharmaceuticals, Inc., 200 Boston Avenue, Medford, MA 02155. Fax: 617-396-1028. An equal opportunity employer.



R arch C enter B A t r a e s е 0 S t S 0 n

IN ENtraordinary Duportunity For Research The story of Astra Research Center Boston begins with Astra, an international organization based in Sweden. With nearly \$4 billion in worldwide annual sales and close to 15,000 employees, Astra is one of the most innovative and rapidly growing pharmaceutical companies in the world. Driven by our mission to improve human health and quality of life, we have maintained a strong commitment to innovative research throughout our growth.

> Astra Hässle, a successful research company in the Astra Group, focuses on the development of new and improved pharmaceuticals for cardiovascular and gastrointestinal diseases. This dynamic organization defines the leading edge in the fields of chemistry, biology, pharmaceutics and medicine.

Astra Hässle is now moving forward into a new era with the establishment of Astra Research Center Boston. The initial research focus of Astra Research Center Boston will be the development of small molecule drugs and vaccines to improve therapies against Helicobacter pylori. The multidisciplinary team working on this project will exploit H. pylori genomic information to identify targets for pharmaceutical intervention. As a contributing member of our new organization, you will discover that our commitment to human health is paramount and provides the foundation of our world class drug discovery unit.

We are seeking accomplished **Ph.D's** at all levels for the following positions:

BIOCHEMISTRY

BIOPHYSICAL BIOCHEMIST: Experience in biophysical characterization of proteins with emphasis on protein ligand interactions.

AUTOMATION BIOCHEMIST: Expertise in the development of Robotics and development of screening assays.

PROTEIN PURIFICATION **BIOCHEMIST:** To perform protein purification to enable characterization of therapeutically relevant protein targets.

ENZYMOLOGIST: To develop assays for the identification of new antimicrobial agents based on enzyme inhibition and characterize enzyme inhibitors to determine mode of action.

MICROBIOLOGY

ANTIMICROBIAL MICROBIOLOGIST: To establish in vitro and in vivo methodology for evaluation of antimicrobial agents.

Chemists with expertise in combinational chemistry, analytical chemistry, and computational chemistry to join a group focused on the identification and optimization of novel anti- H. pylori small molecule drugs.

IMMUNOLOGY

CHEMISTRY

Scientists with expertise in mucosal immunology, vaccine development, cellular immunology and inflammation to form a group focused on therapeutic vaccine development.

BIOINFORMATICS

COMPUTATIONAL BIOLOGIST: Scientific researcher to lead our initial effort in the use of Genomic information in the drug discovery process.

SCIENTIFIC/GENOMIC DATABASE MANAGER: Extensive experience in the development and design of databases.

RESEARCH ASSOCIATES

BS/MS multiple positions open in all of the above disciplines.

Astra combines the stability of a growing international organization with the entrepreneurial spirit of a newly formed research group. We value your talents, are dedicated to promoting professional development, and offer you an extensive list of benefits to ensure your well-being. Please send your C.V. indicating your position of interest, to Astra Research Center Boston, Human Resources, 128 Sidney Street, Cambridge, MA 02139-4239; FAX (617) 576-3030.

creative freedom, and a results orientation with the resources of a global leader

The Astra Research

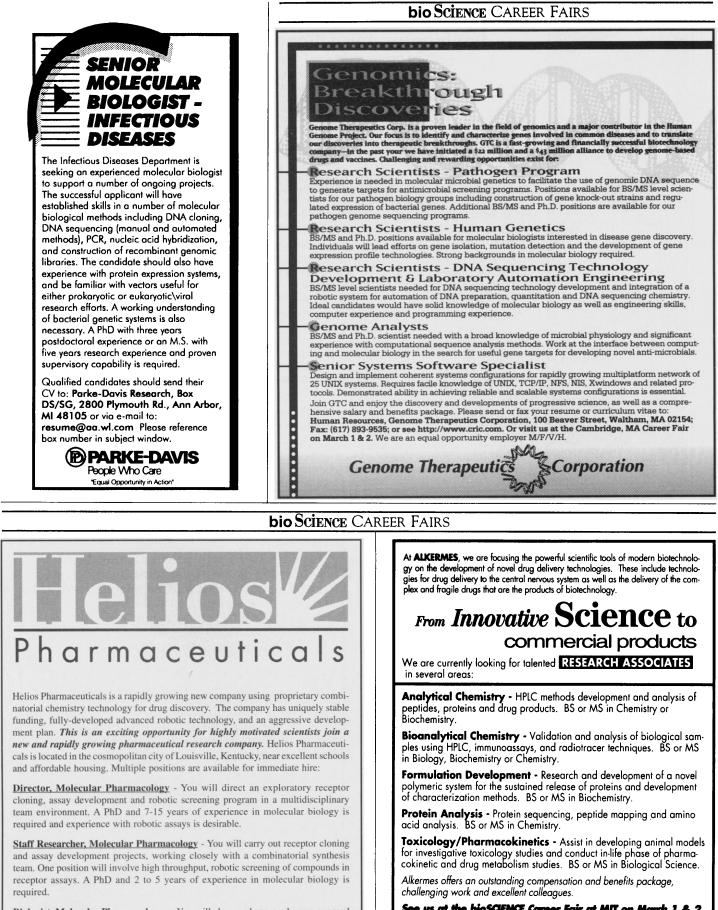
Center Boston:

combining a

unique vision,



Pursuing knowledge through the power of equal opportunity.



Biologist, Molecular Pharmacology - You will clone and express known or novel receptors and enzymes. Certain assignments will involve high throughput assay development and execution. A BS/MS and 1 to 3 years of experience in molecular biology and/or robotic screening is required.

We offer competitive salaries and benefits packages as well as out-standing opportunities for career growth. Please send a detailed resume in confidence to: Human Resources, Helios Pharmaceuticals, 5501 Fern Valley Road, Louisville, KY 40228 Soo us at the bioSCIENCE Caroor Fair at MIT on March 1 & 2. Or, send your CV and a cover letter, clearly indicating your research interests, to: Human Resources, Alkermes, Inc., 64 Sidney Street, Cambridge, MA 01239. We are an equal opportunity company.





Postdoctoral Positions in Cancer Genetics

National Center for Human Genome Research (NCHGR) National Institutes of Health (NIH)

The NCHGR located on the Bethesda MD campus of the NIH is positioned at the forefront of the study of human genetic disease including cancer. A Laboratory of Cancer Genetics (LCG), dedicated to the investigation of fundamental questions in contemporary cancer genetics and molecular biology, has been created. The LCG is now recruiting postdoctoral fellows with research interests and training in molecular and cellular biology. Currently, the LCG comprises:

Molecular Examination of Chromosome Rearrangements Jeffrey M. Trent, PhD

Molecular examination of chromosome abnormalities is focused upon identifying genes important in the biology and development of cancers including emphasis on human malignant melanoma, breast and ovarian cancer. Work is focusing on quantitative analysis of gene expression to identify genes expressed between stages of cellular and tumor development. Positions involved in both genomics and functional analysis of genes involved in growth regulation of malignancy are available.

Molecular Genetic Analysis of Tumor Progression Olli Kallioniemi, MD, PhD

Genetic mechanisms of breast and prostate cancer progression are studied using a variety of molecular genetic and molecular cytogenetic approaches, such as FISH, CGH, chromosome microdissection, microarrays, SAGE and positional cloning technologies.

Alterations of Gene Copy Number and Expression Paul Meltzer, MD, PhD

Studies are directed at characterization of genetic alterations in cancer cells and the mechanisms which lead to their development. Areas of emphasis include the characterization of gene amplification and other chromosome alterations at the genomic and gene expression levels utilizing state-of-the-art technologies. Positions are available which emphasize molecular, biochemical, and molecular cytogenetic approaches to these problems.

If you hold a graduate degree (e.g., PhD, MD/PhD) or a professional degree (MD, DO, DDS, DMD, DVM) and less than five years previous postdoctoral experience, and would like to be considered for one these positions, please send a cover letter, curriculum vitae, bibliography, and statement of research interests to Sharon McFadden / 49 Convent Drive MSC 4470 / NIH - 49 4a38 / Bethesda, MD 20892-4470. In addition please arrange to have letters of recommendation sent from three scientists who can provide an evaluation of your qualifications.

-NIH is an equal opportunity employer-

TARGETED GENETICS CORPORATION Staff Scientist: Gene Expression

Targeted Genetics Corporation is a biotechnology company developing integrated gene and cell therapies for the treatment of acquired and inherited diseases. We have a new opportunity for a Staff Scientist in our Gene Expression Department. The successful candidate will join a highly interactive group dedicated to the aggressive pursuit of research programs leading to therapeutic products.

This achievement-oriented scientist will work closely with other team members to develop strategies for maximizing the production of DNA virus vectors and to construct and characterize DNA virus vectors for use in gene therapy and CTL immunotherapy applications. Qualified candidates will have a Ph.D. in molecular and cellular biology, virology or a related discipline. They will also have at least 2 years of post-doctoral experience, including demonstrated expertise in the expression of heterologous genes in mammalian cells. Persons applying will need strong collaborative and communication skills. Experience in a team-based industrial environment would be an advantage.

Targeted Genetics offers competitive salaries and an excellent benefits package. For consideration, please submit your resume with names of three references to:

Targeted Genetics Corporation REF: SL396 1100 Olive Way, Suite 100 Seattle, WA 98101 FAX (206)521-7872 email: sackettp@targen.com Equal Opportunity Employer.

IMMEDIATE OPENINGS !

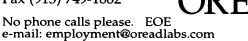
Oread, a leader in pharmaceutical drug development, has several openings due to continued growth and expansion. We are searching for technically qualified, entrepreneurial minded scientists to fill a variety of positions at both our Farmington, CT, and Lawrence, KS, facilities.

With Oread, you'll find state-of-the-art facilities and a commitment to scientific excellence. We currently have openings in Toxicology, Chemical Synthesis, Formulation Development and Analytical Chemistry. We're seeking individuals with the following requirements:

- Ph.D or M.S.
- B.S. & 7+ years pharmaceutical industry experience

Oread offers and excellent benefits and salary. Send resume and letter of intent to:

Human Resources S-1, Oread, Inc. 1501 Wakarusa Dr. Lawrence, Kansas, 66047 Fax (913) 749-1882



BIOPHYSICIST

Help shed some light on our skin research efforts.

Unilever, a leading global manufacturer of consumer products, foods, and specialty chemicals, has maintained a commitment to high quality research for nearly one hundred years. Today, as we expand our research capabilities, we are seeking an individual to join a multi-disciplinary research program at our Skin Science Center in Edgewater, NJ.

You will be a key member of a team probing skin condition, analyzing its response to treatment and presenting related scientific data. You will be required to use simple biological techniques to work with human skin in vitro and prepare it for analysis by novel optical and spectroscopic methods. To qualify, you should possess a BS/MS in biophysics or a related field combining biology with physical measurements as well as experience with modern optical and spectroscopic techniques applied to biological tissues. Familiarity with programming languages and instrumentation skill in hardware and software are pluses.

If you would like to help us develop the science and technology that will drive our businesses into the next century, we invite you to forward your CV to: Human Resources, Dept. BP/HK, Unilever Research U.S., 45 River Road, Edgewater, NJ 07020. Equal Opportunity Employer.



Unilever Research U.S.

Agouron Pharmaceuticals, Inc., a cutting-edge leader in the field of protein structure-based drug design, has State of the second immediate opportunities for Ph.D. level scientists to join its team of researchers in the Pharmacology Group

RESEARCH SCIENTIST, TOXICOLOGY

The successful applicant will support the preclinical and clinical development of novel anticancer and antiviral agents by evaluation of the toxicology profile of ther-

apeutic candidate molecules. Duties will include protocol development, communication with contract facilities, study monitoring and data review. A Ph.D. in toxicology, pharmacology, physiology or a related discipline is required together with a minimum of 2 years' postdoctoral training, preferably in an industrial or contract laboratory environment providing experience in GLP testing and applied R&D. Code: TOX

RESEARCH SCIENTIST, PHARMACOLOGY

State State

An opportunity exists for a Ph.D. level scientist in Pharmacokinetics or Pharmacology with 2 years of industrial/postdoctoral experience. Responsibilities include the design, conduct, analysis and interpretation of preclinical pharmacokinetics, pharmacodynamic and drug metabolism studies. Candidates should have prior experience in developing bioanalytical methods, pharmacokinetic-pharmacodynamic data analysis and report writing for IND/NDA submissions. This position involves interaction with a multi-disciplinary team of scientists involved in the discovery and development of new drugs. Code: PK

We offer competitive salaries and benefits and the opportunity to grow with a dynamic public company. For immediate consideration, please forward your resume and salary history to: Human Resources Department, Code: (see above), Agouron Pharmaceuticals, Inc.,



SCIENTIFIC **EXCELLENCE** IN CHEMISTRY

ALZA Corporation, headquartered in Palo Alto, California, is a leader in the development and commercialization of innovative pharmaceutical products using advanced drug delivery technologies to add medical and economic value to drug therapies. Our continuing product success has created the following career opportunities in our Northern California site:

Protein **Analytical Chemistry** Manager

You will establish/supervise a highly skilled and motivated protein chemistry group to perform protein analysis in support of peptide/protein projects and formulations. You will also provide strong leadership in methods development and validation capabilities for sample analysis, ensuring compliance with GMP regulations; qualify/document the analytical methods developed and the analysis performed; and maintain/troubleshoot instruments. The position requires a Ph.D. in biochemistry, analytical chemistry or relevant field; a minimum of 6 years' experience as a group leader in protein analytical chemistry, preferably in the pharmaceutical/biotechnology industry; excellent managerial and written/verbal communication skills; and proven problem-solving and methods development capabilities. Must have strong experience base in a variety of high level analytical methods used in protein analysis and characterization. (Job# SCIPAC-SK)

Analytical Chemistry Manager

You will supervise/manage the development support group for transdermal products developed at ALZA. You will also provide strong leadership in methods development, gualification and validation capabilities for all phases of drug development; provide analytical support for all phases of projects up to point of transfer; prepare regulatory reports; and maintain/troubleshoot equipment. The position requires a Ph.D. in chemistry or relevant field; 6+ years' supervisory experience in an analytical chemistry laboratory for methods development and product support, preferably in a pharmaceutical environment; excellent managerial and written/verbal communication skills; and proven problem-solving and methods development capabilities using a variety of analytical techniques. Demonstrated hands-on electromechanical aptitude and HPLC & GC experience are essential. Must be able to analyze experimental results and make class decisions with minimal supervision. Experience with GPC, CE, GS/MS, LC/MS, FTIR and/or NMR is desirable, as is experience in characterization of polymers. (Job# SCIACM-DM)

We will reward you with an attractive salary & benefits package and a career opportunity to contribute to the success of an established industry leader. To apply, please send resume to: ALZA Corporation, HR Dept., Attn: (Job#), 950 Page Mill Rd., P.O. Box 10950, Palo Alto, CA 94303-0802. Fax: (415) 494-5151. TDD: (415) 494-5003. Or call our Job Hotline at (415) 494-5319. ALZA is proud to be an Equal Opportunity Employer and welcomes applications from minorities & persons with disabilities.



POSTDO<u>CTORAL FELLO</u>WSHIPS

IN NEW DRUG DEVELOPMENT

The Department of Clinical and Scientific Affairs (CSA), Pfizer Central Research, New York City, announces its annual competition for Postdoctoral Fellowships in New Drug Development.

The Department of Clinical and Scientific Affairs has a broad range of activities. It is responsible of designing and conducting clinical development programs for Pfizer discovered compounds, as well as investigating and developing new claims and indications for marketed compounds. CSA also designs and conducts clinical development programs for new formulations and dosage forms of existing products.

The Postdoctoral Fellows will become members of project teams, and gain experience in the design and implementation of clinical research programs. While no laboratory or clinical studies are actually conducted at Pfizer in New York, Fellows will interact with specialists in their chosen field to have studies performed at contract laboratories, universities, and with individual investigators.

Two fellowships will be given for clinical research related to new drug development in the following areas: allergy, central nervous systems, microbiology/infectious disease, oncology, pharmacokinetics and urology. Candidates should possess a doctoral degree (MD, Ph.D. or PharmD), have a broad background in pharmacology/physiology, have no more than one year of non-industry postdoctoral experience, and be authorized to engage in employment within the US. Prior experience with clinical trials or the drug development process is desirable, but not a pre-requisite. Salary will be determined based on qualifications and experience. The deadline for application is May 1, 1996.

For further information, forward resume and salary history to: **Postdoctoral Fellowship in New Drug Development, Department of Clinical and Scientific Affairs, Pfizer Central Research, 235 East 42nd Street, 13th Floor, Stop 2, New York, NY 10017-5755, Attn: Michael Delicio, Employee Resources.** Pfizer is an equal opportunity employer.





DEPUTY DIRECTOR AND SENIOR SCIENTISTS

The Department of Health and Human Services (DHHS), Public Health Service (PHS), Food and Drug Administration (FDA), Center for Food Safety and Applied Nutrition (CFSAN) is seeking qualified scientists for the following positions:

- Deputy Director for Programs
- · Microbiologist (foodborne pathogens)
- · Toxicologist (risk assessment)
- · Nutritionist (clinical nutrition/nutritional biochemistry)
- · Molecular Biologist (food biotechnology)

The Deputy Director assists the Director in providing executive leadership in the wide range of policy, research, and regulatory activities associated with management of major national and international food and cosmetic quality and safety programs.

Senior level scientists direct research and develop food safety, nutrition, and regulatory policy in their areas of expertise. They serve as national and international experts in development of food safety and nutrition guidelines and standards. They are the agency's lead scientists in identification of emerging food safety and nutrition issues of public health concern and will spearhead the development and implementation of future strategies.

All positions are located at the FDA headquarters in Washington, DC.

Because of responsibility associated with these positions, CFSAN is seeking candidates who qualify for the Senior Biomedical Research Service (SBRS). The SBRS, which requires a doctoral level degree, has a salary range up to \$148,400 depending on candidate's experience and scientific achievements. Candidates must be U.S. citizens.

HOW TO APPLY: Submit a curriculum vitae with bibliography to Karen Carson, Executive Operations Staff (HFS-22), Center for Food Safety and Applied Nutrition, Food and Drug Administration, 200 C Street, SW, Washington, DC, 20204. Review of curriculum vitae will begin April 15, 1996. Positions will remain open until qualified candidates are found.

THE FOOD AND DRUG ADMINISTRATION IS SMOKE FREE THE FOOD AND DRUG ADMINISTRATION IS AN EQUAL OPPORTUNITY EMPLOYER

Molecular Tool, Inc.

Molecular Tool, Inc. is a biotechnology company located on the Johns Hopkins Bayview Campus in Baltimore, Maryland. The Company is committed to the development and commercialization of highly integrated, genetic analysis technologies. Molecular Tool is soliciting applicants for the following positions:

Senior Scientist: Nucleic Acid Chemist

Candidate must have a Ph.D. in Organic or Synthetic Chemistry with a combination of experience in nucleic acid chemistry, nucleotide synthesis, surface chemistry and analytical methods development. The selected candidate will work with a multidisciplinary team on the development of genetic analysis technologies and products and will be expected to develop innovative solutions to problems in miniaturized oligonucleotide array development and analysis.

Junior Scientist: Nucleic Acid Chemist

Candidate must have an M.S. Degree in Chemistry or a related field with experience in nucleic acid chemistry including a combination of experience in modification of nucleic acids, analytical techniques and nucleic acid enzymology. The selected candidate will work with a multidisciplinary team on the development of genetic analysis technologies and products.

Please forward two copies of your curriculum vitae along with a list of three references and salary history to: Human Resources, Molecular Tool, Inc., Alpha Center, 5210 Eastern Avenue, Baltimore, MD 21224. Molecular Tool is an Equal Opportunity Employer.





A faculty position at the level of Assistant, Associate, or Full Professor is available at the New England Eye Center, Tufts University School of Medicine, to conduct ophthalmic laser research and to develop novel techniques for optical tomography and laser surgery. Potential candidates should have a strong background in optics and lasers, good communication skills, and an ability to work closely with clinical investigators. A Ph.D. degree in physics, biomedical engineering, biophysics, optics, or related field is preferred. Successful candidate will develop his or her own independent research program. Please send CV and three letters of recommendation to Carmen A. Puliafito, M.D., Director, New England Eye Center, 750 Washington Street, Boston, MA 02111, FAX 617-636-4215.

Research Scientists Positions in Northern San Diego County, California



Isis Pharmaceuticals, a dynamic biopharmaceutical company and leader in antisense technology, has exceptional opportunities for Research Scientists at our Carlsbad, CA headquarters. With strong funding and excellent academic ties, Isis offers a superb environment for outstanding professionals. Immediate opportunities are currently available for highly motivated candidates in the following areas:

Senior Scientist Antimicrobial Drug Discovery

The successful candidate will design and implement a preclinical antimicrobial pharmacology program and will participate on an interdisciplinary team to discover novel lead structures from combinatorial libraries. Experience in antimicrobial drug discovery is preferred, but a candidate with a broad background in prokaryotic physiology or molecular biology will be considered. Experience in the RNA metabolism of RNA protein interaction or animal models would be valuable. The candidate should have a Ph.D. or M.D. and have experience working in antimicrobial drug discovery. (Code 202)

Post Doctoral Fellows Molecular Pharmacology - Signal Transduction

The selected candidate will determine the pharmacological consequences of inhibiting expression of various isozymes of key signal transduction proteins. Experience in the biochemistry and

molecular biology of eukaryotic signal transduction pathways required. The candidate should have a Ph.D. or equivalent and 0-3 years of postdoctoral experience. (Code 203)

Cell Biology - Intracellular Trafficking

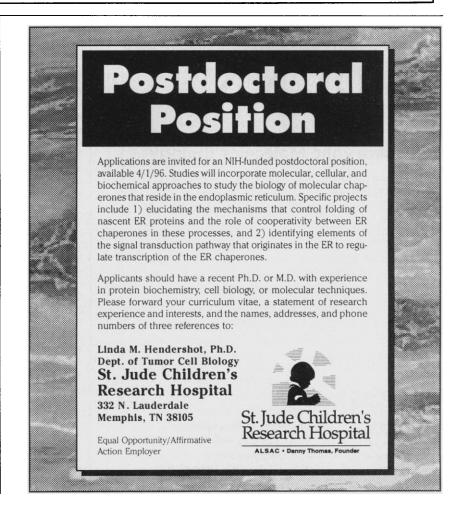
The selected candidate will determine the biological pathways by which oligonucleotides are internalized in mammalian cells and tissues, becoming available for hybridization to target mRNAs. Experience in eukaryotic intracellular trafficking, cell biology, receptor-ligand interactions, and working knowledge of pharmacokinetics are highly desirable. The candidate should have a Ph.D. or equivalent and 0-3 years of postdoctoral experience. (Code 204)

Isis offers excellent salaries and benefits, including equity participation. We are located in North Coastal San Diego County, an area offering a wide range or recreational advantages, as well as proximity to world-class educational institutions. For consideration, send your resume with cover letter to: Isis Pharmaceuticals, Human Resources, Code (see above), 2292 Faraday Avenue., Carlsbad, CA 92008. Principles only. No phone calls please. EOE.



TENURE TRACK POSITION AVAILABLE

The National Institute on Aging is searching for a tenure track candidate - M.D. or Ph.D. -- for a position in the Laboratory of Cellular and Molecular Biology. Candidates should have expertise in molecular biology -- with training in molecular cloning, eukaryotic gene expression systems, and extensive experience in protein biochemistry, particularly analysis of kinases/phosphatases involved in signalling pathways. The successful candidate will be expected to develop an independent research program involving signal transduction pathways critical to cellular responses to stress, with a particular emphasis on their ole in aging processes. Candidates should submit a C.V., bibliography, three letters of recommendation, a detailed statement of research interests and selected publications by March 22, 1996 to: ALBERT J. FORNACE, JR. , CHAIRMAN OF THE SEARCH COMMITTEE, LABORATORY OF MOLECULAR PHARMACOLOGY, DIVISION OF BASIC SCIENCES, NATIONAL CANCER INSTITUTE, BETHESDA, MD 20892-4255.



Postdoctoral Fellowship

The Comparative Medicine Division at St. Jude Children's Research Hospital, a premier research center for catastrophic diseases of childhood and biomedical research, offers a FELLOWSHIP IN BASIC SCIENCE RESEARCH. The fellowship is open to postdoctoral candidates who wish to study the pathobiology and therapeutics of

wish to study the pathobiology and therapeutics of Cryptosporidiosis. Experience in protozoan pathobiology is advantageous.

The fellowship award is made for up to three years and is based on merit, recommendations, and promise of a productive career in biomedical research. Stipend available is highly competitive and based on qualifications.

Applicants should provide a curriculum vitae, a brief description of their research interests and the names of three individuals who have agreed to serve as references.



An Equal Employment/Affirmative Action Employer



Prokaryotic Molecular Biology

The Department of Microbiology, University of Pennsylvania School of Medicine invites applications for tenure-track positions at the Assistant and Associate Professor levels. Candidates should have strong credentials in the fields of microbial pathogenesis or prokaryotic molecular genetics. Major responsiblilities will include supervision of an active research program and teaching microbiology to graduate and medical students. Applicants should submit a curriculum vitae, summary of research accomplishments, description of future plans and three letters of reference by April 15, 1995 to:



Dr. Susan Weiss, Chair Prokaryotic Search Committe Department of Microbiology University of Pennsylvania 1033 Blockley Hall 418 Guardian Drive Philadelphia, PA 19104-6021

AN EQUAL OPPORTUNITY/AFFIRMATIVE ACTION EMPLOYER



SUSTAINED SUCCESS.

DepoTech Corporation is a rapidly growing drug delivery company engaged in the development and manufacturing of injectable therapeutic products. DepoCyt, our leading product, is in late Phase III clinical development. DepoTech expects to have a DepoCyt on the market in 1997. We anticipate upcoming opportunities in the following areas:

- DEVELOPMENT SCIENTISTS (CODE: DS)
- PROCESS DEVELOPMENT ENGINEERS (CODE: PDE)
 - **Research Associates** (Code: RA)
 - **PROJECT LEADERS** (CODE: PL)
- PROCESS DEVELOPMENT SCIENTISTS (CODE: PDS)

We offer a comprehensive compensation and benefits package. Please send resume with salary history to: DepoTech Corporation, HR Dept-Code: (see above), 10450 Science Center Drive, San Diego, CA 92121. Equal Opportunity Employer.

FACULTY POSITIONS IN BIOCHEMISTRY AND MOLECULAR BIOLOGY

THE DEPARTMENT OF BIOCHEMISTRY AND MOLECULAR BIOLOGY in the College of Medicine at the University of Oklahoma Health Sciences Center is undergoing a major expansion in its size and research activities. Several TENURE-TRACK positions are available at ALL RANKS. Interested candidates must have a Ph.D. or equivalent degree and a strong training and publication record. Scientists with a productive research program in macromolecular physical biochemistry and structural biology are encouraged to apply, but serious consideration will also be given to individuals with interest in other areas of modern molecular and cell biology including signal transduction, intracellular trafficking and cell-matrix interactions. Senior scientists should have a record of sustained extramural support. Successful candidates are expected to develop independent research programs, participate in graduate and professional teaching programs, and be involved in collaborative projects. There are seven colleges in the University of Oklahoma Health Sciences Center, located on a 200 acre modern campus in Oklahoma City, with over 3300 students and 2200 faculty. A new Biotechnology Park has been completed and work has begun on a \$45 million Biomedical Research Center. Please send a letter of application, curriculum vitae, outline of current research activities and future plans, selected reprints, and the names and addresses of three references to:

Dr. Richard D. Cummings Chair of Search Committee Department of Biochomistry and Molecular Biology University of Oklahon & Health Sciences Center P.O. Box 26901 BSEB-325 Oklahoma City, OK 73190 e-mail: searchc@uokhsc.edu

Review of applications will begin by March 15, with an expected start date in the summer/Fall of 1996.

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

A Career of Discovery TOKYO, JAPAN

Tanabe Seiyaku Co., Ltd. is one of the oldest and largest pharmaceutical companies in Japan. Tanabe is committed to innovation through world class programs and scientific staff.

Tanabe Seiyaku is currently seeking a talented Research Scientist with expertise in molecular biology/biochemistry to join our drug discovery program in Modulation of Transcription Factors and Application to Drug Development. The successful candidate is expected to conduct innovative research in a team setting and possess a broad knowledge of and experience base in transcription factors and their relationship to inflammation/immunology. He or she should be highly motivated and skilled in cDNA cloning, transfection, CAT plasmid construction and assay, gel shift assays, *in vitro* translation, Northern, Southern, and Western blotting, cell labeling and DNA binding analysis.

Minimum requirements include a PhD in a relevant discipline, 2+ years' postdoctoral training or industrial research experience with an established track record of scientific excellence and strong communication skills. Knowledge of Japanese language not required.

Tanabe Seiyaku Co., Ltd. offers a competitive compensation, benefits and relocation package, as well as a stimulating and challenging work environment. Qualified, interested candidates are encourage to submit a C.V. with references to: V. Smith, Director Administrative Affairs, Tanabe Research Laboratories, USA, 4540 Towne Centre Court, San Diego, CA 92121. EOE.



Tularik is a rapidly growing biopharmaceutical company dedicated to the discovery and development of novel therapeutic agents that regulate gene expression. We are continuing to expand our multi-disciplinary research team and have the following opportunities available:

SCIENTIST

We are seeking an innovative and creative Scientist with a strong background in molecular virology. This professional will play a key role in the discovery and development of novel antiviral compounds. Applicants should have a Ph.D. in Molecular Genetics or related field, with at least 2 years of postdoctoral experience. (Job# PWMM-S1)

RESEARCH ASSOCIATE

Successful candidate should have a MS or BS degree in Biochemistry or related field, with at least 2 years of relevant experience. The successful candidate will also have a strong background in molecular biology & protein biochemistry and an interest in drug discovery. (Job# PWMM-S2)

Tularik offers productive and experienced leadership, equity participation, competitive salary and benefits commensurate with experience, and a very exciting research environment. For consideration, please submit your CV to: Tularik Inc., Attn: Job# ____, 270 East Grand Avenue, South San Francisco, CA 94080.

Tularik is an equal opportunity employer.



As the established world leader in gene discovery, HGS has utilized automation and high-throughput DNA sequencing to identify new human genes and analyze patterns of gene expression under defined conditions of cell activation and development. From this rich source of information, our goal is to identify novel protein pharmaceuticals with therapeutic potential for unmet medical needs.

Opportunities in Drug Discovery

PHARMACOLOGY

Positions exist for the development of preclinical, small animal models focusing on immunopharmacology, cancer and infectious disease. Candidates will be expected to take proteins with demonstrated in vitro activities and characterize them further both in vitro and in appropriate animal models. The position requires a willingness to be creative in animal model development, a PhD/MD with at least 3+ years experience in related fields and demonstrated record of past performance (**Position PM-2**).

PROTEIN EXPRESSION

We are seeking experienced biochemists and research associates to validate quality control assays for protein pharmaceuticals. Familiarity with cGMP is essential. Biochemist candidates should also have knowledge of Drug Master Files and associated documentation required for FDA submission (**Position PE-7**).

MOLECULAR MICROBIOLOGY

We are seeking creative PhD/MD candidates willing to exploit complete microbial genome sequence information toward the identification of new vaccine antigen candidates and development of gene-based antimicrobial agents. Knowledge of microbial genetics and animal models of infectious disease is essential **(Position ER-2).**

HGS offers an excellent salary and benefits package which includes medical/dental coverage, 401(k) and tuition reimbursement. Please send your curriculum vitae indicating position number to **Human Resource Department**, **Human Genome Sciences**, Inc., 9410 Key **West Avenue, Rockville, MD 20850-3331.** An Equal Opportunity Employer.

Human Genome Sciences, Inc.

Dedicated To Discovery For Health

Research Assistant or Postdoctoral Fellow

A position is available in the Tom Sato, Ph.D. lab for either a postdoctoral candidate or experienced research assistant to study molecular mechanisms of blood vessel formation (PNAS <u>90</u>, 9355, 1993; Development <u>121</u>, 1089, 1995; Nature <u>376</u>, 70, 1995; Oncogene <u>12</u>, 397, 1996). The successful candidate will have scientific and technical knowledge of: ES cell cultures, feeder cell preparation, and generation and characterizations of transgenic and knockout mice/embryos. 2-3 years' related experience required.

Interested candidates, please send resume indicating requisition #4551 to Adrienne McCosh, Human Resources, Beth Israel Hospital, 330 Brookline Avenue, Boston, MA 02215. If you are interested in other employment opportunities, or would like to complete an application, please visit our Employment Office at 132 Brookline Avenue, 2nd Floor.

■ Beth Israel HealthCare MealthCare Meth Israel Hospital

An Equal Opportunity Employer

Beth Israel Hospital is the cornerstone of Beth Israel HealthCare, a regional system of care promoting lifelong well-being.

CENTER DIRECTOR

The U.S. Department of Agriculture (USDA) is seeking candidates for the position of Director of the Plum Island Animal Disease Center (PIADC) at Greenport, New York. PIADC is the principal USDA laboratory for research and diagnosis of animal diseases which are foreign to the United States. Duties of the Director include direction and coordination of the research and diagnostic programs as well as the overall operation and management of the Center. Research is funded and administered through the Agricultural Research Service (ARS). The Foreign Animal Disease Diagnostic Laboratory is funded and administered through the USDA Animal and Plant Health Inspection Service (APHIS). The Director represents ARS and APHIS in communications in the veterinary and biomedical communities, representatives of other governmental agencies, congressional staff, livestock producers and commodity groups, news media and the general public, on foreign animal diseases.

The successful candidate will have the DVM or equivalent degree, demonstrated skill in organizing and leading multidisciplinary teams of scientists, and a strong record of personal research accomplishments. A Ph.D. or equivalent degree is highly desirable. This is a Senior Executive Service position with a salary range from \$102K to \$123K, depending on qualifications. For further information about the positions please call **Dr. Herbert Rothbart at 215-233-6593**. For application procedures, call **Gwen Donovan at 301-344-4303** by **March 22, 1996.** Applications must be received by **March 29, 1996**, to be considered.

USDA/ARS IS AN EQUAL OPPORTUNITY EMPLOYER

Agricultural Besearch United States

Department o

Agriculture

Postdoctoral Fellow Molecular Biology

Amgen, the world's largest biotechnology company, seeks a Postdoctoral Fellow for its Boulder, CO facility.

To qualify, you will need a PhD in Molecular Biology or related field with a strong emphasis on gene isolation via expression cloning, hybridization, and PCR technologies. A background in inflammation biology and/or signal transduction is desirable.

We recognize that diverse perspectives are a key factor in the process of discovery.

At Amgen, you'll find our approach to scientific research as rewarding as it is effective. We offer a highly competitive compensation and benefits package that includes a retirement and savings plan and three weeks' vacation. Please e-mail your resume/c.v. to: jobs@amgen.com and indicate resume as your subject or mail your resume to: Amgen, Human Resources Dept., Job Code: BPSC, 3200 Walnut Street, Boulder, CO 80301. Please consult our on-line Job Bulletin Board at http://www.bio.com for information on other career opportunities available at Amgen. Principals only, please.

EEO/AA Employer M/F/D/V





PROJECT DIRECTOR

The American Association for the Advancement of Science is seeking a Project Director to conceptualize, organize, convene symposia on scientific topics of importance to Pacific Rim (PR) nations; write proposals, interact with donor agencies concerning external support for PR activities; manage cooperative programs with counterpart organizations in the PR region; provide expert advice about the PR region to AAAS Board members and senior management; initiate design and development of new projects; supervise professional and support staff including assigning work, monitoring work progress, providing training, conducting performance reviews and recommending changes in staff salaries; oversee daily operations and develop/monitor project budgets; in collaboration with Directorate Head may formulate policy for project(s); stay abreast of project issues and serve as advocate for project or issues at professional, governmental and community meetings and hearings. Position requires advanced university or college training leading to a Master's degree in a field of specialization related to the work performed (science or Pacific Rim regional studies); five to seven years professional/management experience in progressively responsible positions in program development and management; two to three years experience su-pervising others; "In country" work experience in the Pacific Rim region, and some knowledge of at least one non-English language from the region; experience in fundraising, proposal writing and budget management; experience in international scientific cooperation; excellent written and verbal communication skills required. Interested persons who would be available for only a two year period will also be considered. Applicants may send resume and cover letter with salary requirements to the American Association for the Advancement of Science (AAAS), Human Resources Department, 1333 H Street, NW #123 - PD-015, Washington, DC 20005. EOE. Non-smoking work environment.

Director of Bioanalytical Research

At DuPont Merck Pharmaceutical Company, we are focused on meeting unmet medical needs through the discovery and development of innovative compounds leading to novel pharmaceuticals. Currently, we are seeking an individual who can share in our commitment to our mission.

The successful candidate will lead a team of highly motivated bioanalytical scientists accountable for development and validation of sensitive and specific methods for assay of drugs and metabolites in biological fluids to support drug discovery and development.

The qualified individual should possess a Ph.D in bioanalytical chemistry or pharmaceutical sciences with at least 10 years of pharmaceutical industry experience and a demonstrated track record of developing novel bioanalytical methods using state-of-the-art technologies. Extensive hands-on experience in LC/MS/MS is required. Excellent oral and written communication skills are essential. Ability to work effectively in a dynamic environment is a plus.

DuPont Merck offers a competitive salary and an excellent benefits package. Please send resume, including salary history to: DM & PK-DIR, Human Resources, DuPont Merck Pharmaceutical Company, Experimental Station, P.O. Box 80400, Wilmington, DE 19880-0400.



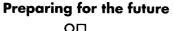
The DuPont Merck Pharmaceutical Company Merging Strengths...Emerging Opportunities



POST-DOCTORAL OPPORTUNITY

Ciba Pharmaceuticals is seeking a Post-Doctoral Research Associate to perform independent research in a novel collaboration between Pharmaceutical Development and Bioanalytics and Pharmacokinetics. The candidate must have a PhD in Biochemistry, Physiology or Pharmaceutics, and have demonstrated the ability to perform original research as evidenced by scientific publications/presentations. Experience in mammalian cell culture techniques is essential; knowledge of HPLC is a plus. Candidate will work in a state-of-the-art research facility, and interact in a multidisciplinary, team-oriented environment.

Qualified and interested candidates are invited to send their resume, indicating qualifications and the names and phone numbers of three professional references, to: **Staffing Center, Dept JN-300TJ, Ciba Pharmaceuticals Division, 556 Morris Avenue, Summit, New Jersey 07901**. We are an equal opportunity employer.





A Novel Approach to Drug Discovery

One of the newest pharmaceutical research enterprises in the San Francisco Bay Area, Roche Bioscience was formed following the acquisition of Syntex by Roche Holding Ltd. We are located in Palo Alto on an extremely wellequipped campus devoted to drug discovery. We actively encourage creativity and innovation in the identification of novel drug targets by way of exploratory research programs.

Research Scientists

Computational Chemistry

We have an opening for a Research Scientist in our Molecular Structure/Computational Chemistry Dept. The successful candidate will have studied Structural Chemistry, Biophysical Chemistry, Biochemistry, Pharmaceutical Chemistry or equivalent. Requirements include a PhD with 2-4 years of relevant postdoctoral experience. This key opportunity calls for excellent computer skills, particularly with UNIX[®]. You will participate in the design and discovery of small molecule inhibitors using a variety of macromolecular modeling and computational approaches. As a Computational Chemist, you will be part of a team supporting the various drug discovery programs that involve structure based research. You will have the opportunity to use other computational approaches that can impact drug discovery, for example bioinformatics. Experience with homology modeling, de novo ligand design, database searching or molecular dynamics is required.

X-Ray Crystallography

In this key Research Scientist position within the Molecular Structure/X-ray Crystallography Dept., you will provide all the necessary expertise to determine the X-ray crystal structure of drug discovery targets. Knowledge and technical expertise in protein purification, enzyme assays, protein crystallization and X-ray diffraction methods are required. Experience with methods for determining protein structures by X-ray crystallography, in particular, MIR and molecular replacement are essential. You will also be responsible for interpreting information about how ligands and drugs interact with the drug discovery target and for providing insights for drug discovery.

We offer competitive salaries, relocation assistance and generous benefits. For immediate consideration, please send your resume to Roche Bioscience, Attn: Human Resources, Dept. SCI223, 3401 Hillview Ave., Palo Alto, CA 94304-1397, or fax to (415) 424-8159. See our home page on the World Wide Web at: http://www.roche.com/bioscience. Roche Bioscience is an equal opportunity employer committed to the values of a diversified workforce. All trademarks belong to their respective companies.

Bristol-Myers Squibb

Director/ Associate Director, M.D. Immunology Clinical Research

Bristol-Myers Squibb Pharmaceutical Research Institute is the R&D division of Bristol-Myers Squibb, a worldwide leader in the discovery and development of innovative pharmaceuticals.



This is an exceptional opportunity for a physician to join our Immunology Clinical Research Department which is responsible for worldwide clinical development of immunosuppressive and immunomodulatory agents.

Candidates should have a strong scientific background in immunology and should have completed a clinical fellowship training in rheumatology, clinical immunology/allergy, nephrology, or gastroenterology with experience in clinical trials and the desire to participate in the clinical development of immunotherapeutics.

Applicants should submit their curriculum vitae and a brief letter describing their clinical research experience and interests to: Mark Hecklinger, Associate Director, Human Resources, Bristol-Myers Squibb Company, 5 Research Parkway, Wallingford, CT 06492-7661, fax# (203) 284-7762. Equal Opportunity Employer, M/F/D/V.





May 5-9, 1996 Supercomputing Techniques for Biomedical Researchers

June 9-14, 1996 Sequence Analysis for Nucleic Acids and Proteins

August 7-10, 1996 Molecular Mechanics and Dynamics

August 21-24, 1996 Advanced Sequence Analysis Subject to funding availability.

Application forms, deadlines, financial assistance and further information: http://www.psc.edu/biomed/workshops.html

Direct All Inquiries to: Nancy Blankenstein Pittsburgh Supercomputing Center 4400 Fifth Avenue, Suite 230C Pittsburgh, PA 15213 biomed@psc.edu or 412-268-4960



The Foundation for Advanced Cancer Studies invites your participation in the

Twelfth Annual Meeting on Oncogenes

> June 18-22, 1996 Hood College Frederick, Maryland

Organized by

Alan Bernstein

Samuel Lunenfeld Research Institute Mount Sinai Hospital

> Michael Cole Princeton University

G. Steven Martin University of California at Berkeley

We invite the participation of investigators involved in oncogene and tumor suppressor gene research. The scientific organization of this meeting provides a forum for researchers at all levels to present and discuss their latest research accomplishments through the assemblage of an intense scientific program including both oral and poster presentations. Please plan to attend.

Registration (including housing and meals) is \$600.00 US. Abstract submittal deadline is April 12, 1996.

For details, please contact:

Margaret L. Fanning Conference Office, FACS P.O. Box 249 • 12120 Main Street Libertytown, Maryland 21762 301-898-9266 • FAX 301-898-9173

Be rewarded for your new ideas

The BFGoodrich Collegiate Inventors Program recognizes university students and their faculty advisors for research and innovative discoveries.

• Open to any full-time student at a

- U.S. college or university • Separate judging for both undergraduates & graduates
- Thousands of dollars in cash awards

 Winners are honored alongside inductees of the National Inventors

Hall of Fame

For information and an application call:



Inventure National Place Inventors Hall of Fame National Place



Schering-Plough

The Schering-Plough Laboratory for Immunological Research, in Dardilly, France, is offering:

A STAFF POSITION for a MOLECULAR BIOLOGIST

The applicant should have an MD or PhD with significant experience in molecular biology.

The candidate will contribute to the discovery of novel molecules that affect the function of the human lymphoid system. The applicant should be interested in applying molecular and biochemical technologies, including expression cloning, to address biologically related questions. The candidate will be working as a member of a team in tandem with cellular biologists.

Applicants should send a letter, a CV, summary of previous accomplishments, and the names of three referees.

The laboratory is located near Lyon in an outstanding research facility.

A TEMPORARY POSITION (18 months) for a SENIOR POSTDOCTORAL RESEARCH FELLOW

The applicant should have at least 4 years' postdoctoral experience in molecular biology.

The candidate will contribute to the discovery and study of the cytokines and membrane molecules of human dendritic cells and human B cells that participate in the development of antigen-induced T cell dependent immune responses.

Applicants should send a letter of application, CV and letters of recommendation.

Write to: Dr. Jacques Banchereau Schering-Plough Laboratory for Immunological Research 27 chemin des reupliers, BP 11, 69571 Dardilly, France Fax (33) 78.35.47.0



Applied Entomology

INSECT PHYSIOLOGIST as Research Associate (Oberassistent/in)

Our group investigates insect dispersal and host searching behaviour of herbivores and their parasitoids including mechanisms behind these processes.

We are seeking a creative and cooperative scientist with strong expertise and post-doctoral experience in insect physiology. Responsibilities include: (1) research together with graduate and undergraduate students in the frame of our mentioned research areas (e.g. on endocrine regulation of insect behaviour); (2) participation in teaching and administration.

Send curriculum vitae, three selected publications and three references to: Prof. Dr. Silvia Dorn, Institute of Plant Sciences, Applied Entomology, ETH (Swiss Federal Institute of Technology), Clauslusstrasse 25, CH-8092 Zürich.

Assistant Professor Biotechnology

There is a vacancy for an Assistant Professor at the Biotechnology Laboratory at Aalborg University in Denmark. (Position No. 95022). The position is available from May 1996.

The Biotechnology Laboratory focuses on enzyme technology, downstream processing and aquaculture. The laboratory seeks to strengthen present research and teaching capacity.

The 3-year tenure-track Assistant Professor will have responsibilities for teaching undergraduate and graduate programmes in biochemical engineering primarily, but also in other study programmes of the University. The position incorporates research possibilities which will form 50 per cent of the appointment term. The successful candidate will possess a strong and appropriate publication record.

For further information please contact Professor Wolfgang Zimmerman, telephone +45 98 15 85 22 ext. 6552, E-mail i5 wz@civil.auc.dk, fax no. +45 98 14 24 55.

The full text of the vacancy announcement, such as information on qualification requirements, conditions of employment and the regulations for the procedural treatment of applications, can be obtained from the Faculty Office, telephone +45 98 15 85 22, ext. 7471 or fax no. +45 98 15 97 57

Applications marked Position No. 95022, and containing 3 copies of each of the documents and publications, which are to be submitted for the assessment, as well as a list of all enclosed material, should be received at the University by March 11, 1996.

> Aalborg University Faculty of Technology and Science P.O. Box 159 DK-9100 Aalborg

GLOBAL CAREER OPPORTUNITIES



The successful candidate will be given the freedom to develop professionally and individually and to attain mutually agreed goals

COMPUTATIONAL CHEMISTRY (CORE DRUG DISCOVERY TECHNOLOGIES DEPARTMENT)

We are looking for a new member for out computational chemistry team, to work with chemists, biologists and molecular biologists designing potential new drug candidates. A broad spectrum of tools for indirect and structure based drug design as well as protein modeling is available. Applicants should have a PhD in chemistry, biochemistry or biophysics combined with informatics experience and post-doctoral or professional experience. Strong communications and interpersonal skills to work in multidisciplinary teams are essential.

Please send your CV including list of publications and names of two referees to:

Mr. H.P. Rüedi, Ref. 15650, Personaldienst, Ciba-Geigy AG, CH-4002 Basel (Switzerland)



The Medical Faculty of the Ruprecht-Karls-University Heidelberg invites applications and nominations of outstanding researchers for a full professorship (C3) in

Social Medicine with the main area of research on health systems.

The professorship also includes the leadership of the Department of Social Medicine. The applicant (preferably physician with additional training in social medicine and practical clinical experience) is expected to represent the subject of social medicine in research and teaching. Candidates must hold the degree of Dr. habil. or an academic equivalent of PhD and must have teaching experience.

As a major research focus the Health System Research for the European area as completion of the research focus of "Health System Research in Developing Countries" of the Department of Tropical Medicine and Public Health is assumed. Besides this, a close cooperation with the interdisciplinary Research Focus of "Tropical Medicine Heidelberg" supported by the BMFT will be expected.

Direct nominations or applications with letter of interest, curriculum vitae, list of publications and proof of teaching qualifications and teaching experience should be sent within six weeks after publication of this announcement to the Dean of the Medical Faculty of the University of Heidelberg, Prof. med. H.-G. Sonntag, Im Neuenheimer Feld 346, D-69120 Heidelberg.

Women and minority candidates are encouraged to apply.

Max-Planck-Institut für Biologie and Max-Planck-Institut für Entwicklungsbiologie Tübingen, Federal Republic of Germany

In forthcoming years, there will be openings for directors of research departments in both institutes. In this connection a

Symposium

on

developmental biology including neuroembryology, evolutionary biology and related areas will be held

from SEPTEMBER 13 to 16, 1996.

Scientists recognized for their work in these fields can apply for participation and are invited to submit a title for their presentation, an abstract and key references before **April 1**, **1996** to Dr. F. Bonhoeffer (Max-Planck-Institut für Entwicklungsbiologie, Spemannstrasse 35, D-72076 Tübingen, Fax 0049-7071-601-305) or Dr. P. Overath (Max-Planck-Institut für Biologie, Correnstrasse 38, D-72076 Tübingen, Fax 0049-7071-62971).

University of Basel

The Department of Physics and Astronomy invites applications for a faculty position

Professor in Experimental Physics

(Condensed Matter)

The candidate should be an established scientist in Nanoscience, have made outstanding scientific contributions in the area of local probe methods, and be among the leaders in one or two specific directions.

Future research should be based on scanning probe methods, but should aim at the development of new approaches of obtaining local physical and chemical properties by «nano-age mechanics».

The applicant is expected to participate with enthusiasm in teaching (in German within two years) at all levels of experimental physics. Several years of experience in teaching and research following the Habilitation or equivalent qualification is required.

Applicants should submit a curriculum vitae, including a publication list with a brief commentary on one's three most important papers, teaching experience, and an outline of the planned research projects. Furthermore, success in obtaining external research funding should be demonstrated. Involvement in interdisciplinary research, interaction with industry and cooperation with theoretical groups, in the past, and envisaged in the future should be addressed. The application should be sent to:

Dekanat der Philosophisch-Naturwissenschaftlichen Fakultät, Missionsstrasse 64,

CH-4055 Basel, Switzerland. Closing Date: March 30th, 1996

The University particularly encourages female candidates to apply.



Cadus Pharmaceutical Corporation is a rapidly growing biopharmaceutical company pioneering the discovery of drugs which regulate G protein-mediated signaling pathways in the areas of inflammation, cardiovascular, and neurological disorders.

Associate Research Scientists

Biochemical Pharmacology-BS or MS degree in pharmacology and biochemistry and a significant experience in receptor binding and second messenger system assays. Experience with yeast and/or mammalian cell culture techniques, peptide receptology and protein biochemistry is desirable. Candidate will join an interdisciplinary drug discovery team directed toward the identification of novel classes of therapeutic agents. Code: S-P

Scientist

Molecular Biology-PhD Scientist withminimum of 3 years postdoctoral research experience in molecular biology. Expertise in DNA cloning and gene expression is essential. This individual will take responsibility for projects centered on analysis of orphan G protein-coupled receptors using yeast-based technologies. Code: S-MB.

Cadus offers competitive salaries and benefits as well as excellent opportunity for career growth in a stimulating collaborative environment. Send CV and List of References to Science Search (please indicate code), Cadus Pharmaceutical Corporation, 777 Old Saw Mill River Road, Tarrytown, NY 10591-6705. Cadus is an Equal Opportunity Employer.



GLOBAL CAREER OPPORTUNITIES

The Max Planck Institute for Biophysical Chemistry invites applications for a position as

<u>'Junior Investigator'</u> in <u>Non-linear opti-</u> cal microscopy in the biosciences

The candidate is expected to develop an independent research program in the field of non-linear optical microscopy applied to biological systems.

Appropriate topics of interest include new optical configurations with improved resolution, two and multiphoton excitation and photolysis, time-resolved measurements in the excited state, development of specific probes, and investigations of cellular processes. Coordinated activities with scanning probe microscopy and confocal microscopy groups at the institute are anticipated.

The position is limited to 5 years starting in the autumn of 1996 and is roughly equivalent to that of an Associate Professor (C3 position according to the Bundesbesoldungsgesetz). There is no teaching commitment.

The group will have modern laboratory facilities, funds for equipment and operating expenses, and support for one scientific and two technical co-workers as well as for a graduate student and a postdoctoral fellow.

Applications, including a curriculum vitae, list of publications, up to 5 reprints of the most relevant publications, a detailed research plan, and addresses of three referees should be submitted by *April 1st, 1996* to:

Dr. Thomas M. Jovin Managing Director Max Planck Institute for Biophysical Chemistry P.O. B. 2841 37018 Göttingen, Germany

IMPERIAL COLLEGE University of London

Assistant Professor/ Lecturer in Analytical Sciences

The candidate should be a young, dynamic researcher with keen research plans in the areas of bioanalytical assay technology, mass spectrometry or other hot topics.

Applicants please send CV, research plan and reprints of publications to: Prof. A. Manz, Department of Chemistry, Imperial College, London SW7 2AY. Tel 0171 594 5836 Fax 0171 594 5833 Closing date: 31st March 1996.

The College is striving towards Equal Opportunities At the leading edge of research,

innovation and learning

BioStar, Inc. is a dynamic Boulder, Colorado

company specializing in rapid, point of care diagnostic tests for infectious diseases utilizing a patented thin film detection platform. We have openings on several exciting new programs in the following areas:

Project Leaders

Responsible for initiating and guiding the development of a project from initial research to completion of manufactured goods. Interface with various other departments to ensure successful product transfer and commercialization. Ph.D. In directly related area and minimum two (2) years prior experience or Master's degree and six (6) years experience required. Demonstrated experience in technical project management of bringing an immunoassay from concept to market is required.

Scientists

Responsible for moving R&D programs forward from a technical perspective. Skills in chemistry, conjugations, protein purification and modflication, antibody production, microbial and cell cultures are desired. Ph.D. in related field required or a Master's degree plus three (3) years experience. Preference will be given to candidates with commercial immunoassay development experience.

BioStar offers a competitive salary along with a generous benefits program including paid Vacation/Sick/Holiday time, Life & ADD, Medical/ Dental, 401k Plan, and Employee Stock Options. The Boulder Colorado area offers an outstanding quality of life. Qualified candidates should forward their resume along with salary requirements/history to:

BioStar, Inc. Attn: (Specify Job) 6655 Lookout Road Boulder, CO 80301 FAX (303) 530-6601 NO CALLS PLEASE

AA/EOE

Toxicology Faculty Position

Department of Biomedical Sciences in the College of Pharmacy invites applications for TENURE-TRACK ASSISTANT PROFESSOR position. A Ph.D. in toxicology or a closely related discipline is required. Postdoctoral experience and publications in peer reviewed journals are essential. Research should be focused on aspects of human toxicology. The successful candidate must be in a strong position to establish an independent, extramurally funded research program and will participate in teaching undergraduate and graduate courses. Preference will be given to candidates with previous record of extramural grant support. Application review will begin in March, 1996, and will continue until position is filled. Send curriculum vitae, names and addresses of three references, copies of selected publications, and a statement of research plans, to: Dr. Z.A. Shaikh, Search Chair, Log #161065, University of Rhode Island, PO Box G, Kingston, RI 02881. The University of Rhode Island is an AA/EEO employer.

ASSISTANT PROFESSOR OF PHARMACY AND PHARMACEUTICAL CHEMISTRY (TENURE TRACK) DEPARTMENT OF PHARMACY UNIVERSITY OF CALIFORNIA SAN FRANCISCO

The Department of Pharmacy invites applications for an Assistant Professor. Applicants should have a Ph.D. with research experience combining advanced techniques at the cutting edge of molecular and cellular biology together with physical chemical and/or bioengineering sciences as applied to drug delivery and biotechnology. Primary research may be in: 1) Biophysical, biochemical or molecular biological aspects of gene delivery; 2) Molecular biology, biochemistry or biophysics of membrane transport; 3) Novel biomaterials design or interactions with the biophase; 4) Self-assembling systems for biomedical applications.

Teaching responsibilities will be in professional curriculum and in graduate and elective courses in topics related to biotechnology and drug delivery.

Send curriculum vitae, three letters of reference, a summary of current research, and a concise outline of future research by March 12, 1996 to:

FRANCIS C. SZOKA, JR., PH.D. DEPARTMENT OF PHARMACY BOX 0446 SCHOOL OF PHARMACY UNIVERSITY OF CALIFORNIA SAN FRANCISCO, CA 94143-0446

UCSF is an Equal Opportunity/Affirmative Action Employer. Women and minorities are encouraged to apply.

POSITIONS OPEN



Applications are invited for a TENURE-TRACK position in plant cell and molecular biology to begin in January 1997. Candidates should have postdoctoral experience in the plant sciences and demonstrate the ability to develop a vigorous, independent research program focussed on molecular signaling in plants. Possible topics include, but are not limited to, growth regulation, molecular physiology, cell-to-cell communication, and plantmicrobe interactions. The successful candidate will be expected to lead a group consisting of postdoctoral fellows, graduate students, and technical staff. The Friedrich Miescher Institute is a foundation devoted to basic research in the area of cell and molecular biology of both plants and animals. It offers excellent facilities in a stimulating scientific environment. Applications including curriculum vitae, list of publications, a description of present research and research plans, list of publications, and three letters of recommendation should be sent to: Dr. Werner Reber, Friedrich Miescher Institute, P.O. Box 2543, CH-4002 Basel, Switzerland by April 1, 1996.

ASSISTANT, ASSOCIATE FULL PROFESSOR BIOCHEMISTRY/MOLECULAR BIOLOGY

The Department of Biochemistry at the F. Edward Hebert School of Medicine, Uniformed Services Univer-sity of the Health Sciences (USUHS) in Bethesda, Maryland, invites applications for TWO FULL TENURE-TRÁCK FACULTY POSITIONS available in 1996. Outstanding candidates in the areas of biochemistry, molecular and cell biology are encouraged to apply. Candi-dates at the Assistant Professor level must have postdoctoral experience and will be expected to develop a vigorous basic research program. Applicants for Associate/Full Professor should have an ongoing extramurally funded research program, and have teaching experience. The successful candidates will participate in training of students in medical school and in a graduate program. Please send curriculum vitae, reprints of three to five recent publications, a one-page statement of future research plans, and the names of at least three preferred references by March 15, 1996 to: Dr. Ishaiahu Shechter, Chair, Department of Biochemistry Search Committee, Uniformed Services University of the Health Sciences, F. Edward Hebert School of Medicine, 4301 Jones Bridge Road, Bethesda, MD 20814-4799. Foreign nationals will only be considered if qualified United States citizens are not available. USUHS is an Equal Opportunity Employer with a strong commitment to racial, cultural, and ethnic diversity.

FACULTY POSITIONS LIFE SCIENCES

A newly formed Department of Life Sciences invites applications for several FACULTY POSITIONS in the area of cell biology. The successful applicant must have a Ph.D. or M.D. degree, minimum of two years of postdoctoral experience, a strong record of research, and the ability to teach undergraduate courses in Mandarin. Preference will be given to those with research program em-ploying physico-chemical as well as molecular genetic techniques to the study of cell biological problems related to cell differentiation and gene regulation. The deadline for applications is March 31, 1996. Please send a statement of research and teaching interest and experience, a curriculum vitae, and three recommendation letters to: Ming-Ta Hsu, Dean, School of Life Sciences, National Yang-Ming University, Shipai, Taipei, Taiwan, Republic of China. Email: mth@dns.ym.edu.tw; FAX: 2-820-1886.

ANATOMY

FACULTY POSITION: 12-month, tenure-track, at instructor/assistant/associate or professor level. Requirements: Master's degree or Ph.D. in human anatomy. Teaching position with lectures and labs; may include Saturday and/or evening classes. Submit letter of interest, curriculum vitae, date of availability, salary requirements, and three letters of recommendation to: V. P. of Academic Affairs, Life College, 1269 Barclay Circle, Marietta, GA 30060. Equal Employment Opportunity Employer.

POSITIONS OPEN

TENURE-TRACK FACULTY POSITION Cardiovascular Molecular Biologist

The Department of Pharmacology at the State University of New York (SUNY) Health Science Center at Syracuse invites applications for a tenure-track, full-time position at the ASSISTANT PROFESSOR level. The candidate will be expected to develop an independent research program focusing on modification of gene expression in the cardiovascular system. Preference will be given to candidates with experience in the expression of exogenous genes, including work with transgenics, viral expression, or other novel gene transfer technology. The candidate will be expected to interact with other faculty members in cooperative projects. Ph.D. degree or equivalent, postdoctoral experience, and a record of research productivity are required. Salary, space, and start-up funds are competitive with national levels. Send application, including a statement of research interests and goals, a curriculum vitae, and three letters of reference to: Mario Delmar, M.D., Ph.D., Search Committee Chair, De-partment of Pharmacology, SUNY Health Science Center at Syracuse, 750 East Adams Street, Syracuse, NY 13210. The deadline for applications is April 15, 1996. An Affirmative Action/Equal Employment Opportunity/ ADA Employer, committed to excellence through diversity.

NEUROSCIENTIST OBERLIN COLLEGE

The Neuroscience Program at Oberlin College, an undergraduate institution, invites applications at the ASSIS-TANT PROFESSOR level for a one-year full-time position beginning July 1996. Teaching responsibilities will be in two upper-level neuroscience courses with accompanying laboratories in areas of the applicant's speciality and in an introductory neuroscience or cell and molecular biology laboratory course. The position is open to applicants with training in any area of neuroscience. Applicants with research backgrounds in neurophysiology, neuroendocrinology, molecular neuroscience, sensory physiology, behavioral neuroscience, and learning and memory are particularly encouraged to apply. Opportunities for research are available. Previous teaching experience desir-able. Ph.D. in hand or by July 1, 1996 required. Send application, including a statement of teaching interests, graduate transcript, and three letters of recommendation to: Dr. C. McCormick, Department of Biology, Ober-lin College, Oberlin, OH 44074. Review of applications will begin March 25, 1996. Affirmative Action/Equal Opportunity Employer.

FACULTY POSITIONS Section of Molecular Cardiology Albert Einstein College of Medicine

Faculty positions are available at the ASSISTANT and ASSOCIATE PROFESSOR levels for outstanding M.D. and/or Ph.D. investigators with interests in diverse areas of cardiovascular biology. Mouse gene targeting expertise is desirable but not essential. We have a highly interactive scientific environment and numerous core facilities that support basic biomedical research. Successful applicants will be provided with a generous start-up package including new or renovated space. Interested applicants should submit a curriculum vitae, statement of research interests, and two letters of recommendation to: Glenn L. Fishman, M.D., Section of Molecular Cardiology, Albert Einstein College of Medicine, Jack and Pearl Resnick Campus, 1300 Morris Park Avenue, Bronx, NY 10461. An Equal Opportunity Employer.

FACULTY POSITION

The Department of Molecular Microbiology and Biotechnology at Tel Aviv University is seeking candidates for a **TENURE-TRACK POSITION** in the areas of microbial genetics; prokaryotic biology; industrial and applied microbiology; structural biology; molecular basis of microbial pathogenicity; and related areas. The position becomes available in October 1996.

Interested parties are invited to send curriculum vitae, list of publications, names of three references, and a brief outline of future research plans to: Professor D. Gutnick, Chairman Ad Hoc Search Committee, Department of Molecular Microbiology and Biotechnology, Tel Aviv University, Ramat Aviv 69978, Israel. Telephone: ++973-3-6409834; FAX: ++972-3-6409407 or ++972-3-6425786; Email: davidg@ccsg.tau.ac.il.

CHAIRPERSON Department of Microbiology, Molecular Genetics and Immunology

The University of Kansas School of Medicine invites applications and nominations for the **CHAIR** of the Department of Microbiology, Molecular Genetics, and Immunology. Candidates must have either a Ph.D., M.D., or equivalent degree. The successful candidate will have a demonstrated and continuing record of outstanding research, experience in graduate and medical student education, strong leadership skills, and a commitment to leading and strengthening the department. Tenure-track junior faculty positions, research space, and a competitive recruitment package are available.

Curriculum vitae of applicants, including funding history and names of three references, should be sent to: Paul F. Terranova, Ph.D., Chair of Search Committee, Department of Physiology, University of Kansas Medical Center, 3901 Rainbow Boulevard, Kansas City, KS 66160-7401. Telephone: 913-588-7423. The University of Kansas Medical Center is an Equal Employment Opportunity/Affirmative Action Employer.

ORNITHOLOGIST The Academy of Natural Sciences of Philadelphia

The Division of Biodiversity and Evolution seeks an outstanding ornithologist for the career-track position ASSIS-TANT CURATOR of Ornithology. Appointment begins approximately October 1996. Requirements: 1) Ph.D. in biology/zoology, 2) demonstrated research ability in systematics and/or evolutionary biology, 3) ability to establish, maintain, and obtain funding for an independent research program, 4) experience curating a systematic collection of birds of the world, including computerized data management, and 5) desire and ability to participate in the public programs of the institution. Potential exists for adjunct appointments at area universities with opportunities for teaching and advising graduate students. To apply, send curriculum vitae, statement of research and curatorial interests and goals, and the names, addresses, telephone numbers, and email addresses of three references to: Ms. Margaret Fischer, Ornithology Search Committee, The Academy of Natural Sciences of Philadelphia, 1900 Benjamin Franklin Parkway, Philadelphia, PA 19103-1195. Applications should be received by April 15, 1996. The Academy is an Equal Opportunity Employer.

Full Page Recruitment Advertisement Directory

Exciting Times in a Tough Market: Career Opportunities in

Biotechnology & Pharmaceuticals

The following organizations have placed full page recruitment advertisements in the special advertising supplement of this issue of SCIENCE beginning on page 1154.

0 0 10	
Advertiser	Page
Amgen	1169
Astra Research	
Center Boston	1174
Arris Pharmaceutical	1167
Bristol-Myers Squibb	1165
Eli Lilly	1157
FASEB	1164
FDA/CBER	1172
Genentech	1156
Hoffmann-La Roche	1166, 1191
Millennium Pharmaceuticals	1170
NIH (OSE)	1161
Oak Ridge National	
Laboratory	1160
Pfizer	1171
Schering-Plough	1163
SCRIPTGEN Pharmaceuticals	1173
Zeneca Pharmaceuticals	1159

POSITIONS OPEN

MICROBIOLOGIST

ASSISTANT/ASSOCIATE PROFESSOR tenure track position is available for a Ph.D. and/or M.D. with relevant postdoctoral experience. Candidates with research interests in the molecular basis of bacterial pathogenesis are preferred. Applicants for Assistant Professor must show a potential to develop an independent research program that can attract extramural support. Associate Professor applicants must have a significant publication record and extramural support. Candidates will teach medical and graduate students and supervise dissertation research. An attractive start-up package and excellent facilities are available to the successful candidate. Submit a curriculum vitae, statement of research interests, and three references to: Dr. Paul C. Montgomery, Professor and Chair, Department of Immunology and Microbiology, Wayne State University School of Medicine, 540 East Canfield Avenue, Detroit, MI 48201. Wayne State University is an Equal Opportunity/Affirmative Action Employer. Minority and female candidates are encouraged to apply.

JOHNS HOPKINS UNIVERSITY BIOMEDICAL ENGINEERING

The Department of Biomedical Engineering at the Johns Hopkins University invites applications for a tenured or tenure-track FACULTY POSITION. The successful candidate must be able to establish an independently funded research program that builds on or complements existing research programs. The candidate will also participate in the teaching of undergraduate and graduate students. For more information on our department see: http://www.bme.jhu.edu.

Interested applicants should send their curriculum vitae and names of three referees to:

> Dr. Murray B. Sachs Faculty Search Department of Biomedical Engineering 710 Traylor Building 720 Rutland Avenue Baltimore, MD 21205

The Johns Hopkins University is an Equal Opportunity/Affirmative Action Employer.

POSITIONS OPEN

ASSISTANT PROFESSOR OF WILDLIFE

The TENURE-TRACK appointment includes teaching the equivalent of 12 credits per semester in wildlife management techniques, introductory wildlife ecology, ecosystem management and restoration and /or introductory GIS, plus three weeks at our summer field station for additional compensation; advising undergraduates; and directing graduate research in specialty. Ph.D. in wildlife ecology required with emphasis on landscape ecology and specialization in wetlands preferred. Working knowledge of GIS is desirable. Candidates with a record of excellence in undergraduate teaching are preferred. Appointment begins August 1996, or January 1997 if necessary. Salary is commensurate with qualifications and experience. Send letter of application, résumé, copies of transcripts, and names and telephone numbers of three references by April 5, 1996 to: J. W. Hardin, College of Natural Resourc-University of Wisconsin-Stevens Point, Stevens Point, WI 54481. Telephone: 715-346-4178. University of Wisconsin-Stevens Point is an Equal Opportunity Employer.

EVOLUTIONARY VERTEBRATE BIOLOGIST

The Department of Environmental, Population, and Organismic Biology (EPOB) and Institute of Arctic and Alpine Research (INSTAAR) of the University of Color ado (CU), Boulder, jointly seek an individual for a tenure-track faculty position, at the ASSISTANT PRO-FESSOR level, in the evolutionary biology of vertebrates emphasizing plant/animal interactions. The successful candidate will have a Ph.D. and will be expected to have a research program in plant/animal interactions that complements existing strengths in evolutionary biology and alpine ecology. The individual will also serve as Assistant Director of the Mountain Research Station, CU's field station. Closing date for applications is 15 March 1996. Applicants should send a cover letter, curriculum vitae, and three letters of recommendation to: Dr. William Bowman, Department of EPO Biology, University of Colorado, Boulder, CO 80309-0334. The University of Colorado strongly supports the principle of diversity. We are partiularly interested in receiving applications from women, ethnic minorites, disabled persons, and veterans.

The Applied Biosystems Division of Perkin-Elmer is the leading producer of instruments and reagents for biotechnology research. We are committed to developing innovative products for scientists exploring a broad range of bioresearch applications, such as the Human Genome Project.

Our multidisciplinary teams of scientists, engineers and strategic marketing personnel are focused on providing improved systems for automation of such processes as DNA Synthesis, DNA Analysis, PCR (Nobel prize-winning technology of 1993) and Protein Analysis.

We serve leading-edge academic research and applied science efforts in molecular biology and human genetics research, pharmaceutical R&D, environmental studies, agriculture/food testing and forensic analysis throughout the world.

APPLICATIONS SPECIALISTS

In these key positions, we will rely on you to champion a broad array of state-of-the-art PCR and genetic analysis techniques in active applications laboratories in Foster City, CA (2 openings) and Norwalk, CT (1 opening). You will assist in sales demonstrations, perform lab experiments to evaluate new products in development, troubleshoot complex customer problems, and develop proof statements and technical training materials. Your solid written and communication skills will be essential for participation in training programs and communication of results. Approximately 10-20% travel is required for these positions.

Your background should include a MS or PhD in Molecular Biology or Biochemistry and 3-5 years of laboratory experience or an equivalent combination of education/experience. Furthermore, you should have demonstrated expertise in PCR optimization and quantitative methods, DNA sequencing, fluorescence techniques, gel electrophoresis, and molecular biology instrumentation. Experience in cell biology/pathology, forensics, PCR quantization, nucleic acid fragment analysis, or data handling will be a plus depending on the specific position.

For more information on us and all our job opportunities, see our home page on the WWW at http://www.perkin-elmer.com/abd/

We offer a competitive salary and generous benefits package. Please send your resume to: ABD, Attn: Michael J. Tews, Ref. #SC-AB1204, 850 Lincoln Centre Drive, Foster City, CA 94404. We are an equal opportunity employer.



Applied Biosystems Division

UNIVERSITY OF LOUISVILLE Chair, Department of Pharmacology and Toxicology

The University of Louisville School of Medicine is seeking a **PROFESSOR AND CHAIR** for its Department of Pharmacology and Toxicology. Requirements for this position include a doctorate (or equivalent degree) in pharmacology, toxicology or a closely related area and academic qualifications commensurate with the rank of Professor of Pharmacology and Toxicology. Relevant leadership skills; a vigorous research program using state-of-theart approaches; demonstrated administrative ability; continuous grant support; and a vision for innovative medical, dental, graduate, nursing, and allied health education are essential qualities for the person assuming this position in the University of Louisville School of Medicine. An appropriate start-up package and potential for dynam-ic departmental growth are available. If interested, please send a letter of application describing your leadership and research abilities, teaching goals, a list of four professional references, a summary of research support, and a current curriculum vitae to: Russell A. Prough, Ph.D., Chair, Pharmacology and Toxicology Search Committee, Office of the Dean, School of Medicine, University of Louisville, Louisville, KY 40292. The deadline for receipt of all materials is April 15, 1996 or until a suitable candidate is identified. http://www.louisville.edu/ groups/pharm.www/. Female or minority applicants are es-pecially encouraged to apply. The University of Louisville is an Affirmative Action/Equal Opportunity Employer.

CHAIRPERSON BASIC PHARMACEUTICAL SCIENCES

West Virginia University School of Pharmacy invites applications for CHAIRPERSON of the Department of Basic Pharmaceutical Sciences. Applicants should have a Ph.D. in one of the pharmaceutical sciences, demonstrated leadership and management skills, a substantial record of research productivity, and an understanding of current trends in pharmacy education. Applicants should submit a letter detailing career objectives and interests, a curriculum vitae, and the names and addresses of three references to: Dr. P. M. Gannett, Basic Pharmaceutical Sciences Chair Search Committee, West Virginia University, P.O. Box 9530, Morgantown, WV 26506. Applications will be accepted until the position is filled. *West Virginia is an Equal Opportunity Employer*.

PRESIDENT AND CEO

The New Jersey Marine Sciences Consortium (NJMSC), a private not-for-profit corporation located at Sandy Hook, New Jersey, conducts and promotes marine sciences research and education in New Jersey. The President supervises and administers all Consortium programs, develops new projects for the Consortium and its member institutions, and serves as Director of the New Jersey Sea Grant College Program. Candidates must have experience in marine or natural sciences; demonstrated proficiency in academic or corporate program, personnel, and financial management proven effectiveness in fund raising/grant acquisition; and strong communication skills. Doctoral or equivalent level of experience and background is preferred. To initiate process, immediately fax or Email letter of interest to: Dr. Dennis Suzzkowski, NJMSC Board of Trustees. FAX: 212-924-8325; Email: hrfdennis@aol.com Equal Opportunity Employer. Minorities/Fenales/Disabled/Veterans.

FACULTY POSITION IN A RESEARCH CENTER IN TAIWAN

The Laser Medicine Research Center, College of Medicine, National Taiwan University is seeking qualified candidates for **TEACHING STAFF** positions (professor, associate professor, assistant professor, lecturer, or postdoctoral, depending on the candidate's qualifications).

Applicants must be R.O.C. attizens, should hold Ph.D. degree (Ph.D. with M.D. degree is preferable), and must have experience with cancer biology research or molecular biology research related to lasers.

Qualified candidates should forward curriculum vitae, summary of current and past research activities, and names of references to: Song-Nan Chow, M.D., Ph.D., Professor, Department of Obstetrics and Gynecology, Director, Laser Medicine Research Center, College of Medicine, National Taiwan University, 1, Jen-Ai Road, Sec. 1, Taipei 10016, Taiwan, R.O.C. Telephone: 886-2-3123456 ext. 5165; FAX: 886-2-3211683 or 886-2-3224795.

POSITIONS OPEN

CENTER DIRECTOR AND PROFESSOR

University of Florida, Central Florida Research and Education Center (CFREC) with facilities at Apopka, Leesburg, and Sanford. Requires a Ph.D. in an agricultural or natural resources discipline and demonstrated profession-al leadership. Provides leadership and direction for 19 faculty and 46 support personnel. CFREC has programs in agricultural economics, biotechnology, agricultural and aquatic entomology, horticulture, plant breeding, and plant pathology. Major commodities are interior foliage plants, cut foliage, landscape ornaments, watermclon and other spring vegetables, where vegetables, and grapes. The CFREC facility at Apopka, where the Director is housed, is located 15 miles northwest of the Orlando metropolitan area. Submit a formal letter of application, a complete biographical résumé, transcripts, and names and addresses of five individuals who may be contacted regarding your qualifications to: Dr. Donald L. Hopkins, Chair, Search and Screen Committee, University of Florida, CFREC, 5336 University Avenue, Leesburg, FL 34748. Telephone: 904-360-6689; FAX: 904-360-6691; Email: dhop@gnv.ifas.ufl.edu. Closing date 1 May 1996. The University of Florida is an Equal Opportunity/Affirmative Action Employer. Women and minorities are encouraged to apply.

FACULTY POSITIONS Cornell University Medical College Department of Pharmacology

Candidates are sought for tenure-track positions at the level of **ASSISTANT PROFESSOR**. Candidates with interests in a wide range of areas related to the disciplines of pharmacology and clinical pharmacology will be considered. The responsibilities of these positions include development of an active, independent research program and participation in both medical and graduate student teaching programs in the department. Applicants should send a curriculum vitae, a summary of proposed research, and should arrange to have letters sent from at least three scientists who can evaluate their accomplishments. Cornell University Medical College is a part of the New York Hospital-Cornell Medical Center and adjacent to Memorial Sloan-Kettering Cancer Center and Rockefeller University. Applications should be sent to: Chair, Pharmacology Search Committee, c/o Room E-409, Pharmacology Department, Cornell University Med ical College, 1300 York Avenue, New York, NY 10021. Equal Employment Opportunity/Affirmative Action/ Minorities/Females/Disabled/Veterans.

ASSISTANT/ASSOCIATE PROFESSOR Molecular/Cellular Immunologist

Position available in the Division of Rheumatic Diseases, University of Connecticut School of Medicine for Ph.D. or M.D. in the general area of molecular and cellular immunology. For M.D. candidates, board certification in Rheumatology is desirable. ASSISTANT PRO-FESSORS will be expected to develop independently funded research programs. ASSOCIATE PROFESSOR candidates must demonstrate established, funded research programs. Competitive salary, benefits, and startup funds are available. Applicants should send a curriculum vitae, three letters of reference, and a brief description of research plans to: Leo Lefrançois, Ph.D., Division of Rheumatic Diseases, MC1310, UCONN Health Center, 263 Farmington Avenue, Farmington, CT 06030-1310.

ASSISTANT PROFESSOR OF BIOLOGY ECOLOGY/EVOLUTION

The Department of Biology, Hofstra University, invites applications for an **ASSISTANT PROFESSOR** tenuretrack position. The successful candidate is expected to develop courses in ecology and evolutionary biology, as well as non-majors human biology. The applicant must be capable of maintaining an active research program involving undergraduates and Master's degree students. Ph.D. required; postdoctoral and teaching experience preferred. Please submit curriculum vitae, statements of teaching goals and research interests (including a short description of plan to involve students in research), three representative reprints, and letters from three references to: **Search: Ecology/Evolution, Dr. Dorothy E. Pumo, Professor and Chair, Department of Biology, 114s Hofstra University, Hempstead, NY 11550. Deadline: 31** March, 1996. Hofstra University is an Equal Opportunity/ Affirmative Action Employer. Women and minorities are encouraged to apply.

POSITIONS OPEN

MICROBIOLOGIST

Pending approval and funding, the Department of Biology at the University of San Francisco invites applications for a tenure-track position in Microbiology at the ASSISTANT PROFESSOR level anticipated to begin in the fall of 1996. Teaching responsibilities may include, inter alia, general microbiology (for majors or nursing students), advanced courses in microbiology with an emphasis in ecological microbiology, microbial remediation, microbial physiology or related fields, participation in the General Biology course for majors, and participation in the General Education Foundations of Natural Science course for non-science majors. The candidate will be expected to guide Master's-level graduate students and to develop an independent and ongoing research program. Qualifications: University teaching experience, evidence of scholarship, an earned doctorate by fall 1996 and an understanding of and commitment to support the mission of the University are required. Applicants should submit a letter of application, curriculum vitae, transcripts (including a list of graduate courses taken or audited; note which), brief description of research plans, statement of teaching philosophy, evidence of teaching ability (includ-ing student evaluations, if available), and three letters of recommendation to: **Microbiology Search Committee**, c/o Professor Paul K. Chien, Department of Biology, University of San Francisco, 2130 Fulton Street, San Francisco, CA 94117-1080. Applications must be received by March 25, 1996, to ensure full consideration. We particularly encourage minority and women applicants for all positions. The University of San Francisco is an Equal Opportunity/Affirmative Action Employer, and provides reasonable accommodations to individuals with disabilities upon request. The University is a private Catholic and Jesuit institution, and particularly welcomes candidates who desire to work in such an environment.

DIRECTOR of Undergraduate Semester Program in tropical biology, language, and culture. The Organization for Tropical Studies (OTS), a consortium of 50 universities, seeks a Ph.D. biologist to plan and implement a new program that teaches tropical biology in a cultural context: faculty direction, liaison with universities, administration, and limited teaching. The successful candidate will have knowledge of Costa Rica, Spanish and English skills, experience with study abroad programs, exceptional interpersonal skills, and ability to travel 50% of the time. Position is full-time beginning May 1996. Salary range is \$35,000 to \$40,000 with Duke University benefits. Review begins March 1, 1996, until position is filled. Send application including telephone numbers of four references to: **OTS, Box 90633, Durham, NC 27708**. *Equal Opportunity Employer.*

RESEARCH ASSISTANT PROFESSOR

Position is available to study the regulation of phospholipase activation, focusing on molecular mechanisms. Applicants should have skills in molecular biology. Additional skills in cell biology would also be desirable. Send letter and curriculum vitae and the names and telephone numbers of three references to: **Dr. John S. Bomalaski**, **Rheumatology Research, Medical College of Pensylvania and Hahnemann University, 3300 Henry Avenue, Philadelphia, PA 19129. FAX: 610-524-6384.**

BIOLOGY/INVERTEBRATE ZOOLOGIST

Emporia State University invites applications for a ninemonth, tenure-track position at the **ASSISTANT/AS**-SOCIATE PROFESSOR level to begin August 1996. Preference will be given to candidates with expertise in aquatic biology and/or parasitology. A Ph.D. and commitment to teaching are required. Teaching loads average 12 contact hours per week per semester. Responsibilities include teaching invertebrate zoology and advanced courses in field of expertise and may include general biology; academic advising; committee participation; direct research of undergraduates and Master's students; and maintaining a research program in specialty, appropriate to available facilities and resources. Review of applications will begin March 25, 1996 and continue until the position is filled. Send letter of application stating teaching and research interests, curriculum vitae, transcripts, and names, addresses and telephone numbers (e-mail if available) of four references to: Dr. Elmer Finck, Invertebrate Zoologist Search Committee, Division of Bio-logical Sciences, Campus Box 4050, Emporia State University, Emporia, KS 66801-5087. http:// www/emporia.edu. Affirmative Action/Equal Opportunity Employer



DISCOVERING THE FUTURE IN PHARMACEUTICALS

Hoffmann-La Roche's dedication to the future is evident in our commitment to the research, development and manufacture of pharmaceuticals worldwide. We currently have the following opportunities available for dedicated, experienced scientific professionals to join us in our U.S. headquarters in Nutley, New Jersey.

Bioinformatics

Roche is currently looking for qualified candidates to join a growing group of scientists conducting bioinformatics and computational biology research in collaboration with Metabolic Diseases, Oncology and Inflammation discovery teams. Members of the Bioinformatics group will apply state-of-the-art computational biology tools to assist in the understanding of human diseases and the identification of critical proteins for drug discovery programs. In addition, they will identify and analyze new areas of opportunity for research at Roche arising from genomics, bioinformatics, and DNA sequencing.

GROUP LEADER

Will provide scientific and administrative leadership to the Bioinformatics group and strategic leadership for Discovery. Ph.D. in Biological Sciences or Computer Science with greater than 3 years of experience in the fields of genomic research, evolutionary biology, sequence/structure analysis or related research. Evidence of leadership ability and strategy development is required. Demonstrated team-oriented skills are critical as well as excellent written and verbal skills. (*Respond to: Dept. SS116SR*)

PRINCIPAL SCIENTISTS

Successful candidates will conduct bioinformatics research including standard and customized database queries, analyze and interpret data in conjunction with discovery research projects as well as liaise with software developers to create a state-of-the-art bioinformatics environment. Ph.D. in Biological or Computer Sciences required. Demonstrated expertise in standard and public databases, analysis tools, search algorithms and methods, data analysis and problem solving, desktop and VAX/UNIX computers. Must demonstrate a thorough understanding of biological problems, strong interpersonal skills, oral and written communication skills and an ability to produce in an independent or team-oriented mode. (*Respond to: Dept. SS126SR*)

COMPUTER SCIENTISTS

The selected candidates will provide computer programming and systems support for the Bioinformatics group and will collaborate with team members and discovery scientists to develop and implement leading edge bioinformatics software and to automate sequencing and sequence handling operations. M.S. degree (or higher) or equivalent experience in computer sciences and demonstrated ability to contribute in a multi-functional scientific environment required. Three-five years of programming experience necessary. Expertise in C/C++, UNIX systems, and World Wide Web development is required. (*Respond to: Dept. SS136SR*)

Analytical Research and Development SCIENTIST

The candidate will join an established protein development group responsible for preclinical development and development activities for projects leading to IND/PLA filing. Major responsibilities for this position include protein characterization and analysis, method development and optimization, and support of protein stability studies. Qualifications include a BS/MS in Biochemistry or Chemistry with 2-5 years strong laboratory experience in protein characterization and bioanalytical techniques. Experience in HPLC, electrophoresis and immunoassay is required, as are strong communication skills. Experience in automated chromatography, densitometry, spectroscopy or specific protein techniques is a plus. (*Respond to: Dept. SS106AF*)

Chemistry Technology PRINCIPAL SCIENTIST

Supervising a small team of organic chemists, your focus will be optimization of drug discovery lead candidates using Combinatorial Chemistry techniques. Specific responsibilities will include performing bench scale synthetic organic and solid-phase chemistry and scale-up work. To qualify, you must possess a Ph.D. in Organic or Bio-organic Chemistry with relevant post-doctoral training or equivalent experience. A knowledge of solid-phase chemistry (peptide synthesis), analytical procedures, computerized database management and the use of computers for data tracking are preferred. (*Respond* to: *Dept. LH126TH*)

Oncology SCIENTIST

Working in our Oncology Department, the position is responsible for assisting in the protein purification and assay development for drug discovery. To qualify, you should possess a BS/MS in Biochemistry (or related discipline) with 2-4 years experience in protein purification and assay development. The ability to do column chromatography, HPLC, SDS-PAGE, Western blotting, spectrophotometry and ELISA is imperative to your success. Experience with mammalian tissue culture and molecular biology techniques is a plus. (*Respond to: Dept. LH136KP*)

We offer an attractive salary and benefits package in a state-of-the-art work environment. For consideration, please send your resume with salary history/requirements, indicating appropriate response code information in the address to: **Department _____, Hoffmann-La Roche, Nutley, New Jersey 07110-1199.** PRINCIPALS ONLY. We are an equal opportunity employer.

Roche Hoffmann-La Roche

A Member of the Roche Group

DEVELOPMENTAL NEUROBIOLOGIST ASSISTANT PROFESSOR

The Marine Biomedical Institute (MBI) of the University of Texas Medical Branch at Galveston, Texas, invites applications for a tenure-track faculty position in develop-mental neurobiology at the **ASSISTANT PROFES** SOR level, beginning September 1, 1996. Postdoctoral experience is required. Applicants should have excellent credentials in the area of developmental neurobiology and should use cellular and/or molecular approaches. The MBI supports a large cephalopod mariculture facility with several species available all year in all life stages, allowing developmental studies at any level of organization with these unique, biomedically relevant invertebrates. The existing faculty has extensive expertise in cephalopod neurobiology and nutritional biochemistry, and over 50 neuroscience faculty with expertise in all areas of neuroscience are present on campus. Candidates are expected to develop independent, externally funded research programs that should include projects with cephalopods. Limited teaching in graduate or medical courses is required.

Please send curriculum vitae, future research and teaching plans, and names of at least three references to: Bernd U. Budelmann, Ph.D., Chair, Search Committee, Marine Biomedical Institute, 301 University Boulevard, University of Texas Medical Branch, Galveston, TX 77555-1163, USA. For further information Telephone: 409-772-2133; FAX: 409-772-6993; Email: budelmann@mbian. utmb.edu. Equal Opportunity/Affinnative Action Employer. Minority/Female/Disabled/V ceran.

OREGON HEALTH SCIENCES UNIVERSITY Center for Research on Occupational and Environmental Toxicology (CROET)

Growing multidisciplinary research institute focused on the brain and behavior invites applications for FACUL-TY POSITIONS in molecular toxicology or pharmacology. Interactive, team-oriented, independent scientists focused on chemical perturbations of gene expression in neurodegeneration, development or aging are sought. Start-up funds, competitive salaries, and generous benefits package. Applications accepted until positions filled; review to begin April 20, 1996. Send curriculum vitae, carcer goals, representative publications and three references to: Dr. P. S. Spencer, Director, OHSU, CROET, 3181 SW Sam Jackson Park Road, L606, Portland, OR 97201-3098. An Equal Opportunity/Affirmative Action Employer.

POSTDOCTORAL POSITION to study transcriptional regulation of Type I isozyme of mammalian hexokinase. Relevant experience is required, and candidates familiar with nuclease protection and nuclear run on assays preferred. Send curriculum vitae and three letters of recommendation to: Dr. John E. Wilson, Biochemistry Department, Michigan State University, East Lansing, MI 48824. Email: wilsonj@pilot.msu.edu. Michigan State University is an Affimative Action/Equal Opportunity Employer.

ANALYTICAL CHEMIST

Developing environmental/bioanalytical lab is seeking an analytical chemist with mass spectrometry experience to assist the Director in program development. Ph.D. in analytical chemistry, chemistry, biochemistry, or related discipline, with proven experience in chromatography and mass spectrometry methodologies. A minimum of three years of postgraduate experience in analytical work, to include GC, GC/MS, and HPLC, is required. Able to organize and interpret results for reports and publications. Computer and good oral and written communication skills are essential and some electronic experience is preferred. Position is **NON-TENURE-TRACK** and is available April 1, 1996. Applications will be accepted until the position is filled. Please send complete curriculum vitae and two letters of recommendation to: **Dr. Thomas P. Mawhinney, Director, Agriculture Experiment Station Chemical Laboratories, Room 4 Agriculture Building, University of Missouri, Columbia, MO 65211. The University of Missouri is an Equal Opportunity/ Affinnative Action Employer.**

POSTDOCTORAL POSITIONS

Immediately available to 1) participate in map- and sequence-based cloning of soybean mosaic virus resistance genes; 2) conduct research on molecular marker analysis of cereal crops. Please send résumé to: Saghal Maroof, Department of Crop and Soil Environmental Sciences, Virginia Polytechnic Institute and State University, Blacksburg, VA 24061-0404.

POSITIONS OPEN

Challenging POSTDOCTORAL FELLOWSHIP position is available to study the genetics of vesicoureteral reflux (VUR). Renal injury associated with VUR is a leading cause of severe hypertension during childhood and adolescence and of chronic renal failure in patients less than 30 years of age. The hereditary and familial predilection of VUR is well established. We are currently searching for a key individual to join our interdisciplinary molecular medicine group to spearhead the mapping of this disorder and to bring the latest in gene identification techniques, e.g. EST's, into the facility. The successful candidate will have a Ph.D. in molecular genetics and experience in familial linkage analysis. Preference will be given to individuals with expertise in positional gene cloning and large scale mutagenesis screening methods. The candidate must be able to work independently but cooperatively as a member of a diverse academic medical unit consisting of researchers from seven departments. Position available until filled. Salary commensurate with education and experience. Send résumé to: Garth D. Ehrlich, Ph.D. Head Search Committee, 737 Scaife Hall, Department of Pathology, University of Pittsburgh, Pittsburgh, PA 15261. The University of Pittsburgh is an Affirmative Action, Equal Opportunity Employer.

PUBLIC HEALTH SCIENTIST. The Natural Resources Defense Council, a national non-profit public interest organization, seeks a scientist to work in various for the prevention of adverse health effects of toxic chemical pollution. A Ph.D./M.D., or Master's and five plus years of highly relevant experience is required. Candidates should be knowledgeable about cutting-edge toxics issues such as disproportionately impacted subpopulations, non-cancer endpoints, and emerging issues regarding carcinogenesis. The salary is \$50,000-65,000, commensurate with experience. Prior applicants need not reapply. Send résumé to: Public Health Program, NRDC, 1350 New York Ave., Suite 300, Washington, DC 20005. Equal Opportunity Employer.

PH.D. MOLECULAR BIOLOGIST

Advanced protein workstations with "biology intuitive" software will soon be ready for use in leading research laboratories. These powerful tools promise to revolutionize the conduct of biology and gene research worldwide. We seek molecular biologists to assist with the development process between the company and client Research Centers in major metro areas. Competitive cash compensation enhanced by significant stock options. Eax résumé to: Hockett Associates, FAX: 415-941-8817, or mail to P.O. Box 1765, Los Altos, CA 94023.

SENIOR SCIENTIST. Applicants are invited for the position of Senior Scientist at IntraImmune Therapies, Inc., a Boston-based gene therapy and human genomics company. ITI is developing intracellular antibodies as therapeutics for gene therapy and for use with *in vivo* targetable gene transfer vectors. Candidates should possess a Ph.D. and/or M.D. degree, and a distinguished publication record in phage display and/or phage antibody technologies. The successful candidate will develop the phage antibody program and recruit staff.

Interested individuals should submit a letter of application, curriculum vitae which includes a summary of their research program and accomplishments, and three letters of reference to: IntraInmune Therapies, Inc., P.O. Box 1419, Concord, MA 01742.

PH.D. MOLECULAR BIOLOGIST

POSTDOCTORAL FELLOW position is available in the Pulmonary Division, Brigham and Women's Hospital/Harvard Medical School to study the molecular interactions between GPI-linked receptors and integrins as they pertain to cellular differentiation and migration. Experience in molecular biology and molecular genetics or cell signaling required. Send curriculum vitae to: Dr. Hal Chapman, Pulmonary Division, Brigham and Women's Hospital, 75 Francis Street, Boston, MA 02115. FAX: 617-732-7421. An Affirmative Action/Equal Opportanity Employer.

POSTDOCTORAL POSITION(S) available to study the pathogenesis of Alzheimer's disease using molecular, cellular, and transgenic animal systems. Minimum requirements: Ph.D. with experience in molecular and/or neurobiology, prefer ES cell experience. Salary based on experience: \$19,000 to \$30,000 plus fringe benefits. Send curriculum vitae and have three letters of reference sent to: Ken Fukuchi, M.D., Ph.D., Department of Comparative Medicine, University of Alabama at Birmingham, 1670 University Boulevard, Birmingham, AL 35294-0019. FAX: 205-975-5519.

POSITIONS OPEN

MEMORIAL SLOAN-KETTERING CANCER CENTER Department of Human Genetics Laboratory of Molecular and Developmental Biology

POSTDOCTORAL POSITIONS are available to study 1) The molecular biology of Acute Promyelocytic Leukemia (APL) and the normal function of genes involved in the disease (PML, PLZF, NPM, RARa), which is also being analyzed by gene ablation in mouse ES cells; 2) Mouse modeling of APL utilizing *in vivo* tissue-specific and *ac/loxp* recombinase-mediated transgene expression; and 3) The role in neoplastic transformation of PML Ring-finger-related genes (HPFR, rfp). Applicants should have a Ph.D. and/or M.D. with ex-

Applicants should have a Ph.D. and/or M.D. with experience in molecular biology and mouse genetics. Send or FAX curriculum vitae and the names and addresses of three references to:

P. P. Pandolfi, M.D., Ph.D. Department of Human Genetics, Box 110 Memorial Sloan-Kettering Cancer Center 1275 York Avenue New York, NY 10021 FAX: 212-717-3374

Memorial Sloan-Kettering Cancer Center is an Equal Opportunity/Affirmative Action Employer.

A POSTDOCTORAL POSITION will be available in the summer of 1996 to work on B lymphocyte development and activation with an emphasis on the roles of complement and complement receptors. Projects that are designed to characterize the cell biology and immunologic roles of these receptors are available in human and mouse systems. Research approaches focus on molecular biologic in addition to cellular immunologic methodologies. The training environment benefits from strong collaborative arrangements within the combined Immunology Program at the University of Colorado Health Sciences Center (UCHSC), Barbara Davis Center for Diabetes and the National Jewish Center for Immunology. A strong background in molecular structurefunction, biochemistry or cellular immunology is required. Please send curriculum vitae and the names of three references to: Dr. V. Michael Holers, Departments of Medicine and Immunology, Box B-115, University of Colorado Health Sciences Center, 4200 East Ninth Avenue, Denver, CO 80262. The UCHSC is committed to Equal Opportunity and Affirmative Action

A POSTDOCTORAL POSITION is available to study G-Protein mediated signaling pathways involved in the regulation of cell growth (see Oncogene, 9:2425, 1994; JBC, 269:11802, 1994; 270:18655, 1995). Applications are encouraged from individuals with strong interest and experience in the area of molecular biology, cell biology, or signal transduction research. Send curriculum vitae and names of three references to: Danny N. Dhanasekaran, Ph.D., Fels Institute for Cancer Research and Molecular Biology, Temple University School of Medicine, 3307 North Broad Street, Philadelphia, PA 19140-5101. FAX: 215-707-2102; Email: danny@sgil.fels. temple.edu. Affirmative Action/Equal Opportunity Employer.

A POSTDOCTORAL POSITION is available to study rapid repair of the gastric mucosa after injury. Research involves investigation of how Na⁺/H⁺ antiporter activity, intracellular pH, extracellular matrix, cytoskeleton, and signal transduction pathways influence restitution. Work will be done *in vitro* and with cell cultures and isolated cells. Experience in cell separation and culture techniques is essential. Send curriculum vitae and names of three references to: Susan J. Hagen, Ph.D., Department of Surgery, Beth Israel Hospital, Dana 815, 330 Brookline Avenue, Boston, MA 02215. Email: shagen@bih.harvard.edu.

POSTDOCTORAL POSITION

Research to focus on genetic alterations in familial hematopoietic neoplasms. Studies to include LOH analysis, mutation screening, sequencing and linkage studies within informative families. A strong background in molecular genetics is required. Send curriculum vitae and names of three references to:

Kenneth Offit, M.D., M.P.H. Chief, Clinical Genetics Service (Box 192) Memorial Sloan-Kettering Cancer Center 1275 York Avenue New York, NY 10021 FAX: 212-717-3129

Memorial Sloan-Kettering Cancer Center is an Equal Opportunity/Affirmative Action Employer.

Tissue Engineering R & D Positions

Desmos, Inc. is developing laminin-based products for application in the fields of cell adhesion and tissue engineering. We are expanding our research efforts in our cell therapy and protein chemistry groups, and seeking the following :

Sr. Research Scientist

Lead research projects involving the production/characterization of cultured pancreatic islets. Experience in mammalian cell culture, immunohistochemistry, and biochemical/molecular methods for studying cell-cell and cell-extracellular matrix interactions, is essential. PhD in cellular biology, or related discipline; 5+ vears of postdoctoral and/or industrial experience; a demonstrated record of accomplishment; and excellent leadership skills required. Strong verbal/written communication skills essential.

Research Scientist

Conduct research investigating mechanisms of cell-cell and cell-extracellular matrix interactions in pancreatic islets and islet cell cultures. Experience with biochemical and molecular techniques required. Familiarity with cell culture and microscopy is advantageous. PhD in cellular biology or related discipline, and 2+ years of postdoctoral experience, with a demonstrated record of accomplishment, required.

Protein Chemist

Focus on the characterization of a newly isolated extracellular matrix protein. Requires a PhD in protein chemistry or related discipline; 3-5 years postdoctoral experience with a demonstrated record of accomplishment; and knowledge of modern analytical methods, including peptide mapping and HPLC. Industrial experience and familiarity with production/characterization of clinical grade proteins is desirable.

Desmos, Inc. is a dynamic, rapidly growing biotechnology company. We offer outstanding opportunities for career growth, along with excellent compensation and benefits packages. Please send curriculum vitae to: Desmos, Inc., Attn: Human Resources, 3550 General Atomics Ct., Rm. 2-418, San Diego, CA 92121. FAX: (619) 455-3962. EOE



S С I E S N Т S Т

Challenging infectious and cardiovascular diseases, allergies, cancer and central nervous system disorders...

That's Schering-Plough

From molecules to medicines. At Schering-Plough, scientists are discovering and developing the novel therapeutics that challinge mankind's most debilitating diseases. To continue this important work, we seek talented scientists with knowledge and dedication.

POSTDOCTORAL FELLOW Allergy Research

We seek a scientist to conduct scientific research to determine the role of cyclic nucleotide phosphodiesterase IV in the function of inflammatory cells. As an integral member of this fellowship project, you will have a unique opportunity to generate novel, publishable data and conclusions. To qualify, you will need a PhD in biochemistry with proven experience in enzyme kinetics, protein biochemistry,

and molecular cloning and expression. Direct experience with PDE enzymes is preferred. Excellent written and verbal communication skills are a must.

We offer an excellent compensation package including a competitive salary and comprehensive benefits. For prompt, confidential consideration, we invite you to forward a resume with salary requirements to: Human Resources-BG, Dept. TM-PDF, Schering-Plough Research Institute, MS #1255, 2015 Galloping Hill Road, Kenilworth, NJ 07033-0539. We are an equal opportunity employer. We regret we are unable to respond to each resume. Only those selected for an interview will be contacted.



Using Science For Human Advantage



CHIRON

WHERE GREAT CAREERS COME TOGETHER

Here, people make all the difference.

At Chiron, our enthusiasm for biotechnology goes beyond looking for solutions to serious diseases. Our sights are set on helping people be their best. Whether they're the patients who benefit from our breakthrough diagnostics, therapeutics, vaccines or ophthalmic devices ... or the Chiron professionals who make it happen.

Do you have the Chiron mind set?

If your education, talent and self-determination have inspired you to seek out creative solutions in detection, treatment and prevention of the unsolved diseases and conditions plaguing mankind, Chiron has a place for you. Come join our team of diverse, energetic visionaries, today. And develop the cancer, herpes, HIV and hepatitis answers of tomorrow.

Where you fit.

Our global organization has openings to challenge a wide range of biotech capabilities. Currently the following divisions:

*Diagnostics	*Therapeutics
*Ophthalmics	*Vaccines
*Technologies	

Are reviewing resumes that specialize in:

*Research & Development *Engineering *Information Systems *QA/QC

Write us at Chiron Corporation, Human Resources, Box SCI/223, 4560 Horton Street, Emeryville, CA 94608. Expand your opportunities to advance your career and to transform the practice of medicine. We welcome applications from all individuals. Women, veterans, minorities and disabled individuals are encouraged to apply.

POSTDOCTORAL POSITIONS Department of Pharmacology

Two positions are available immediately to study aspects of the role of dihydrodiol dehydrogenase (DD) in polycyclic aromatic hydrocarbon (PAH) carcinogenesis. The first position is for an analytical/organic chemist to study oxidative damage of DNA as well as stable and depurinating adducts that may result from exposing DNA to PAH *o*-quinones. Synthetic experience, with knowledge of NMR-spectroscopy, HPLC with electrochemical detection, and [³²P]-post-labeling is desirable. The second position is for a molecular biologist to study the regulation of DD gene expression in cultures of rat hepatocytes. Experience in genomic cloning, reporter gene constructs, manmalian cell culture, gel-retardation assays, and DNase footprinting desirable. Opportunities for career advancement exist. Send a curriculum vitae and the names of three references to: Dr. Trevor M. Penning, Department of Pharmacology, University of Pennsylvania School of Medicine, 3620 Hamilton Walk, Philadelphia, PA 19104-6084.

Penn is an Equal Opportunity/Affirmative Action Employer.

POSTDOCTORAL FELLOW POSITION

A POSTDOCTORAL FELLOW POSITION funded by the Auburn University Biogrants Program is available for at least two years to conduct basic studies on the development of combinatorial chemistry approaches to identifying new anti-protozoal agents. Ph.D. degree in biochemistry/enzymology is required. A strong background in enzymology or parasitology and experience with proteases and/or protozoal parasites is desirable. The minimum starting salary is \$25,200 plus benefits. Please send curriculum vitae and names of three references to: Dr. Christine C. Dykstra, Department of Pathobiology, 264 Greene Hall, Auburn University, AL 36849-5519.

Auburn University is an Affirmative Action/Equal Opportunity Employer. Minorities and women are encouraged to apply.

POSTDOCTORAL POSITION available immediately to study actions of Neuropeptide Y in human epilepsy, using patch clamp techniques and infrared videomicroscopy of human and rat hippocampal slice. Experience in electrophysiology essential. Send curriculum vitae and names and telephone numbers of three references to: Dr. W. F. Colmers or Dr. J. H. Jhamandas, Department of Pharmacology, University of Alberta, Edmonton, Alberta T6G 2H7 Canada. FAX: 403-492-4325; Email: william.colmers@ualberta.ca.

POSTDOCTORAL POSITION available in fall 1996 to study the molecular biology of vascular growth with special emphasis on the role of the renin angiotensin system and nitric oxide. The position requires a recent Ph.D. and experience in the above fields. Please send curriculum vitae, name of references and a key publication to: Nabil Andrawis, M.D., Ph.D., Division of Clinical Pharmacology, Georgetown University, Med-Dent Building, NE403, 3900 Reservoir Road, Washington, DC 20007. Affirmative Action/Equal Opportunity Employer.

A POSTDOCTORAL POSITION available immediately to investigate the structural and functional organization of a renal cystine transporter. Experience in molecular biology and protein characterization techniques desirable. Please send curriculum vitae and names of three references to: Suresh Tate, Ph.D., Department of Biochemistry, Cornell University Medical College, 1300 York Avenue, New York, NY 10021. FAX: 212-746-8875; Email: ehperry@mail.med.cornell.edu. Equal Opportunity Employer.

POSTDOCTORAL POSITION available for a Ph.D. or M.D. to study the pathogenesis of human and murine insulin-dependent diabetes and potential immunotherapeutics (see *Nature*, **366**:69–72, 1993). Experience in cellular immunology preferred. Send curriculum vitae; reprints; and names, addresses, and telephone numbers of three references to: **Daniel L. Kaufman, Department of Molecular and Medical Pharmacology, University of California, Los Angeles, Los Angeles, CA 90095-1735.** *Affirmative Action/Equal Opportunity Employer.*

POSITIONS OPEN



GROUP LEADER/RESEARCH ASSOCIATE

Two positions are available April 1, 1996 for two years (renewable), to lead a group of researchers and technicians for a large scale mouse cDNA sequencing and mapping project. One position is for a Ph.D. SCIENTIST who has broad, in-depth knowledge and experience in techniques of molecular biology, especially in DNA sequencing and gene mapping. The other position is for a COMPUTER SCIENTIST who has knowledge and experience for the system and network administration of Unix, Macintosh, and DOS machines and programming. Experience in bioinformatics and genomics is desirable. Annual salary for both positions will be \$40,000 to \$50,000 plus a generous package of fringe benefits such as full coverage of health insurance. Send curriculum vitae and names of three references to: Ms. Barbara Knoth, Center for Molecular Medicine and Genetics, Wayne State University School of Medicine, 5047 Gullen Mall, Detroit, MI 48202, USA. Wayne State University is an Equal Opportunity/Affirmative Action Employer. All WSU Buildings and Structures are Smoke-Free.

UNIVERSITY OF FLORIDA

POSTDOCTORAL ASSOCIATE position available now for application of biophysical techniques to the study of actin polymerization in motile cells. Projects are available for studying pharmacological agents that affect the actin cytoskeleton or for studying the regulation of actin polymerization by actin-binding proteins. The laboratory is equipped with facilities for time-dependent fluorescence spectroscopy and analytical ultracentrifugation. Reply with curriculum vitae and the names of three references to: Dr. Michael Bubb, Department of Medicine, Box 100277 JHMHC, Gainesville, FL 32610. Email: bubb@icbr.ifas.ufl.edu by April 15, 1996. Equal Opportunity/Affinnative Action Employer.

POSTDOCTORAL POSITIONS to study: 1. DNA repair by prokaryotic and eukaryotic DNA photolyases. A strong background in enzymology and molecular biology is highly desirable. 2. Structure/function relationships in sarcosine oxidase, a heterotetrameric enzyme containing several redox centers, binding sites for tetrahydrofolate and other substrates. A strong background in molecular biology is essential. Send curriculum vitae, including names and telephone numbers of three references, to: Dr. Marilyn Jorns, Department of Biochemistry, MS 411, Medical College of Pennsylvania and Hahnemann University, Broad and Vine, Philadelphia, PA 19102. Email: jornsm@hal.hahnemann.edu.

The Department of Surgical Oncology and the Breast Cancer Basic Research Program at The University of Texas M. D. Anderson Cancer Center, Houston, Texas, are seeking an **INVESTIGATOR** to conduct research in breast cancer. We are interested in an individual with a Ph.D. or M.D./Ph.D. background for a joint appointment in the tenure track at the assistant professor level. This investigator will be expected to develop and maintain an independent research program in the area relating to breast cancer research.

The salary and benefits will be commensurate with training and experience. The position includes eligibility for appointment at The University of Texas at Houston Health Science Center Graduate School of the Biological Sciences with access to graduate student trainees. If interested, please send a curriculum vitae, summary of research background and future directions, and three letters of recommendation to:

Raphael E. Pollock, M.D., Ph.D. Associate Professor and Chairman Department of Surgical Oncology and Mien-Chie Hung, Ph.D. Director Breast Cancer Basic Research Program The University of Texas M.D. Anderson Cancer Center 1515 Holcombe Boulevard (Box 106) Houston, TX 77030

Women and minority applicants are particularly encouraged to apply.

POSITIONS OPEN

POSTDOCTORAL POSITION Johns Hopkins Oncology Center

A POSTDOCTORAL POSITION is available immediately to study signal transduction of a novel tyrosine kinase in early hematopoiesis (*Oncogene*, 12:903, 1996). A Ph.D. with a strong background in molecular biology or protein chemistry is required. U.S. *ditzens preferred for training grant eligibility*. Starting salary \$28,000. Send or fax curriculum vitae, research background, and three reference letters to: Curt I. Civin, M.D., Johns Hopkins Oncology Center, 600 North Wolfe Street, Baltimore, MD 21237-5001. FAX: 410-955-8897. Johns Hopkins School of Medicine is an Equal Employment Opportunity/ Affimative Action Employer.

BLOOD COAGULATION ENZYMOLOGY VANDERBILT UNIVERSITY

A POSTDOCTORAL RESEARCH POSITION is available to investigate the mechanisms and regulation of blood coagulation reactions with protein chemistry, enzyme kinetics, and fluorescence spectroscopy approaches. Interestd individuals who are recent Ph.D. degree graduates in biochemistry, biophysics, chemistry, or biology should send a copy of their curriculum vitae and arrange for two letters of recommendation to be sent to: Dr. Paul Bock, Vanderbilt University School of Medicine, Department of Pathology, C-3321 Medical Center North, Nashville, TN 37232-2561. Vanderbilt University is an Equal Opportunity/Affirmative Action Employer.

Position(s) available immediately for a **SENIOR STAFF SCIENTIST** for the design and characterization of recombinant immunoglobulin (Ig) molecules for cancer immunotherapy, in the Laboratory of Tumor Immunology and Biology (**Dr. Jeffrey Schlom, Chief**), National Cancer Institute, National Institutes of Health, PHS, Bethesda, Maryland. Studies involve construction of CDR-variants, single chain Ig molecules and Ig-fusion proteins, and baculovirus expression of Ig and Ig-fusion proteins, and baculovirus expression of Ig and Ig-fusion in molecular biology is required. Salary range is S62,473 to S95,531. If interested, please call **Nancy Bagley, Telephone: 301-496-1771** to request the mandatory application/curriculum vitae requirements for position No. CA-96-0016. *NIH is an Equal Opportunity Employer*.

TREE BREEDER. The Morton Arboretum seeks a plant breeder to develop an outstanding program of plant improvement, selection, propagation, and hybridization, emphasizing woody plants hardy in the upper Midwest. Must have a Ph.D. in dendrology, horticulture, plant genetics, or related field and a demonstrated interest in breeding of woody plants. Postdoctoral experience and good knowledge of statistics desirable. The Morton Arboretum, a 690 hectare woody plant museum, is located in suburban Chicago. Send letter of intent, curriculum vitae, and three letters of reference to: Dr. Christopher P. Dunn, Director of Research, The Morton Arboretum, Lisle, IL 60532. Apply by April 30, 1996. An Equal Opportunity Employer.

The Department of Pathology at a private university in North East Ohio is seeking a **SENIOR RESEARCH ASSOCIATE** to perform cell and molecular biological studies of the glycoinositol phospholipid (GPI) anchor-ing pathway in mammalian cells and of the molecular defect underlying the hemolytic disorder paroxysmal nocturnal hemoglobinuria (PNH). Specifically, the candidate will 1) clone and characterize cDNAs encoding the enzymes involved in the intracellular assembly of GPI-anchor structures, 2) study GPI defective and unaffected bone marrow progenitors of patients with PNH, and 3) participate in the preparation of a mouse model of the human disease. A Ph.D. in biochemistry or molecular biology, three years of postdoctoral experience in the above duties or three years of postdoctoral experience in molecular cloning, gene expression, flow cytometry, immunological methods, and protein or lipid chemistry, and prior work with GPI-anchored proteins, PNH cells or transgenic/knock out mice is required. Working hours are 8:30 a.m. to 5:00 p.m., 37½ hours per week, Monday to Friday. Salary: \$28,800 per year. Send two cover letters and two curricula vitae with list of publications and names, addresses, and telephone numbers of three recent academic/employer references (no calls) to: T. Do, Reference No 1588, Ohio Bureau of Employment Services, P.O. Box 1618, Columbus, OH 43216. Equal Opportunity/Affirmative Action Employer

Laboratory Development Biochemist

Sequana Therapeutics, Inc., a leading genomics company dedicated to the discovery of genes associated with human diseases, is seeking a Laboratory Development Biochemist to contribute to our Engineering group at our California headquarters.

You will be involved in the development, testing and integration of PCR protocols for automated instrumentation and the development of fluorescence-based assays. A BS or MS degree in Biochemistry or Molecular Genetics, 3 years' lab experience with proficiency in DNA extraction, electrophoresis, PCR and computeraided data analysis are required. Ideally, you will have experience with automated sequencers, robotic systems, fluorescence detection, and protocols for high throughput production on automated systems.

As a publicly held corporation located in La Jolla, Sequana is proud to offer a stimulating scientific setting along with highly competitive salary and benefits,

including stock options. For consideration, please mail or fax your resume to: Sequana Therapeutics, Inc., Attn: HR/Job SC-LDB, 11099 North Torrey Pines Road, Suite 160, La Jolla, CA 92037, Fax (619) 452-4378. Equal Opportunity Employer.



POSTDOCTORAL SCIENTIST JOB# %18

Ciba's Biotechnology Research Unit (RTP) is seeking a Ph.D. for a Postdoctoral position in the Crop Protection Disease Control Group. The successful candidate will possess a background in microbial genetics and molecular biology. Experience in biochemistry, genetics, microbiology, or molecular biology is required. The selected candidate will be part of a collaborative effort researching aspects of bacterial signal transduction and gene expression in plant-associated bacteria.

We offer competitive salaries and a generous benefits package which includes relocation assistance.

Resumes should be forwarded with a cover letter (which should include Job# 9618) and three (3) references to: Ciba Biotechnology Research Unit, Human Resources Department, P.O. Box 12257, Research Triangle Park, NC 27709-2257. **Resume deadline is: March 22, 1996.**



We are an Equal Opportunity Employer, m/f/d/v.

There's more to Allergan than meets the eye.

If you think Allergan's expertise is limited to quality eye care products, it's time you gave us another look. We're a highly respected global leader in the development, manufacture and marketing of pharmaceutical drugs for a variety of neuromuscular disorders as well as eye and skin care. Currently, we're making dramatic advances through our generous commitment of funds for R&D.

Join us as we continue to explore innovative approaches to glaucoma, cataracts, neuromuscular disorders, contact lens care and receptor-selective retinoids. Our determination



to meet the current and future health care needs of the world has created the following opportunities:

SUPERVISING SCIENTIST

Will oversee functioning of the Laboratory Information Management System (LIMS) for adequate control and documentation of pharmaceutical R&D stability data used in writing stability reports. Requires a Ph.D., 2 years relevant experience with proven writing ability. Must have in-depth working knowledge of HPLC and solid analytical skills. Prefer exposure to cGMP/GLP, FT-NMR, FT-IR and MASS SPEC with some supervisory background.

CRAs - ALL LEVELS

Will plan/coordinate/manage clinical trials of investigational drugs. Requires a BS/MS, 3 years directly related clinical research experience and a solid background in clinical research. Must have exposure to writing study protocols and on-site monitoring as well as thorough knowledge of clinical research methodology and related FDA investigational drug regulations.

We reward our employees with a competitive salary, an excellent benefits package and a great working environment. To learn more about these and other opportunities with Allergan, please send your resume to: Allergan, Human Resources Dept., Attn: Joyce Smith, 2525 Dupont Dr., T2-1B, Irvine, CA 92715. Equal Opportunity



POSTDOCTORAL POSITIONS

TWO POSTDOCTORAL POSITIONS are available in the newly established Biomolecular Structure Group within the Macromolecular Structure Laboratory. Systems under investigation include detoxification enzymes and DNA-binding proteins. Knowledge, training, and experience in X-ray crystallography essential. Knowledge and experience with molecular biology and/or protein chemistry desirable. The ABL-Basic Research Program has state-of-the-art

The ABL-Basic Research Program has state-of-the-art facilities and personnel in molecular biology, biophysics, biochemistry, and computational chemistry. The X-ray crystallography equipment includes four rotation anode X-ray generators, three image plate systems, two Siemens HI-STAR area detectors, and three sets of cryocrystallography apparatus. An extensive network of mainframe computers and work stations is accessible for various types of computational and graphical tasks. Excellent benefits and work environment; competitive salary. Please send curriculum vitae, a brief description of research experience, and three letters of references to: Dr. Xinhua Ji, c/o Personnel Department, ABL-Basic Research Program, P.O. Box B, Building 428, Frederick, MD 21702-1201. Equal Opportunity Employer/Minorities/Females/Disabled/Userans.

POSTDOCTORAL POSITIONS Washington University School of Medicine NIH Training Program in Diabetes Research

Applications are being accepted for **POSTDOC-TORAL POSITIONS** in a multi-investigator program to study diabetes and related endocrine diseases. Trainces will be offered opportunities in the following areas: cellular mechanisms in insulin secretion, insulin action, islet transplantation, autoimmunity, the role of nitric oxide and cytokines, vascular and neurological complications, glucose transporters, biology of aldose reductase, and regulation of gene expression. U.S. diizenship or permanent resident status is required. Salary on NIH scale. Curriculum vitae and three letters of recommendations are required. For information, please contact: Dr. Michael L. McDaniel, Box 8118, Washington University School of Medicine, Department of Pathology, St. Louis, MO 63110. Telephone: 314-362-7435; FAX: 314-362-fundice. *Endit*. *En*

POSTDOCTORAL POSITION Growth Factor Signal Transduction

POSTDOCTORAL RESEARCH FELLOW position available immediately to study the molecular mechanisms of PDGF-stimulated transcription of immediateearly genes [see *MCB*, **12**:5288, 1992 and *MCB*, **15**:315, 1995]. Projects involve gene cloning, DNA transfections, and RNA purification/quantitation. Candidates with a Ph.D. and/or M.D. should have a strong background in molecular and cellular biology. Send curriculum vitae, summary of research experience, and names and telephone numbers of three references to: Rolf Freter, M.D., Ph.D., Columbia University, Division of Medical Oncology, MHB 6-435, 177 Fort Washington Avenue, New York, NY 10032. Email: freter@cucfa.cec. columbia.edu; FAX: 212-305-3035. Columbia University is an Affimative Action/Equal Opportunity Employer.

POSTDOCTORAL POSITION

Multidisciplinary research program addressing role of signal transduction to actin and actin-related proteins in cell and organ function. Projects available employing cell biological, biochemical, or molecular genetic (including transgenic) technology. Inquire: Brigham and Women's Hospital, Experimental Medicine Division, (affiliate of Harvard Medical School), 221 Longwood Avenue, Boston, MA 02115. Women and minority candidates are encounged to apply. Brigham and Women's Hospital is an Equal Opportunity/Affirmative Action Employer.

POSTDOCTORAL POSITION available to candidates with experience in molecular biology or mouse developmental biology. Studies include the analysis of the actions of vitamin A and retinoic acid during embryonic development and in normal versus tumorigenic epithelial cells. Send curriculum vitae, names of three references, and a statement of research interests to: Dr. Lorraine J. Gudas, Department of Pharmacology, Cornell University Medical College, 1300 York Avenue, New York, NY 10021. An Equal Opportunity Employer/Affinative Action/Alinonities/Fenales/1 Carenas.

POSITIONS OPEN

MOLECULAR BIOLOGY of Vasculature or Extracellular Matrix

Applications are invited for a **POSTDOCTORAL/ INSTRUCTOR** position in The Steele Laboratory of Tumor Biology, to study molecular biology of tumor vasculature and interstitium. The position requires prior experience in molecular biology techniques with emphasis on *in situ* hybridization and cell transfection, immunohistology, and biology of endothelial cells and/or extracellular matrix. The current research projects in the laboratory involve engineering approaches to tumor microcirculation, drug and cell delivery, angiogenesis and vessel regression, and cell adhesion (see http://steele.mgh. harvard.edu). Interested applicants should send curriculum vitae and three letters of recommendation to: Dr. Rakesh K. Jain, Department of Radiation Oncology, Massachusetts General Hospital and Harvard Medical School, Boston, MA 02114.

POSTDOCTORAL FELLOWSHIPS Genetic Epidemiology and Molecular Genetics

POSTDOCTORAL FELLOWSHIPS in Genetic Epidemiology and Molecular Genetics are available in the Department of Psychiatry at Washington University, St. Louis, Missouri, M.D. or Ph.D. candidates may have degrees in Genetics, Molecular Biology, Bio-statistics, Mathematics, Psychology or Psychiatry. Participation in research groups conducting family and/or molecular studies of Bipolar Disorder, Unipolar Disorder, Schizophrenia, Attention Deficit Disorder, and Alzheimers' Disease accompany a strong didactic program. Methodological linkage and association projects are also in progress. This is an NIMH Institutional Postdoctoral Fellowship Grant so only United States chizeus and Pennaneut Residents may apply. Please send a letter of application including research interests, transcripts, a copy of your curriculum vitae and the names of three references to: Theodore Reich, M.D., Washington University School of Medicine, Department of Psychiatry, 4940 Children's Place, St. Louis, MO 63110. Washington University is an Equal Opportunity/Affinative Action Employer.

POSTDOCTORAL FELLOW Department of Obstetrics and Gynecology Louisiana State University Medical Center Shreveport, Louisiana

A position is presently available to study the causes and mechanisms of aneuploidy in mammalian germ cells and zygotes. Candidates should have a background and interest in the chemistry of oocyte meiotic maturation and cytogenetics. Please submit a curriculum vitae and statement of research interest to: Dr. John B. Mailhes, Department of Obstetrics and Gynecology, L.S.U. Medical Center, P.O. Box 33932, Shreveport, LA 71130. Telephone: 318-675-5382. Qualifications: Ph.D. in related field. Experience in

Qualifications: Ph.D. in related field. Experience in molecular biology cytogenetics and the biochemistry of oocyte maturation is desirable.

Louisiana State University Medical Center-Shreveport is an Equal Opportunity/Affirmative Action Employer.

POSTDOCTORAL POSITION MOLECULAR/STRUCTURAL BIOLOGY

A POSTDOCTORAL POSITION is immediately available in the Lipoprotein Study Unit at the University of Chicago to study the molecular basis for the thrombotic potential of lipoprotein(a) using naturally occurring and recombinant apo(a) mutants. The successful candidate will have a Ph.D. degree and a strong background in biochemistry and molecular biology. Send curriculum vitae and the names of three references to: Ms. Jody Anderson, Department of Medicine, University of Chicago, 5841 South Maryland Avenue, MC 5041, Chicago.edu. Affinntire Action/Equal Opportunity Employer.

Major national patent law firm located in New York City seeks highly qualified **PH.D. SCIENTISTS** in biomedical and organic chemistry fields interested in second career opportunities in intellectual property law. Demonstrated technical writing skills essential. Competitive salaries and benefits plus opportunities for challenging assignments. Send résumé to:

Box 64, SCIENCE 1333 H Street, NW Washington, DC 20005

Equal Employment Opportunity. Minorities/Female/Disabled/ Veterans.

POSITIONS OPEN

THREE RESEARCH ASSOCIATES HIV Virology and Molecular Biology

We seek talented individuals to establish an HIV research laboratory at the University of Montana, Missoula. Two **VIROLOGISTS** will have experience in cell culture and in the handling of biohazardous agents in a research or clinical laboratory setting. A **MOLECULAR BIOL-OGIST** will be skilled in molecular cloning techniques as demonstrated by prior research experience. Salaries commensurate with experience.

Missoula is situated in the Rocky Mountains west of the Divide. For additional information, visit the University home page: http://www.umt.edu. Please respond to: Dr. Jack Nunberg, Professor and

Please respond to: Dr. Jack Nunberg, Professor and Director, Montana Biotechnology Center, University of Montana, Missoula, MT 59812. Email: nunberg@selway.umt.edu. Affirmative Action/Equal Opportunity Employer.

RESEARCH ASSOCIATE/ POSDOCTORAL FELLOW

Ph.D. in biochemistry, molecular biology to study questions regarding interactions between oxidation, antioxidant function, protein degradation, and aging in the eye lens and retina. *Must be eligible to work in and seek funding for extended employment in the U.S.* Send résumé and three references to: Dr. A. Taylor, USDA-Tufts Human Nutrition Research Center, 711 Washington Street, Boston, MA 02111. *Equal Opportunity Employer.*

POSTDOCTORAL RESEARCH ASSOCIATE

Ecology and Evolutionary Biology is seeking a **POST-DOCTORAL RESEARCH ASSOCIATE** to assist in a one-semester course in Human Morphology for medical students. Cadaver-based experience is requisite. The second semester will be available for full-time research. Submit a résumé including teaching experience, research interest, and the names of three individuals to be contacted for reference. Applications by 1 April 1996 to: Dr. G. E. Goslow, Jr., Box G-B210, Brown University, Providence, RI 02912. Brown University is an Affiinative Action/ Equal Opportunity Employer.

MOLECULAR VIROLOGIST/ EXPERIMENTAL HEMATOLOGIST

The University of Wisconsin (UW)-Madison Department of Medicine is searching for two SCIENTISTS to join its Bone Marrow Transplant Division. Applicants must have Ph.D.and active research program in the area of either stem cell biology or viral vector mediated gene transfer. Please send curriculum vitae, bibliography, and description of research interests to: Friedrich G. Schuening, M.D., Department of Medicine, UW-Madison, K6/562 CSC, 600 Highland Avenue, Madison is an Equal Employment Opportunity/Affinnative Action Employer.

RESEARCH PHARMACOLOGIST

Southern Research Institute is an independent contract research organization serving government, industry, academia, and individuals. A position is available for a **SCI-ENTIST** with a Ph.D. in pharmacology or related discipline to join a team of researchers conducting *in vivo* and *in vivo* studies in cancer chemoprevention, chemotherapy, drug evaluation, and experimental model development. This research program has a 35-year record of productive anti-cancer drug development through interactions with other scientists, private sponsors, and grant-funded research. The successful applicant will have a proven track record in chemoprevention research as exemplified by obtaining independent funding or by publication record. To apply, send curriculum vitae to: **Suzann Richey, Human Resources Department 104, Southern Research Institute, P.O. Box 55305, Birmingham, AL 35255-5305**. *We are an Equal Opportunity/Affinative Action Employer.*

POSTDOCTORAL POSITION available to study neocortical development and epileptogenesis in a rat model of cortical heterotopia. Ongoing research is evaluating cellular and molecular mechanisms of neuronal migration disorders and the electrophysiological substrates of epileptiform activity. Send or fax curriculum vitae and three references to: Dr. Kevin S. Lee, Box 420 HSC, Department of Neurosurgery, University of Virginia, Charlottesville, VA 22908. Telephone: 804-982-3167; FAX: 804-982-1623.

ANNOUNCEMENTS

REQUEST FOR RESTORATION PROPOSALS Exxon Valdez Oil Spill Trustee Council

The Trustee Council is asking the public, private organizations, and government agencies to submit restoration proposals. The publication explaining the invitation is available from the Trustee Council office: Invitation to Submit Restoration Proposals for Federal Fiscal Year 1997. Proposals are due April 15, 1996. For more information, contact: The Trustee Council, 645 G Street, Suite 401, Anchorage, AK 99501. Telephone: 907-278-8012, toll-free at 1-800-478-7745.

SUMMER FELLOWSHIPS

Ocean Remote Sensing—June 3 to August 21, 1996. Offered by University of Maryland, Sea Grant Program and NASA for advanced undergraduate and beginning graduate students; includes stipend, housing, travel. Deadline: 15 April 1996. For application: Maryland Sea Grant, 0112 Skinner Hall, University of Maryland, College Park, MD 20742. Telephone: 301-405-6371. Equal Employment Opportunity/Affirmative Action Employer.

COURSES AND TRAINING

RECENT ADVANCES IN CONSERVATION GENETICS The Smithsonian Institution NOAHS Center Summer 1996, August 3 to 16

At NOAHS-Conservation Research Center, Front Royal, Virginia, outside Washington DC, a two-week intensive hands-on course is offered in methods, applications, and interpretation of molecular genetic analysis of free-ranging endangered species. This course will be taught by a team of scientists whose personal experience offers a variety of areas of expertise in this important new field. Learn from recognized experts how to develop and interpret a wide range of genetic data using real examples, laboratory demonstrations, and a variety of computer programs. Tuition including housing and meals: \$1,375.00. Course Director: Stephen J. O'Brien, Research Director, NOAHS Center. For an application or inquiries please FAX or Email: Dr. Judy Manning, Coordinator, NOAHS-Conservation Research Center, National Zoological Park, Smithsonian Institution, Washington, DC 20008. FAX: 202-673-4733; Telephone: 202-673-4689; Email: NZPNC004@SIVM. SI.EDU. Application deadline: April 15, 1996.

WORKSHOP ON TRANSGENIC PLANTS April 20 through 22, 1996

Tuskegee University, with support from NSF and USDA, is hosting a meeting in plant biotechnology. Travel funding available for U.S. minority students. Contact: Dr. C. S. Prakash, Milbank Hall, Tuskegee University, Tuskegee, AL 36088. Email: Prakash@Acd.Tusk. Edu; Telephone: 334-727-8023; FAX: 334-727-8552.

CAREER CHANGE OPPORTUNITY

This unique program offers the candidate with an earned doctorate in the sciences the opportunity to obtain the Doctor of Optometry (O.D.) degree in two calendar years. Employment opportunities exist in private practice, industry, education, and research. Contact: Dr. Dc. Chauncey, Program Director, Accelerated Program, The New England College of Optometry, Room S, 424 Beacon Street, Boston, MA 02115.

SERVICES

IMMIGRATION-FOREIGN RESEARCHERS

You may be able to obtain a U.S. green card quickly and without a job offer, based on your achievements. The Law Offices of David M. Kramer 12121 Wilshire Boulevard, Suite 1201 Los Angeles, CA 90025 Telephone: 310-820-5320

For information, FAX or Email request with name and address: FAX: 310-820-6522; Email: 104055.466@compuserve.com. Ask about our money back guarantee.

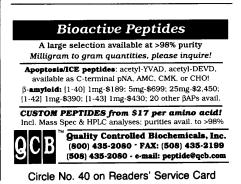
MARKETPLACE CHEMICON International, Inc. Your Neuroscience Antibody Solution ANTIBODIES TO . . . mGluR1 a & mGluR2/3 • GABA Transporters NMDAR2A & NMDAR2B 800-437-7500 · FAX: 909-676-9209 Circle No. 61 on Beaders' Service Card Now...a single source for all of your microfiltration needs. Ask for your FREE copy of the new Poretics Microfiltration Products Selection Guide and Catalog. S OSMONICS Phone (800) 922-Fax (510) 373-1725 Circle No. 13 on Readers' Service Card Antibody **Custom Peptides** Production \$17.00 / Residue 2 Rabbits w/Conjugation & Delivery 6-12 Week Delivery **\$950** >75% Purity, 5-25 mg 5 Day Delivery
 Free HPLC & Mass Spec. No Set-Up Charge US Voice: 800-445-1544 Global Fax: (619) 450-1157 Circle No. 49 on Readers' Service Card 1-800-LabLogix Fax: 415-595-4698 Tools Γ£Γ.) Monoclonal Antibody Purification Kit \$99 Universal Hybridization Solution \$30 Easy PAGE Silver Staining \$99 Non-Isotopic Blotting Kits Services **Monoclonal Antibody & Ascites Production** Circle No. 12 on Readers' Service Card Gene Knockout **Use Quality EF** Only \$100 for 1 complete knockout experiment

Circle No. 41 on Readers' Service Card

F: 314-645-017

SCIENTECH CORP.

T: 1-800-645-0089



MARKETPLACE CUSTOM Synthesized **PNA** OLIGOMERS Hybridization at low salt to DNA & RNA Higher affinity and specificity Stable towards nucleases and proteases **CUSTOM PNA SYNTHESIS SERVICE** PerSeptive Biosystems can synthesize the PNA sequence you need: Simple strings of A, C, G and T Labeled oligomers: Biotin Rhodamine Cyanine DIG™ Alkaline Phosphatase Fluoresceir U.S. and Canada: 1-800-899-5858 • Japan: +81 3 3471 81 91 France: + 33 134 523 030 • U.K.: +44 1 992 507100 Germany and other locations: +49 6122 98300

Circle No. 31 on Readers' Service Card

PerSeptive Biosystems

DIG is a trademark of Boehringer Mannheim



Circle No. 42 on Readers' Service Card



Derivatives for Pharmaceutical and **Biotechnical Applications** Activated for Protein Modification Monofunctional Methoxy, Homobifunctional and Heterobifunctional Derivatives **Exclusive** Products: Vinylsulfone, Aldehyde, SPA, ω-Amino-α-Carboxyl, ω-NHS-α-Vinylsulfone and PEG2-NHS Chromatographically Pure Derivatives, GMP, Bulk and Custom Synthesis Available Shearwater Polymers, Inc. (800) 457-1806 (US) 2307 Spring Branch Rd. (205) 533-4201 (Int) Huntsville, AL 35801 (205) 533-4805 (fax) swpolymers@eworld.com

Circle No. 76 on Readers' Service Card

Marketplace ads continue on page 1198

Continued from page 1197



Circle No. 45 on Readers' Service Card



Circle No. 15 on Readers' Service Card

R

CM 1174



WHILE OTHER DNA SUPPLIERS PROMISE YOU THE WORLD, OPERON ACTUALLY DELIVERS IT.

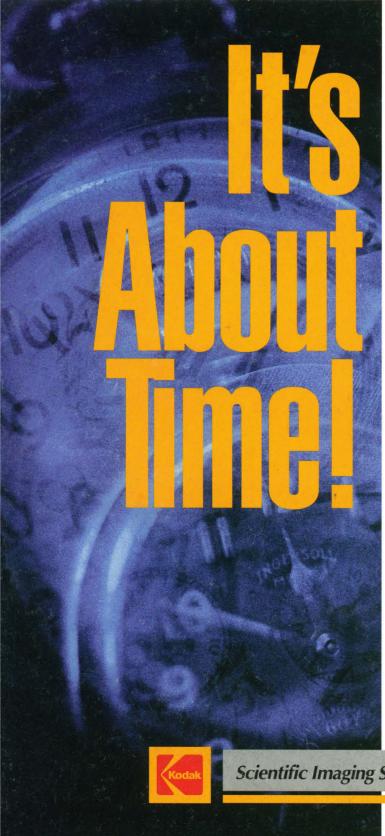
Operon is the world's leading supplier of DNA. And we maintain that leadership by consistently delivering exactly the product you need. On time. With unsurpassed purity. Backed by an unconditional guarantee. And at an extremely competitive price. For a brochure or to place an order, call us at **1-800-688-2248**.



Phone: (510) 865-8644 Fax: (510) 865-5255 NIHBPA 263.00033233

Circle No. 26 on Readers' Service Card

Maximum Performance for Biological Imaging



Kodak BioMax MS system

Detect 32P samples 4 to 8 times faster with Kodak BioMax MS film and BioMax MS intensifying screen.

Before

Now

Kodak BioMax MS

film/Kodak BioMax MS

screen

The BioMax MS system is the fastest autoradiography film/ screen combination available. Using state-of-the-art Kodak technology, the film and intensifying screen work together to advance the boundaries of maximum sensitivity. With the **BioMax MS system** you can:

Reduce 4-day exposures to 1 day Reduce overnight exposures to 4 hours Detect 1-dpm bands in 1 day

Save 25%

72 hours 16 hours Purchase a special combination pack of BioMax MS film and a BioMax MS intensifying screen (8 x 10 in., CAT No. 116 5893; 35 x 43 cm, CAT No. 118 8077). Contact your distributor or call Kodak Scientific Imaging Systems at (800) 225-5352 or (716) 722-5813.

Kodak X-Omat AR film/DuPont

Lightning Plus

screen

BioMax

Depend on Kodak films for life science research, from the maximum resolution BioMax MR film to the general purpose Kodak X-Omat AR film and the economical Kodak X-Omat LS film.

Scientific Imaging Systems

© Eastman Kodak Company, 1995 KODAK, BIOMAX, and X-OMAT are trademarks of Eastman Kodak Company

In the U.S.: Baxter Scientific Products (800) 234-5227/Sigma Chemical Company (800) 521-8956/VWR Scientific (800) 932-5000. Outside the U.S.: Australia/New Zealand Integrated Sciences Ltd. (02) 417 7866 Belgium Sigma-Aldrich N.V./S.A. 0800 14747/INTEGRA Biosciences AG (01) 830 22 77 Canada InterSciences Inc. (800) 661-6431 or (905) 940-1831 Denmark Struers KEBO Lab A/S (43) 86 87 88 Finland KEBO Lab OY (90) 804 4900 France Simga-Aldrich Chimie S.a.r.I. 05 21 14 08/INTEGRA Biosciences S.A. (1) 39 59 84 42/Kodak-Pathé (film only) 64 61 21 77 Germany Sigma-Aldrich Chemie GmbH 0130 5155/INTEGRA Biosciences GmbH (06404) 8090 India Biotech India (542) 311473 Israel TAMAR Ltd. (02) 52 02 79 Italy Sigma-Aldrich S.r.I. 1678-27018/M-Medical srl (055) 5001871 Japan Cosmo Bio (03) 5632-9610/ Kodak Japan (03) 5488-2139/Sigma-Aldrich Japan K.K. (03) 5640-8850 Korea LRS Laboratories Inc. (02) 924 86 97 Netherlands Sigma-Aldrich N.V./S.A. 06 0224748/INTE-GRA Biosciences AG (01) 830 22 77 Norway KEBO Lab AS (022) 90 000 Singapore Research Instruments, Pte. (65) 775-9228 Spain Quimigranel s.a. (91) 556 16 14 Sweden KEBO Lab AB (08) 621 34 00 Switzerland Sigma Chemie 155 00 20/INTEGRA Biosciences AG (01) 830 22 77 Taiwan Long Chain International Corp. (02) 552-2605 United Kingdom Scientific Imaging Systems. Ltd. 01223 24 28 13/Sigma-Aldrich AG (01) 830 22 77 Taiwan Long Chain International Corp. (02) 552-2605 United Kingdom Scientific Imaging Systems, Ltd. 01223 24 28 13/Sigma-Aldrich Co. Ltd. 0800 373731