Deadline: Ads are due by Thursday, 10 a.m., 2 weeks prior to the issue date. Science is published each Friday, except the last Friday of the year. Call for holiday deadlines. Ads must be submitted in writing.

How to Submit a Classified Ad: Prepare double-spaced typewritten copy. Do not include any abbreviations. Science will edit and typeset ads according to Science guidelines. Include billing information, and desired publication date. Available categories: Positions Open, Meetings, Announcements, Courses and Training, Search Firms. Science cannot provide proofs of typeset line ads.

Mail, FAX or Email materials to: Science Classified Advertising 1333 H Street, N.W., Room 814 Washington, DC 20005 Telephone: 202-326-6555 FAX: 202-682-0816 Email: scienceclassifieds@aaas.org

Rates: Ads are $43 per line; $430 minimum. One line equals 52 characters and spaces; centered headings equal 32 characters and spaces. A 3% cash discount is granted to all prepaid ads.

Estimates: Science will provide a cost estimate for line ads. This is an approximate cost only. Allow for variation between estimated lines and actual typeset lines and resulting final cost. Purchase orders must allow for some degree of flexibility and/or adjustment.

Ads from Outside the U.S.: A discount of $30 will be offered to advertisers making payment in U.S. dollars by checks drawn on U.S. banks. Contact Gordon Clark at +44 223 302 067 (telephone) or +44 223 302 068 (FAX).

Credit Cards: Science accepts American Express, MasterCard and VISA. Discount does not apply to credit cards.

Cancellations: Deadline for cancellation is 10 a.m., Tuesday, 10 days prior to issue date.

Directory of Full Page Recruitment Advertisers

Listed below are full page recruitment advertisements that appear in the special advertising supplement, Careers in Biotechnology and Pharmaceuticals: Beyond Discovery, beginning on page 1679.

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The AAAS encourages employers to actively recruit and employ underrepresented minority groups. Science reserves the right, at its discretion, to edit or decline to publish advertisements submitted to it.
Careers in Biotechnology and Pharmaceuticals: Beyond Discovery

Real science? Of course we’re doing real science,” says a biologist in process development at a major biotech. “Science is problem solving,” says a biochemist in manufacturing at a large pharmaceutical firm. “Whenever you’re facing a new problem and asking, ‘What do I need to know to solve this?’ you’ve begun to do science.”

When scientists think of a career in industry, they think first of a job in research. Discovery science, after all, gets the spotlights and headlines. This, we are told, is where real science really happens.

But that’s not where it ends. Real science, no matter how you define it, happens at every step in drug development, from clinical development, where the new drug candidate is tested on human beings, to manufacturing, where it is made in bulk. At each step, scientists face daily challenges that require all their tools and skills. “We don’t distinguish here between research and development,” says Christopher Cimarusti, vice president of process R&D at Bristol-Myers Squibb Company. “We talk about ‘discovery and development.’ Both are research.”

John Timpane, PhD, writes frequently about the biotechnology and pharmaceutical industries.
The Science Stream

An overview of the development stream appears below. When reading it, please keep in mind that different companies have different names for their departments and may slice the cake differently (some companies group preclinical and clinical together, or formulations and process development, or manufacturing and plant operations).

Let us start with a brand-new chemical entity called A1. Discovery scientists have alerted the rest of the company that A1 appears to have promise. Meetings are held, and a decision emerges: Develop A1. Send it on down the stream. What happens to it next?

**Preclinical Development**
Here, DVMs and other scientists are needed to perform animal tests.

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**Clinical Development**
MDs, PharmDs, nurses, biostatisticians, and managers are needed to organize, track, and quantify the results as A1 passes through the large multicenter human trials required by the FDA. One of the more numerous job openings is that of clinical research assistant, or CRA, who travels to the centers, ensures that the protocols for the drug trials are being followed correctly, and scribes data back and forth between center and company.

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**Process Development**
Here, chemists, chemical engineers, biophysicists, and molecular biologists work together, testing A1 to learn all about its characteristics, for they must design processes that can take manufacture of A1 from bench- to plant-level. They are in touch with research, who know most about A1. Their first customer is clinical development, because clinical needs large amounts of A1 for their multicenter human trials.

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And they are in touch with manufacturing, who will implement the process they develop.

**Formulations**
Would A1 work best as a tablet? a syrup? an injectable? Is there a workable time-release form? What excipients do we mix it with? These are the questions facing the chemists and pharmacists in formulations. They perform the crucial hands-on science that molds a drug candidate into a formulation appropriate for commercialization.

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**Regulatory Affairs**
Here, scientists work with government to ensure that management and development techniques meet governmental standards. Regulatory will be involved with A1 all along its ride. One of the most eclectic departments in the company, regulatory is staffed with scientists from many backgrounds.

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**Validation**
This is a division of QA/QC that often is broken out by itself. Here, engineers and other scientists ensure that the company's engineering, design, and manufacturing operations comply with FDA regulations.

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**Manufacturing**
Here, engineers, technicians, and other scientists ensure that A1 is made according to a reliable, steady standard.

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**Operations**
In this department, engineers, technicians, and managers oversee the actual physical functioning and maintenance of the manufacturing plant. Their duties may include purchasing and supply of raw materials, facilities operation and safety, security, and repair.

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Recruiters are looking for good scientists in the following fields:

- **Molecular biology**—to carry the hot science of the moment all the way down the production stream.
- **Pharmacology and medicinal chemistry**—two mainstays in the drug design process.
- **Biophysics**—essential in process development and manufacturing.
- **Chemical engineering**—a well-paying and sought-after field.
- **Fermentation technology**—for both pilot and commercial plants.
- **Information science**—a growing need for biostatisticians and computer programmers.
- **Crossover science**—chemists, biologists, and other scientists with credentials in law, business, industrial relations, or other fields.
BIOTECHNOLOGY
A Network of Teams at Bristol-Myers Squibb

The depth and diversity of Bristol-Myers Squibb’s biotechnology effort positions our Pharmaceutical Research Institute to take advantage of new developments and discoveries on a global basis. Combining our internal network with our external alliances and collaborations places us in a leadership role and at the cutting edge.

We are proud of our scientists who are revolutionizing pharmaceuticals and ultimately world health care.

Central Nervous System
Drug Discovery
Wallingford, CT

Cardiovascular Drug Discovery
Metabolic Diseases
Princeton, NJ

Oncology Drug Discovery
Molecular Genetics
Princeton, NJ

Natural Products Research
Drug Discovery
Wallingford, CT

Immunological Diseases
Immunodeficiency/Immunosuppression
Seattle, WA

Oncology Drug Discovery
Molecular Biology
Princeton, NJ

Bristol-Myers Squibb

Please write or forward your curriculum vitae to:
Human Resources MS300, Bristol-Myers Squibb Pharmaceutical Research Institute,
P.O. Box 4000, Princeton, NJ 08543-4000. Equal Opportunity Employer, M/F/D/V

Princeton, NJ
Canada

Wallingford, CT
Buffalo, NY

Seattle, WA
Syracuse, NY
THE FIRST TO OBSERVE WHAT’S HAPPENING:
New Processes and Developments at Pfizer, Bristol-Myers Squibb, and Genentech

Amy Murnane is a group leader of cell culture and fermentation R&D at Genentech, Inc. The role of her group is to develop cell culture processes that will allow large-scale manufacture of biologically produced products. At Genentech, biochemists, cell biologists, and chemical engineers all work in close concert. “We evaluate nutrient metabolism and recombinant protein secretion from mammalian cells,” Murnane says, “and then we develop a way to make enough to support market demands.”

Christopher Cimarusti, vice president of process research and development at Bristol-Myers Squibb, oversees three tightly knit yet diverse groups whose task is to determine the best process for making a new drug product and to transfer that process to manufacturing. Cimarusti enjoys the powerful overview this activity has given him. “We really are intimately involved with every other department in R&D,” he says. Tim Hagen, group director for pharmaceutical R&D at Pfizer Central Research, says, “The remarkable thing about this area is that we have a variety of clients and customers within our organization, including hourly and minute-by-minute contact with clinical and with regulatory. We also serve discovery, obviously; production, because ultimately we have to transfer our product units there for manufacture; and marketing as well, because they have a great deal of input as to design and construction, dosage strengths and profiles, even the color and shape of a tablet.”

At Pfizer, as at many companies, pharmaceutical R&D scientists are responsible for all the dosage form R&D for new chemical entities coming out of the discovery labs. But that’s far from all. They also study ways to extend product lines. As the company applies for FDA approval for new dosage forms, pharm R&D is testing each new form for efficacy and safety. When drugs are licensed from other companies, pharm R&D is there to characterize and test them for their commercial possibilities. And pharm R&D is also involved in exploring new drug delivery systems.

Hagen’s department at Pfizer is about 123 strong, with 25 doctorate-level scientists and about 20 lab technicians, with the balance being bachelor’s and master’s degree scientists. These include engineers, physical organic chemists, biologists, biochemists, polymer chemists, and pharmacists.

Time is of the essence in these departments. “Though everyone’s under time pressure in the modern company,” Cimarusti of Bristol-Myers Squibb says, “I think our departments are even more so. We have at least one process in transfer between process development and manufacturing at a time—and several—so we’re always moving.” Says Murnane of Genentech, “Basic research may have an undefined endpoint. In development, we have a time line that drives our challenges and our sciences. We have to find novel ways to meet those time lines.”

Murnane calls process development “intellectually exciting, very fast-paced, very team-oriented.” And it is ever science. Chris Sinko, senior research scientist in pharm R&D at Pfizer, says, “We’re doing real science all the time. We’re charged with bringing in new technologies to work more efficiently with less material. We have to stay current, go out and learn the new technologies.” Hagen says that “some of the work in Chris’s lab is very much on the cutting edge of research in material assessment.”

Murnane, Cimarusti, Hagen, and Sinko all agree that the elements for which discovery science is famous also exist in their departments. That includes the thrill of being the first to see into a previously hidden corner of nature. “Often we are working with a novel molecule that has never been used in this way before,” Murnane says. “We may be the first scientists ever to observe what’s happening.”
Listed below are some of the outstanding research training opportunities that are currently available at the National Institutes of Health.

**Breast Cancer and Aging**

Antonio Passaniti, PhD

Tumor progression and suppressor gene function in an aged rodent model of spontaneous breast cancer is being studied. Projects involve differential gene expression and mammary epithelial cell culture. Applicants must have a strong background in molecular and cellular biology and have less than five years of postdoctoral experience.

Laboratory of Biological Chemistry (OE-73), NIA, Gerontology Research Center, Room 1-223, 4940 Eastern Avenue, Baltimore, MD 21224.

**Erasure of T Cell Memory by Immunotoxins**

David M. Neville, Jr., MD

Erasure of T cell memory by anti-CD3 diphtheria toxin based immunotoxins is being studied in rhesus monkeys. Optimization of immunotoxin construction is being performed by inserting specific coupling sites on engineered single chain mAbs and engineered toxins. Applicants must have less than five years of postdoctoral experience.

Laboratory of Molecular Biology (OE-73), NIMH, Building 36, Room 1B08, 36 CONVENT DR MSC 4034, BETHESDA MD 20892-4034.

**HIV Molecular Biology**

Steven L. Zeichner, PhD

Cellular genes and gene products involved in HIV replication and the host response to infection are being studied. Projects involve the identification, cloning, and characterization of cellular genes demonstrating altered expression during HIV infection and the investigation of their effects on HIV pathogenesis. Applicants must have training in molecular biology and have less than five years of postdoctoral experience. Pediatric Branch (OE-73), NCI, Building 10, Room 13N240, 10 CENTER DR MSC 1928, BETHESDA MD 20892-1928.

**Human Retrovirology and Molecular Biology**

David Derse, PhD

Molecular mechanisms of retroviral pathobiology are being studied with the aims of defining interactions of viral regulatory proteins with cellular factors and their effects on signalling pathways which control mRNA synthesis and processing. Molecular biological methodologies combined with various recombinant expression systems will be used to analyze protein-protein and protein-nucleic acid interactions that modulate cellular and viral functions. Applicants must have less than five years postdoctoral experience. Laboratory of Leukocyte Biology (OE-73), NCI-FCRDC, Building 567, Room 219, Frederick MD 21702-1201.

**Molecular Carcinogenesis and Papillomaviruses**

Joseph A. DiPaolo, PhD

_In vitro_ and _in vivo_ models are in use to study multistage cervical carcinogenesis and human papillomaviruses. Areas of interest include molecular control of differentiation and cytokine gene expression, molecular cytogenetics, therapy using targeted ribozymes, and immunological intervention. Applicants must have less than five years postdoctoral experience. Laboratory of Biology (OE-73), NCI, Building 37, Room 2A19, 37 CONVENT DR MSC 4255, BETHESDA MD 20892-4255.

**Transcriptional Regulation in Lymphocytes**

Howard A. Young, PhD

Molecular analysis of the transcriptional regulation of lymphokine genes in T helper-1 and T1 helper-2 CD4+ T cells with special emphasis on interferon-γ is being studied. This work will focus on the effect of clinically relevant signalling molecules on the activation of gene transcription and DNA binding proteins which interact with specific regulatory elements in the IFN-γ gene and other relevant genes. Laboratory of Experimental Immunology (OE-73), NCI-FCRDC, Building 560, Room 3123, Frederick MD 21702-1201.

**Vaccines Targeting T Cell Subsets**

Basil Golding, MD

Ongoing research projects include the development of a vaccine for HIV-1 using a carrier, _B. abortus_, which bypasses the requirement for CD4+ cells and studies of human and mouse cytokine networks following stimulation by different immunogens. Applicants must be US citizens or permanent residents and have less than five years postdoctoral experience. Laboratory of Plasma Derivatives, (OE-73), FDA/CBER, Division of Hematology, (HFM 345), 1401 Rockville Pike, Rockville, MD 20842-1448.

**Additional Postdoctoral Fellowship Opportunities**

For an on-line listing of additional postdoctoral openings, you may access the NIH EDNET Bulletin Board POSTDOC conference via Internet (wylbur.cu.nih.gov) or modem (1,301-402-2221 or 1,800-358-2221) with parameters set at "7,Even,1,". When connected to NIH, type in "vt100" for terminal emulation, "F5E" for initials, and "AJL" for account number.

The Postdoctoral Research Fellowship Opportunities catalog, which describes intramural laboratories at the NIH, is also available by request. An electronic version of the catalog may be accessed via the Internet using either the Gopher Information System (gopher.nih.gov) or the World Wide Web (http://www.nih.gov/). When connected, select Research Opportunities at the NIH Office of Education. If you would like to request a catalog or have further questions, please contact the NIH Office of Education, Building 10, Room 1C129, 10 CENTER DR MSC 1158, BETHESDA MD 20892-1158, 301-402-1603, Fax 301-402-0483.

**To Apply**

If you hold a doctoral degree (e.g., PhD, MD/PhD, 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.
Amgen's philosophy of independent research within a collaborative, consensus-driven environment has been instrumental in making us the leading independent global biotechnology company. Each individual's background and experience allows for unique input — input that may point the way to a new breakthrough.
POST DOCTORAL FELLOW
STEM CELL BIOLOGY

Candidates must have a Ph.D. in Hematology, Developmental Biology, or a related field. Experience in cell biology or hematopoiesis (colony assays, maintenance of primary cells and cell lines), FACS analysis, and cell sorting is required. (Job Code: OXP-SC-2200)

CLINICAL MANAGERS

These positions will plan and manage clinical programs encompassing broad drug-specific or disease-specific disciplines. Responsibilities also include coordinating interdepartmental activities such as protocol design and proposal, negotiating grants, tracking program budgets, and screening and selecting investigators. These positions require a MS in a Life Science and typically 3 years' management experience. Candidates must have knowledge of FDA regulatory requirements, a strong scientific background, and excellent communication skills.

We currently have openings in the following areas:

- Infectious Disease: (Job Code: OXP-SC-1866)
- Interferon: (Job Code: OXP-SC-1536)
- Oncology: (Job Code: OXP-SC-1867)

CLINICAL RESEARCH ASSOCIATES

These positions require a BS in a Life Science or an RN license, and typically 2 years of clinical research monitoring experience within a pharmaceutical, biotech, or CRO environment. Excellent interpersonal skills and the ability to travel are also required. Knowledge of FDA regulations is preferred.

We currently have openings in the following areas:

- AIDS: (Job Code: OXP-SC-2173)
- Interferon: (Job Code: OXP-SC-0001)
- Oncology: (Job Code: OXP-SC-0002)
- CNS: (Job Code: OXP-SC-0003)
- Infectious Disease: (Job Code: OXP-SC-0004)

MANAGER,
BIOSTATISTICS

Candidates must have a MS (Ph.D. is preferred) in Biostatistics, Biomentry, Applied Statistics, Epidemiology, Statistics, or Applied Mathematics with an emphasis on statistics. This position typically requires 8 years' experience in applied biostatistics in a medical research setting, including 5-6 years in a pharmaceutical or biotechnology environment with regulated products. Excellent background in pre-clinical design and analysis (pharmacokinetic, stability analysis, process development, manufacturing, and research) is also required. (Job Code: OXP-SC-1077)

BIOSTATISTICIAN

This position requires a MS in Biostatistics, Biomentry, Applied Statistics, Epidemiology, Statistics, or Applied Mathematics with an emphasis on statistics. Candidates must have at least 3 years' applied biostatistics experience in a medical research setting, including the design and analysis of clinical trials. Experience with SAS programming and BMDP is required. (Job Code: OXP-SC-1938)

RESEARCH SCIENTISTS

The following positions require a Ph.D. in Biological Sciences or related field and 2 years of post-doctoral experience.

- Inflammation: Experience in drug discovery/rheumatoid arthritis is required. (Job Code: OXP-SC-1401)
- Colon Tumor Biology/Intestinal Epithelial Cell Biology: Experience in intestinal epithelial cell biology and colon tumor biology is required. (Job Code: OXP-SC-1914)
- Mammalian Cell Biology: Assay development experience in receptor/ligand and tumor biology is required. (Job Code: OXP-SC-2261)
- Neuroscience: Requires experience in molecular biology (expression cloning), pharmacology, or related field. (Job Code: OXP-SC-2096-S)
- Medicinal Chemistry: Experience in drug discovery is required. (Job Code: OXP-SC-2054)
- Pathology: Experience with drug development, preclinical biology, and in vivo models is required. (Job Code: OXP-SC-2175-S)
- Experimental Hematology: Experience with tissue culture and ES cells is required. (Job Code: OXP-SC-1778-S)
- Immunology: Receptor/ligand biology experience is required. (Job Code: OXP-SC-1974)
- Developmental Biology: Experience in molecular and cell biology is required. (Job Code: OXP-SC-2240)

RESEARCH ASSOCIATES

The following positions require a BS/BA in Biological Sciences or related field.

- Neuroscience: Requires expression cloning or in vivo experience. (Job Code: OXP-SC-1476-S)
- Experimental Hematology: Experience with tissue culture and ES cells is required. (Job Code: OXP-SC-1778-S)

MANUFACTURING ASSOCIATES

These positions require a BS in a Life Science or equivalent. (Job Code: OXP-SC-2298-S)

Other positions require an additional 2 years of related manufacturing experience. (Job Code: OXP-SC-2243-S)

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. Please mail your resume/cv to: Amgen Inc., Staffing, Job Code (refer to the job code listed next to your area of interest), Amgen Center, Thousand Oaks, CA 91320-1789. Principals only, please. EEO/Affirmative Action Employer M/F/D/V.

For further information on these and other opportunities available at Amgen, please call 1-800-446-4007.
PRODUCTION AT PROMEGA: “A DISTINCT FREEDOM TO ACT”

Promega Corporation of Madison, Wisconsin, is a biotechnology company that provides a broad range of molecular biological reagents for scientists in both industry and the academy worldwide. While it does not make drugs and therefore is not under the same regulatory constraints as a drug company, Promega has a complete development stream using the latest in bioprocessing technology. Eight Promega scientists gathered to talk about their departments and their company. Members of the round table were:

Ray Bandziulis, director, corporate quality assurance and regulatory affairs
Michael Betlach, microbiology and fermentation development manager
Mary Doers, production scientist, applications group, molecular and cell biology
Elizabeth Murray, group leader in process biochemistry, applications group
Cas Perkowski, vice president, operations
Tim Seifritz, employment coordinator, human resources
Alan Smallwood, group leader, modifying enzymes, production
Chuck York, group leader, nucleic acid chemistry

Betlach: My department, fermentation, is a cross between a biology and a chemical engineering group—and there’s a fair amount of bacteriology. When the R&D scientists need to grow things in bigger batches, they call us. We’re involved significantly in both discovery research and process development. We also provide starting materials for many research and development groups.

Doers: Molecular and cell biology is one of three departments in the applications group (the other two being protein biochemistry and nucleic acid analysis). Our molecular biologists and cell biologists spend most of their time doing quality and applications testing of specific products. We are constantly working on quality, cost-effectiveness, issues concerning scale-up, and troubleshooting.

Murray: We become research partners with our customers, because they start using products in ways we never anticipated. That’s probably inevitable in the real world. The results get back to us, and sometimes we take a product back to the lab and reinvestigate it.

York: In nucleic acid chemistry, we manufacture products for nonradioactive labeling of nucleic acids and purification/isolation. We’re responsible for a wide range of products, including antibodies and enzymes. Some of the most important skills here include immunology, molecular biology, and chromatography.

Murray: In process biochemistry, we take seriously the idea that we are directly responsible for our products. One woman in my group, which makes lysate products, has made over 90 batches of the same product, and she has documented each according to yield and quality. She has a real feeling for it and can pick up subtle changes. If a vendor provides us with slightly different starting materials, she can tell.

Bandziulis: Everyone praises the discovery scientists in R&D—as they should. But the science and techniques needed to get procedures to work reliably and consistently—they’re surely undervalued. The type of problems we have to solve in process troubleshooting would have been valid thesis topics for graduate students a couple of years ago.

Murray: We’re trying to debug problems in production, create ever tighter and tighter manufacturing protocols, and create effective validation processes. That demands a lot of experimental work.

Smallwood: And some of it can lead to publication. You find yourself faced with challenges that no one else has had to face before. Let’s say a new entity comes in that has not yet been commercialized. We have to discover the best methods and equipment to purify and isolate it. Often these present very large hurdles that we have to address.

York: Addressing just the logistics of supplying raw materials and assembling those materials into final products can be astounding. And it washes over into areas such as plant operations and safety, and liaison with vendors and clients.

Smallwood: In production, we have a constant interplay between molecular biologists, protein biochemists, and fermentation scientists.

Perkowski: Right now, we’re looking for an experienced bioprocess engineer with a strong background in chromatography scale-up in enzymology and protein purification. That shows how specific our needs can be. But in a more general way, we are always interested in chemists, biologists, and biochemists with excellent backgrounds—and we do prefer experience.

Seifritz: That’s why, from an HR perspective, we look for excellent science, but also we ask, “Does this person have the ability to manage projects? Communicate effectively?” Technical skills are only half the package. Flexibility and open-mindedness are very important.

Doers: Within that, there is a definite assumption that you can make your own decisions. You’re responsible for each aspect of your product, and you enjoy a distinct freedom to act.
Gen-Probe is changing the way medicine is practiced through the continual evolution of genetic probe-based technology. Today, we are the acknowledged leader in DNA probe diagnostics, with more FDA-cleared DNA probe products than any other company.

At Gen-Probe, improving technology is a non-stop pursuit. We continue to build upon our leadership position by using our patented and proprietary technologies to develop, manufacture and market new products while making existing tests faster, more sensitive and easier to use.

Our search for skilled professionals is also an ongoing process. We continuously seek talented individuals to join our San Diego facilities and be a part of exciting diagnostic and therapeutic breakthroughs. Opportunities are available in the following areas:

- Diagnostic R&D
- Therapeutic R&D
- Regulatory Affairs

As one of the few emerging biotech companies that is profitable and has proven R&D, manufacturing, marketing and sales skills, Gen-Probe will continue to grow and prosper based on our sound technology, our philosophy of innovation and our ability to improve existing products while developing new ones.

If you’re searching for the ideal solution to your professional pursuits, we invite you to learn more about our current opportunities. Call our Jobline at (619) 625-8666, then send your resume to 9880 Campus Point Drive, Dept. 395, San Diego, CA 92121. Gen-Probe supports a drug-free work environment. We are an equal opportunity employer.
Pharmaceuticals: WHO WORKS WHERE

**Process/Pharmaceutical Development**

*Process development/Scale-up*
- Bulk drug synthesis & preparation of bulk drug for development
  - Organic synthetic chemists (BS, MS, PhD)
  - Chemical engineers (MS, PhD)

*Analytic Processes*
- Assays to assure bulk purity
  - Analytic chemists (BS, MS, PhD)

*Pharmaceutics/Formulations*
- Determination of dosage form, quality
  - Pharmacy scientists (BS, MS, PhD)
  - Pharmacologists (PharmD)
  - Organic synthetic chemists

**Biopharmaceuticals R&D**
- "Mini Biotech"
- Fermented/Protein Products
  - Biochemists
  - Molecular biologists
  - Cell biologists
  - Bioengineers
  - Microbiologists/Physiologists
  - Enzymologists
  - Genetic engineers (all BS, MS, PhD)

**Preclinical Research/Toxicology**
- Animal testing
  - DVMs
  - Toxicologists (BS, MS, PhD)
  - Pathologists (DVM/PhD)
  - Biologists (MS, PhD)

**Clinical Research**
- Human testing
  - MD/PhDs
  - Computer scientists
  - Biostatisticians
  - Clinical research assistants (many fields)

**Manufacturing**
- Making commercial product
  - Chemical engineers (MA, PhD)
  - Biology (BS, MS)
  - Chemistry (BS, MS)
  - Computer scientists
  - Mechanical engineers
  - Pharmacy background

**Plant Operations**
- Machinery, operations
  - Mechanical engineers
  - Chemical engineers
  - Technicians (AS, BS)

Source: Survey of pharmaceutical companies
Chart: Jackie Syrop
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- Clinical Research
- Product Development
- Project Management
- Regulatory Affairs
- Toxicology

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WHERE TODAY’S DISCOVERIES LEAD TO TOMORROW’S HOPE

Research conducted by scientists and physicians at Fox Chase has led to
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today. Past achievements include formulation of the Patterson function in
crystallography; demonstration of pluripotence in animal cells; discovery of
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tumor-suppressor gene; and discovery of the SCID mouse.

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expression; molecular aspects of oncogenesis; viral molecular biology and
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control; and human genetics, including the Human Genome Project.

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Interested candidates should send a C.V., summary of research interests and
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Burholme Ave., Philadelphia, PA 19111.

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- Lead the Product Support Group in the advancement of drug monitoring products, transitioning products from Development to Manufacturing. You'll be responsible for competitive evaluations, product improvements, and preservative development, as well as the development of new drug monitoring products using EMIT technology. You'll need a Ph.D. in Biochemistry or Bio-organic Chemistry, and 7+ years of related experience. Requires expertise in EMIT technology and Drugs of Abuse assay methodologies. You must also be knowledgeable of drug testing, therapeutic drug monitoring, clinical chemistry, and diagnostic product manufacturing and current device manufacturer regulatory requirements. The ability to interface with related departments/customers, summarize technical information for distribution, and lead products through development and manufacturing is essential. (Job #SSM317SBA)

SENIOR SCIENTISTS

Infectious Disease Diagnostics
- Both of these positions will design and conduct experiments related to the application of EIAs for infectious disease analytes to an automated analyzer. Additionally, you may test approaches to overcome reagent/system interactions. Requires an M.S. in Chemistry, Biochemistry, Biology, Virology or Physics, paired with 4+ years' experience, or a Ph.D. and 1+ years of experience. You'll need an understanding of basic statistical principles (imprecision, ANOVA, confidence intervals), and direct experience in the development and characterization of analytical methods. A background in ELA, multifactorial experimental designs, and automated instrument systems is ideal. For the more senior position, you must also demonstrate strong project leadership skills and supervisory experience. (Job #SSM317SBB)
- These positions provide technical leadership in immunoassay test development through reagent engineering and experimental & manufacturing protocol design. You'll conduct hands-on bench work and direct others as needed in order to collect, interpret and present sound data and conclusions. Requires an M.S. or Ph.D. in Biochemistry or Microbiology (Ph.D. preferred), along with relevant post-doctoral or industry experience. You must have a solid understanding of the fundamental concepts of biochemistry, quantitative analytical skills, experience with IBM compatible computers, and a working knowledge of the application of statistics to experimental design. Previous experience developing analytical methods for antibody purification at the manufacturing scale is preferred. (Job #SSM317SBC)

RESEARCH:

SENIOR SCIENTISTS

Human Disease Markers
- You'll assume team leadership responsibilities for production and product support for Research Kits for a marker of Type I diabetes. This involves developing protocols for components preparation, carrying production of the kits into a manufacturing environment, and advising customers as to usage. You'll need a Ph.D. in Biochemistry, or related field, paired with demonstrated laboratory and supervisory experience, including a background in R&D and manufacturing. Prior knowledge of diagnostic assay technologies and project management is essential. (Job #SSM317SBD)

Nucleic Acid Detection
- This team player will invent and optimize novel methods (applicable to automation and compatible with Syva's commercial goals) for nucleic acid-based amplification and detection of infectious micro-organisms. A Ph.D in Molecular Biology, Microbiology, Genetics or Biochemistry, and related experience are required. Candidates must be skilled in nucleic acid manipulation, have the ability to work with biohazardous materials, and have experience using standard molecular biology techniques, along with strong analytical abilities. Some familiarity with medical microbiology is beneficial. (Job #SSM317SBE)

Immunooassay Methods
- You'll play a vital role in designing and developing improved bioanalytical procedures and methods, primarily in the area of nonisotopic immunoassays. This will encompass devising and preparing new and existing materials and reagents, as well as implementing/executing experimental strategies while critically analyzing experimental observations. A Ph.D., or equivalent, in Biophysical or Physical Organic Chemistry and a minimum of 2-3 years' relevant post-doctoral experience are required. Knowledge of bioanalytical, organic and biochemistry is preferred. (Job #SSM317SBF)

Syva offers competitive salaries and generous benefits. Please send your resume, indicating appropriate Job #, to: Syntex/ Syva Corporation, Professional Staffing, 3401 Hillview Avenue, Ste. A2-130, Palo Alto, CA 94304. FAX: (415) 354-2122. Principals only please. Syva is an equal opportunity employer committed to the values of a diversified workforce.
Advertising Supplement

Biotechnology: WHO WORKS WHERE

New applications: SNDAs; Phase IV

Formulations: Organic synthetic chemists (BS, MS, PhD), Biochemists (BS, MS, PhD), Biologists (BS, MS, PhD)

Process Development: Chemical engineers, Biochemists (BS, MS, PhD), Biologists (BS, MS, PhD)

Manufacturing

- Process engineers
- Chemical engineers
- Pharmacists
- Biologists (BS, MS)
- Chemists (BS, MS)

Plant Operations

- Chemical engineers
- Mechanical engineers
- Managers

Preclinical Research

- DVMs
- Toxicologists (PhD)
- Biologists (BS, MS)
- Pharmacologists (PhD)

Assay Development

- Bioanalytical chemists (BS, MS, PhD)
- Chemists (PhD)

Quality Control

- Chemists (MS, PhD)

Quality Assurance

- Biochemists (BS, MS, PhD)
- Molecular biologists (MS, PhD)

Clinical Research

- MDs, MD/PhDs
- Data managers
- Biostatisticians
- Science MA's

- RNs
- MDs
- PharmDs

FDA Approval

IND Filed

To Clinical

FDA

IND Filed

NDA or ELA/PLA filed

To consumer

Source: Survey of biotechnology companies
Chart: Jackie Syrop

Science degrees, all levels; some with add-on MBA's
Research & Development Is The Foundation Of Our Business

Johnson & Johnson, with over $15 billion in sales, is the world’s largest and most comprehensive health care products company serving the consumer, pharmaceutical, diagnostic and professional markets. To us, investment in R&D is key to maintaining leadership throughout our entire family of companies. We believe that our worldwide commitment of over a billion dollars annually ranks us among the top American-based corporations in R&D expenditure. This fact, combined with our supportive environment where contributions are fully acknowledged and advancement is based on ability, offers you a unique foundation on which to build your career.

While openings vary by company, we are interested in hearing from candidates with health care industry or academic experience and a degree (BS, MS, PhD) in Biology, Biochemistry, Biochemical Engineering, Biostatistics, Chemistry, Immunology, Medicine, Microbiology, Molecular Biology, Pathology, Pharmacy, Toxicology or equivalent, for involvement in the following areas:

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- Drug Discovery
- Drug Safety Evaluation
- Pharmaceutical Development
- Drug Metabolism

**Clinical Drug Development**
- Clinical R&D
- Clinical Trials
- Medical Biostatistics
- Medical Writing
- Regulatory Affairs

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**FIRE DRILLS AND HAPPINESS: REGULATORY AFFAIRS**

"You ought to see my in-box," says Mary O'Hara, regulatory affairs associate at Chiron Corporation. It's always full. "There are always surprises in there that could change your whole day, your whole agenda." Regulatory is a little bit of law, a little bit of business, a great deal of science, a great deal of writing and speaking, and a talent for staying on your toes. "There's no degree in regulatory," says O'Hara. "It's a job to be learned on the job."

According to Rod Dougherty, director of the drug regulatory affairs compliance group, Pfizer Central Research, "We're always in the middle." Scientists in regulatory affairs find themselves running a two-way street between the FDA and the company. Bentley Moyer, regulatory affairs associate at Chiron, says, "We have to communicate the company's position to the FDA—meaning we have to know all the issues and be able to distill them and communicate them clearly and coherently. But then, when the FDA makes a statement, we have to turn around and tell the company what it means. You must be utterly in control of your material."

That sounds like an endorsement of good communication skills, it is. "Absolutely essential," said every single scientist we spoke to. Gary Wilson, associate director of compliance at Pfizer, stresses that "because of the diversity of disciplines we must deal with day to day, you can't do without good verbal and written skills." Janice Russ, regulatory affairs associate at Pfizer, says, "I can't stress such skills enough. We keep in touch with one another on various projects, we interact with the clinical department, and we have to communicate with investigators when we are out in the field."

At a biotech like Chiron, regulatory tends to attract people with degrees in biology, biochemistry, genetics, physiology, or microbiology. At larger traditional drug companies, biology, chemistry, and pharmacology backgrounds are relatively more in evidence. One will find all degree levels from BS to PhD. Add-on MBA's are common. (Russ: "My MBA helped me become more organized, a better communicator, a better user of my time.")

Experience in regulatory is much prized. People come to that experience in a variety of ways. Wilson of Pfizer worked as an inspector of drug manufacturers and devices for the FDA. "My FDA background is a great one to have," he says. "It exposed me to a broad range of companies and products, which developed my ability to assess potential problem areas." Dougherty headed discovery groups in everything from immunology to antiparasitics. Managing projects through the Phases drew him to what he calls "the unique, indispensible role regulatory plays in the overall drug development process." Moyer went from manufacturing/QC to QA to regulatory, "a pathway that makes a lot of sense," he says, "since many of the concerns of QA/QC and regulatory affairs are alike."

No matter how you look at it, regulatory is a rich and busy life. "You work with every department in the company," says one scientist. "You need to know the science, the systems. You need to be able to talk the talk."

Which brings us back to Mary O'Hara's in-box. She is responsible for Chiron's generic products, a few therapeutics, and corporate labeling. She also reviews product complaints and files formal reports on each to the FDA. And her special baby is Proleukin® (aldesleukin), a recombinant interleukin II currently licensed in the United States and Canada for metastatic renal cell carcinoma. Such a range of duties is not unusual in regulatory. Moyer says that "the ability to switch gears is one of the most important characteristics of the successful regulatory person." Wilson says that "there'll be times when walking into our department, you might say, 'What a well-oiled piece of machinery here'—but two days later, you'd think there was a fire drill going on." Information from clinical trials may trigger a series of decisions, reports, communications to the FDA, and liaison with clinical investigators. "One little change can send a ripple through the whole process," Wilson says, and we have to be on top of it." The only way to do that, as Russ sees it, is by capitalizing on everyone's talents. "We all build on one another's skills. My weakness might be your strength."

Our theme has been real science, and in regulatory it goes on every day. Dougherty says, "It's a daily learning experience. We're constantly testing our procedures, trying to do things more quickly, more efficiently, trying to master the scientific disciplines that are central to our jobs." Moyer likes working with the science firsthand every day: "We get to see the raw and the processed data for all our products. We're intimately involved with product development at every stage." Such intimate involvement may be why so many regulatory scientists would agree with Mary O'Hara: "It's challenging, with a true sense of reward and accomplishment: That exhilaration you feel when a new product is approved."

**"IN TUNE WITH WHAT'S GOING ON": QUALITY ASSURANCE, QUALITY CONTROL**

QC/QA. Two sets of two letters. Not the same, but very close.

In most companies, QC is the physical testing of a product—day by day, batch by batch—to ensure that it consistently meets specifications for purity and potency. Not only are they testing; they're also creating new and better methods for testing.

QA is dedicated to assessing the efforts of manufacturing and QC. QA documents and reviews manufacturing records. QA inspects manufacturing and testing systems for efficiency and accuracy. QA also documents the activities of QC. QA assures that everything takes place according to good manufacturing practices.

And behind both QA and QC is regulatory, which runs between company and FDA, ensuring compliance, hastening submissions, keeping in touch.

Since companies may manufacture different kinds of product, there may be a QC department for each kind—one for small-molecule entities, one for proteins, one for diagnostic kits. Validation, dedicated to the testing of equipment, is so important it is often in a department by itself (see "A Job and a Mission: Validation," below).

Peter Rauenbuehler is QC manager responsible for monitoring the stability of marketed and clinical products at Genentech. He sees QC as "ensuring product quality for both the company and the patient." His responsibilities are twofold: To
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.

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

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* Vaccines  
* Technologies  
* Ophthalmics  
* Therapeutics

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

If unable to meet with us personally, write us at Chiron Corporation, Human Resources, 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.
ensure the quality of new materials used in manufacturing final drug product and to develop the stability profiles of final drug products. In Rauenbuehler’s division, analytical chemists, biochemists, and chromatographers perform a variety of analytical tests to monitor the quality of raw materials and finished products.

Tony Eistetter is associate director of methods development and QC at Chiron. “Methods development takes a new product, does the assay validation, handles all the intermediary paperwork, and transfers the product to QC, which takes over the testing and keeps the paperwork up to date,” he says. Precision and dexterity are needed for these jobs. “You have to be a good technician and pay attention to your results. We’d prefer not to repeat steps.”

By the same token, no one can afford to become so focused on a stepwise routine that they fail to think scientifically. “Because each process is so complex, with various modes of fermentation and purification involved, each lot is slightly different,” Eistetter says. “To communicate those differences and what they mean, you need to have a good background in protein chemistry. If we get an unexpected band in a gel, we have to ask ourselves, ‘Is this an artifact? A breakdown product? A bad buffer?’ And we have to be able to test for an answer and communicate our results to scientists throughout the company.”

Most of Eistetter’s QC employees have bachelor’s degrees in biochemistry, microbiology, physiology, or related fields. Everyone has responsibility for several products, for which the basic skills of protein chemistry, including ELISA and gel electrophoresis, are absolutely necessary.

At Bristol-Myers Squibb, Jean Battaglia is director of product compliance services, a division of QA/QC that, as she puts it, “assures that once a product is on the market, it maintains its quality and efficacy.” Battaglia and her group monitor the stability of products and investigate reports from consumers—everyone from wholesaler to private consumer to MDs and nurses. In Battaglia’s group, the predominant background tends to be analytical chemistry; in QA as a whole, analytical chemists, pharmacists, and engineers join environmental scientists and microbiologists.

Suppose that marketing is requesting a package change for a certain product. “We’d start evaluating how that change might affect stability, and we’d design protocols to test for that effect,” Battaglia says. “Our statisticians would analyze the data, and we’d work with the vendors who manufacture our packaging. We must present a rationale for each change we’re considering, meaning we have to understand what we’re doing and why.” Such a change will trigger new contacts with the FDA, meaning close teamwork with regulatory affairs and other departments. A single modification in equipment or packaging can affect an entire product line.

Rauenbuehler enjoys being a part of a dynamic group. “You get exposure not only to your own company but also to regulatory agencies all over the world,” he says. “You’re in tune with what’s going on in the industry—often, you’re shaping it.” Eistetter enjoys the credibility that good work brings. “People know that we add value,” he says. “They know we’re good scientists.”

“Real science? Absolutely,” Battaglia says. “We’re dealing with new compounds all the time and looking for new ways to use them. We have to find ways to deal with challenges that are always changing. That’s what science is about.”

A JOB AND A MISSION: VALIDATION

PHILADELPHIA—What is validation? Validation is what companies like LifeSciences International (LSI) do. There isn’t an engineering degree in validation—at least not yet. But let us hazard a definition: The service of assuring that a company’s engineering, design, and manufacturing operations comply with FDA regulations.

With about 700 employees worldwide, LSI performs engineering, architecture, construction, and validation services for the pharmaceutical, biotech, and medical device industries. A wide range of scientists thrive in such an eclectic environment. Mechanical, electrical, and chemical engineers do well—but so do people with microbiology, pharmacy, even psychology backgrounds.

The essence of validation is testing. Using standard scientific testing protocols to ensure that equipment has been installed, operates, and performs according to manufacturing and design specifications. And that’s not all. Now that the equipment operates, it must comply with FDA regulations—embodied in the bible of regulatory codes, Twenty-One CFR 211, which lays out GMPs for finished pharmaceuticals.

“Compliance is more than just proper operations,” says Michael Breggar of LSI. “There’s the human element as well—we have to develop standard operating procedures (SOPs) for all of the equipment, demonstrate they’re correct, and train the personnel.”

The hottest topic in validation today, Breggar says, is validation of cleaning procedures. Few companies make only one product. Most will manufacture product A and product B, and in a variety of formulations and dosages, on the same equipment. “At FDA right now, the hot questions are, ‘What sort of clean-out procedures do you have?’ There had better be no cross-contamination between products A and B.” Several niche companies exist that do nothing but cleaning validation.

On-the-job travel is a constant. “I tell people to expect 70 percent travel,” Breggar says. “It’ll come in spurts. If the client company is simply developing documents, you can do it at the office. But you can’t stay at the office and test equipment in Des Moines.” Some validation companies divide their work force into teams dedicated to protocol development (no travel) and teams made up wholly of “gypsies” (100 percent travel).

Tact and flexibility are two requirements to put into your suitcase. It’s sometimes a challenge juggling different clients and different cultures. While the GMPs may be the same, each company may handle them differently. Going between company A and company B can be truly jarring. You’ll be working closely with plant engineering, regulatory, quality assurance, and operations management people at the client company. “There’s going to be a certain degree of failure in testing,” Breggar says. “Fingers point, and you end up in the middle of things. We try to train our people in this delicate art.”

LSI is looking for good engineers, people with experience in validation and regulatory consulting, and good scientists who can adapt to the life of the service company. A movement is underway at institutions such as the University of Maryland, Penn State, and Temple University to include validation in their biophysics courses. In the meantime, companies like LSI are the schools in which scientists and engineers learn about this vital field.

People often grow to love it. “We try to have the ideal situation—a team that works with the job from beginning to end,” Breggar says. “That way, they live with the project all the way through. Finishing a job is like coming to the last chapter in a thousand-page novel—you get to know the cast of characters, the situation, you’re comfortable with it. When at last you read in the trade press that the FDA approved the drug, you get a real sense of accomplishment.

“People who do validation should see it as though they are the ones who assure the consumer public of safety and efficacy. That puts a different spin on things. This is no longer my job; it’s my mission.”
St. Jude Children's Research Hospital, a premier research center for biomedical research, offers postdoctoral fellowship opportunities available in the basic and clinical sciences. Recent M.D., Ph.D., D.V.M., or Pharm.D. fellows are eligible to train with leading scientists in several basic biomedical research laboratories, including biochemistry, experimental oncology, genetics, experimental hematology, immunology, molecular pharmacology, tumor cell biology and virology/molecular biology. Additional opportunities are also available in the clinical sciences, including infectious diseases, hematology/oncology, pharmaceutical sciences, pathology and laboratory medicine, radiation oncology and diagnostic imaging. An interdisciplinary effort in cell and gene therapy has been initiated. SJCRH currently has 155 postdoctoral fellows funded from peer-reviewed grants, outside fellowships and institutional sources. Ten named fellowships are currently available.

Fellowship awards are given for up to three years and are based on merit, recommendation and the promise of a productive career in biomedical research. Stipends are highly competitive.

Applicants should provide a curriculum vitae, including a brief description of their research interests, and have three references. These should be forwarded to:

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Danny Thomas, Founder
"TWEAKING THE PROCESS": MANUFACTURING SCIENCES AT GENENTECH

Manufacturing is the focus of all the efforts of all the people we heard from in this article. Their discoveries and decisions all come to effect in the fully scaled-up manufacturing process. Manufacturing is an area of great diversity of backgrounds: PhDs in engineering, analytical chemistry, and biochemistry work alongside technicians with associate degrees. More than science with a pocket wrench, manufacturing is so important that no other department pulls together as many people from as many different areas. Below, Bob Bridenbaugh, group leader and senior scientist in manufacturing sciences for Genentech, discusses the complexity of manufacturing science and the versatile scientists who work there.

Part of being a scientist is that you’re always learning, always synthesizing new solutions from different areas of knowledge. That’s what you have to do in manufacturing sciences. With bioreactors, you’re constantly asking yourself, “How can I explain this biology I am observing?” Is it the equipment, the cells, a media component, or an operating condition?

While most people have a clear idea of what research does, they usually have no concept of development at all. Often, they are surprised when I tell them that we’re doing many of the same things the discovery scientists are doing. The difference here is that we have very optimistically aggressive time lines, and our research is very much process- and task-oriented. But this is applied science, with the goal of coming up with a process for a reliable, safe, effective compound to treat various diseases. To do that, you must understand the biology of that entity and determine its key characteristics, along with the implications these have for treating your target disease state.

To meet a process- or task-oriented goal, we work in project teams composed of people from our department and other development groups in cell culture and fermentation, downstream processing or recovery, stability, characterization, assay development and pharmacology (which can include safety evaluation and pharmacokinetics), as well as support groups in QC and assay services. The composition of the team will change as the project proceeds and requires different areas of expertise. It’s a very complex operation, and it’s by necessity nonlinear. It is massively parallel just to meet the time lines. Almost never does an individual or a single lab group do all the steps from microbiology to cloning to expression and so forth to the end, as is usually done in academia—it would take too long. My area is downstream processing, which includes recovery process design and large-scale protein purification. We design the protein purification process, transfer it to manufacturing proper, train the people there to run it, create the documentation, and often oversee the operation. As the process goes on, you’ll see variations, and there’s always something to improve. Devices can surprise you! And so can the scale-up issues once you’re actually up and running. Very often, a fairly rapid decision is required. You’re back to a very basic scientific requirement: To question your assumptions. You ask yourself, “Which way of solving this problem would work better this time? An engineering approach? Or a biochemistry approach? Or some combination of the two?” And once you’ve drawn some conclusions, you have to turn around and test them and test them again.

Perspective, thinking, skills, communication skills, persistence, and the ability to gain a rapid understanding of a problem or task—you really need these things. A good sense of the possible is important too—knowing which problems can be solved and which are too big for a practical solution. I’m using the same skills I’ve always used as a scientist—observation, organization, formulation and solution of problems, decision-making. You’re always looking for improvements, robustness, streamlining, always tweaking the process to meet the goal.

SCIENCE IN SUITS AND TIES: LICENSING AND BUSINESS DEVELOPMENT

By definition, a company is a living organism that interacts with its environment and incorporates what it needs to grow and develop while assuming new shapes and taking new directions. Nor is this a metaphor but a fact of life in any business, most of all pharmaceuticals.

Licensing and business development are in charge of scouting the territory for opportunities, taking in new ideas from outside, and sending out ideas from within. Call it science in suits and ties. Via in-licensing, the company takes in a good idea and develops it for commercial potential; via out-licensing, that company allows other companies to buy and develop its ideas.

To work here, you need to know the science. You need to know the business too, preferably by experience rather than by the book. One person who knows both is the kinetic Tom Sanders, director of business development at Chiron. Sanders left academia and came to Chiron in 1983, early days for the biotech industry. “I had no real business experience other than common sense,” he says.

What does he do now in business development? “I do deals. I create opportunities. I buy and sell technology—a whole range of activities such as in-licensing a technology from a university lab or putting together our $20 million relationship with Viagene.”

“We have many different backgrounds among our employees,” Sanders says. “People come here by many routes. One has a BS and MS in biochemistry, with an MBA on the side; we’ve also had a PhD in yeast expression biology; another has a PhD in protein biophysics; our vice president has an MBA, and he acquired the science by osmosis, as did our previous vice president, who was a lawyer.

Those interested in his area need a solid science background—maybe not a PhD in all cases, but very good science. Scientists in his field must simultaneously know the science in detail and be able to take the broad view: “You had better understand all the ramifications of the technology. You must be able to appreciate how different sciences synergize. An excellent example is gene therapy. Many different components are involved in delivering genes to specific targets, and when you are buying and selling technologies to do that, you have to know what you’re buying and selling.”

Sanders begs us to say a word on communications skills. He and his people do a great deal of writing: Term sheets, draft amendments to agreements, correspondence, proposals, capability statements, backgrounds, and more. “Clear, incisive writing is absolutely essential. So are good verbal communication skills. I give many presentations, especially company overviews when working in my groups. If there is no leading scientist present, I have to be able to present the scientific angles accurately and accessibly.”

Sanders recommends experience on the business side as well as good science. And one thing more: A taste for creative chaos. “You have to be able to be entrepreneurial, informal, somewhat chaotic environment here. Okay, you’ve come to us from a big university or a large company—but can you function in an environment where decisions are made while walking down the hall? Without a doubt, we’re doing science here—and a whole lot else.”
SCIENCE DRIVES OUR SUCCESS

Our primary focus at Genentech is to provide an environment where science thrives. This commitment to scientific excellence applies to all departments and is the driving force within our company.

Our future is solid due to the number of products in the pipeline. Products in development include antibodies to combat breast cancer; vaccines to fight HIV-1; anti-inflammatory agents; asthma and allergy antibodies; treatments to mitigate chemotherapy; as well as refinements and extensions of some of our five currently marketed products.

This rich product pipeline creates outstanding scientific opportunities. Consider the challenge of applied science and the impact you can have on our manufacturing processes today in the following areas:

SCIENTIST - PROCESS SCIENCES
Focus on development and characterization of processes to manufacture pharmaceutical proteins within Cell Culture & Fermentation R&D, and work on independent projects in this field. Ph.D and 3+ years in cell/molecular biology using mammalian cells for expression of heterologous proteins is necessary. Dept. CSRA

SCIENTIST - VIROLOGY
Your clinical virology background and familiarity with multiple virus families with infectivity and molecular assays will allow you to be directly involved in assay development, virus testing and virology support. Ph.D. with a minimum of 2 years' related experience, including regulatory filings, is ideal. Dept. CSMD2

SCIENTIST - CELL BIOLOGY/PHYSIOLOGY
Your broad-based cell culture, molecular biology and cell genetics background will enable you to contribute to a group responsible for cell banking/cryopreservation and cell characterization. A Ph.D. with a minimum of 2 years' postdoc experience required; GMP and regulatory experience is a plus. Dept. CSMD1

MANAGER - CELL CULTURE OPERATIONS
Take a leadership role in Biochemical Manufacturing as you manage the activities of supervisors and technicians providing cell cultures for development, clinical and licensed product efforts and ensure GMP compliance. Your BS combined with an advanced degree in biological sciences, engineering or management will allow you to also provide technical/project management. A minimum of 8 years' related biotechnology experience, with a manufacturing or clinical development focus is required. Dept. CSCR

If you want to join in our success, look into these opportunities at Genentech. Find out about our extensive benefits package that includes fully-paid dental/medical/vision coverage for you and your family, child care facilities, free health club membership, and an employee stock purchase plan.

For immediate consideration, please send your resume to Genentech, Inc., Human Resources Dept. (reference appropriate code), 460 Point San Bruno Blvd., South San Francisco, CA 94080. We promote and actively support affirmative action and equal employment opportunity. Women and minorities are encouraged to apply.

Genentech, Inc.
DepoTech is a leader in lipid-based sustained release systems for the controlled delivery of pharmaceutical agents. Established to address the significant, currently unsatisfied market need for drug delivery systems, our encapsulating technology, Depofoam™, is a unique, proprietary, lipid-based injectable material that can encapsulate a wide variety of water stable drugs to provide sustained and controlled delivery. Currently, we have exciting opportunities in a variety of fields.

**SCIENTIST - PHARMACOKINETICS:** Heads up a small group in the design and execution of preclinical studies involving a novel controlled release technology. A Ph.D. in pharmaceutical sciences, pharmacokinetics or a related discipline and 4-8 years of appropriate industry experience in the development of human pharmaceuticals is required. **JOB CODE 010**

**PROCESS ENGINEER** Play an important role in design and development of process for producing sustained release pharmaceutical agents. BS/MS in Chemical Engineering or related field with at least two years of hands on process design and scale-up experience required. Strong background in colloid science, emulsions and biochemistry is desirable. Knowledge of CGMP, aseptic processing and CIP/SIP design is a plus. **JOB CODE 009**

**STATISTICIAN** Responsible for the analysis of preclinical and clinical studies carried out during the development of new drugs. Advanced degree in statistics or biostatistics. Experience in analysis of clinical data in reporting to the Food and Drug Administration required. Good knowledge of at least one of the major statistical packages is required. PC environment experience, as well as support of design and analysis of industrial experiments are a plus. Good written and oral communication skills are essential. **JOB CODE 007**

**FACILITIES ENGINEER** Provide corrective and preventative maintenance. Requires 2-4 years experience HVAC maintenance, high purity water systems, steam boilers, compressed gas systems, as well as broad trade knowledge in plumbing, electrical and electrical maintenance. Prior work experience in a biotech manufacturing environment is highly desirable. **JOB CODE 002**

**CALIBRATION SPECIALIST** Responsibilities include calibration laboratory set up, calibration database maintenance, in-house calibration testing and coordination with outside calibration services, validation testing, and writing Calibration and other SOPs. Must be organized, detail oriented, and proficient in word processing, spreadsheet applications and database software, and have experience calibrating: Data acquisition systems, WFI and RO/DI systems, magnetic, pressure and temperature gauges, and other laboratory and pharmaceutical equipment; PLC programming; BS or equivalent and 2-4 years pharmaceutical, biotech or medical device experience is required. BS or equivalent required. **JOB CODE 026**

**VALIDATION ENGINEER** Responsibilities include writing Validation SOPs, Protocols and Final Reports; performing Validation testing and results tabulation. BS/BE and 2-4 years biotech or pharmaceutical experience with Process and System Validation; CQ, IQ, QQ, & PQ studies; data acquisition set up, programming and calibration; PLC programming and software proficiency are required. **JOB CODE 032**

DepoTech is a dynamic, rapidly growing privately-held biopharmaceutical company. We offer outstanding opportunities for career growth and excellent salary and benefits. Please send resume (no calls please) with three references to: Human Resources (Job Code ___), DepoTech Corporation, 11025 N. Torrey Pines Road, Suite 100, La Jolla, CA 92037.

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American Museum of Natural History

**DEAN OF PUBLIC PROGRAMS**

The American Museum of Natural History seeks an outstanding professional with broad interests, background, and knowledge in science education and exhibition to serve as Dean of Public Programs. The Dean will report to the President of the Museum and will be a senior officer of the Museum. Reporting to the Dean will be the Education and Programming departments.

The Dean will provide leadership for active and far-reaching education and exhibition programs dedicated to enhancing the scientific literacy of a broad audience of children and adults. The Dean will be expected to provide the intellectual strength needed to stimulate and coordinate the energies of the Museum's scientific staff, exhibit developers, educators, and consultants in developing an integrated, creative, and effective strategy for Museum-wide public programs. This will be an opportunity to build upon a rich educational tradition, to strengthen it, and to utilize new interpretative techniques to develop national and international initiatives to improve the public's understanding of science.

An advanced degree would be preferred for this position, as well as substantial experience in science education and/or exhibition, but candidates may come from an unconventional background. Familiarity with new and emerging technologies is valuable. Significant managerial experience is also sought. The Museum is an Equal Opportunity Employer and encourages applications from women and members of minority groups.

Nominations and letters of application with curriculum vitae should be sent to:
Lauren Rabin, President's Office
American Museum of Natural History
Central Park West at 79th Street, New York, New York 10024.

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Monterey Bay Aquarium
Research Institute (MBARI)

**SENIOR SCIENTIST / DEPARTMENT CHAIR**

Applications and nominations are invited for a newly created Senior Scientist position at MBARI, with particular emphasis towards the sub-disciplines of marine biology, ocean physics, geochemistry, geology and geophysics. The successful candidate will be selected based on the ability to most appropriately complement MBARI's unique position as a premier independent laboratory, with a major commitment to scientific discovery through advanced technologies for ocean observation. Additionally, the incumbent will be recruited to serve a term as Chairperson of the Science Department, participating in the governance and daily management of the Institute.

A Ph.D. in a scientific discipline and 10+ years demonstrated success in conducting marine research is required, with substantial, significant and original research contributions. In addition, proven leadership and administrative success is essential, as the Science Chairperson serves as a member of the MBARI management team.

Applications should include an updated CV, a statement of research interests, and four professional references. Applications will be considered immediately, with a target review date of June 1, 1995 and a preferred hire date before December 31, 1995. MBARI offers a competitive compensation and benefits package, including retirement. Please respond to Director, SS-MBARI, 160 Central Avenue, Pacific Grove, CA 93950.

EOE MBARI welcomes diversity.
The National Institute on Drug Abuse (NIDA) invites nominations and applications for this senior scientific position located in Baltimore, Maryland.

The Director of NIDA's Division of Intramural Research is responsible for the direction of the largest single research center in the world dedicated to basic biomedical and clinical research on drug abuse and addiction. Located on the Hopkins Bayview Campus, the program includes substantial resources and is comprised of several large multi-disciplinary preclinical laboratories and clinical research programs that include both inpatient and outpatient facilities.

Desirable qualifications include an M.D. or Ph.D. degree with extensive postgraduate research experience; and experience in the scientific and administrative management of research programs which has established the candidate as an authority in preclinical or clinical research approaches in the neurosciences or other biomedical or behavioral sciences.

Salary will be negotiated within the allowable limits established by law.Copies of the vacancy announcement may be obtained by calling the NIDA Personnel Management Branch on (301) 443-9593. Applicants must submit one of the following documents: (1) a resume/curriculum vitae and bibliography; or (2) a Federal employment application (SF-171, or OF-612). In addition, applicants are encouraged to submit a narrative related to the qualification requirements listed in the vacancy announcement.

Submit complete application materials by May 15, 1995, to:

NIDA Personnel Management Branch
Attention: Ms. Maryann Pafitis
5600 Fishers Lane, Room 10-21
Rockville, Maryland 20857

All qualified candidates will receive consideration without regard to race, color, age, religion, gender, national origin, political affiliation, sexual orientation, marital status, union membership or disability.

NIH is an Equal Opportunity Employer

Research Scientist

Bio-Rad Laboratories is a world leader in the fields of clinical diagnostics, life science research products and analytical instruments. Our continued growth has created the need for creative scientists with experience in the commercial development of non-isotopic immunoassays. Successful candidates will have a BS, MS, PhD in Life Sciences or equivalent and demonstrated success in the development of immunochemical assays.

For consideration, please send your resume, complete with salary history to: Bio-Rad Laboratories, 4000 Alfred Nobel Dr., Dept. 199, Hercules, CA 94547. An Equal Employment Opportunity / Affirmative Action Employer.

Postdoctoral Fellowships 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, pharmacology, pharmacokinetics and urology. Candidates should possess a doctoral degree (MD, Ph.D. or PharmD), 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 prerequisite. Salary will be based on qualifications and experience.

Deadline To Submit Application is May 1, 1995

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, 15th Floor; Stop 13, New York, NY 10017-5755, Attn: Michael Deliclo, Senior Personnel Associate. We are an equal opportunity employer.
The Beckman Institute for Advanced Science and Technology
University of Illinois at Urbana-Champaign

ASSOCIATE DIRECTOR FOR EXTERNAL AFFAIRS AND RESEARCH

The Beckman Institute for Advanced Science and Technology at the University of Illinois at Urbana-Champaign (UIUC) is the nation’s largest, most broadly based multidisciplinary academic research organization, housing more than 700 researchers in areas ranging from biological intelligence and human-computer intelligent interaction, to molecular and electronic nanostructures. The 84 research faculty are drawn from 16 departments at UIUC.

The Beckman Institute seeks an experienced manager or executive, from government, academia, or industry, with the necessary scientific stature to work with corporate executives, government officials, and academic and industrial research scientists, to develop broad-scale research relationships between the Institute and entities such as corporations, research institutes, and government agencies. These relations include major multidisciplinary research projects involving researchers from academia, industry, national laboratories, and industrial laboratories. The Associate Director will also assist the Director in the daily operation of specialized research facilities and coordinate public relations efforts.

The position is a regular full-time academic professional appointment. An earned doctorate in an engineering or science discipline is strongly preferred, but the combination of an advanced degree in science or engineering and appropriate industrial experience will be considered.

The position begins August 21, 1995, and all applications received by May 1, 1995 will receive full consideration, though applications may be accepted until the position is filled. Please send a letter of interest, resume, and names and contact information for at least three references to:

Jiri Jonas, Director
Beckman Institute for Advanced Science and Technology
University of Illinois at Urbana-Champaign
405 North Mathews Avenue, Urbana, IL 61801
j-jonas@uiuc.edu, 217-244-1176.

The University of Illinois is an AA/EEO Employer.

Scientific Positions Available

Oread Laboratories has redesigned its technical divisions and has expanded its service offerings. Oread is seeking sharp, technically qualified, entrepreneurial minded scientists to fill the positions of this growing analytical company. We are seeking individuals possessing B.S., M.S., and/or Ph.D.s in the following technical fields.

• Organic Chemistry
• Pharmaceutical Chemistry
• Microbiology
• Analytical Chemistry
• Biochemistry
• Toxicology
• Physical Chemistry

Applicants must possess strong scientific backgrounds, preferably with industrial experience, and a desire to be on the ground floor of a growth company. Excellent benefits and salary. Resumes and letter of intent to: Human Resources, Oread Laboratories, Inc., 1501 Wakarusa Dr., Lawrence, Kansas 66047.

No phone calls please.
EOE
CoCensys, Inc., a progressive and innovative pharmaceutical company located in Irvine, California, has immediate openings in the following positions.

**Director of Synthetic Chemistry**

Requires a Ph.D. in Organic Chemistry. Minimum 10 years of pharmaceutical industry experience, with specific experience in medicinal chemistry. Proven expertise in the discovery of new chemical entities which could be advanced into development as potential drugs. Substantial publication record, both in scientific journals and patents. Experience in preparing and executing comprehensive synthesis plans aimed at discovering and optimizing innovative chemical entities preferred. Must have management experience.

**Director of Pharmaceutical Science**

Requires a Ph.D. in Pharmaceutical Sciences. Minimum 10 years of pharmaceutical industry experience, with extensive experience in preformulation research and formulation development of solid and parenteral dosage forms of small molecule pharmaceuticals. Proven expertise in regulatory filings. Ability to provide scientific guidance and technical direction to product development organizations. Must have management experience.

**Group Leader, In Vivo Pharmacology**

Requires a Ph.D., M.D., or D.V.M. degree. Applicant must have experience with the rat middle cerebral artery occlusion model and other rodent or non-rodent models of focal and global brain ischemia. Experience with animal models of pain is desired. CoCensys is a people-oriented environment with a winning spirit and an excellent benefits package. If you are future-oriented and challenge-seeking with the above qualifications and a willingness to relocate, please send resume and salary requirements to: COCENSYS, INC., Human Resources Dept., 213 Technology Drive, Irvine, CA 92718.

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**FIBROGEN, INC.** is an emerging biotechnology company committed to the development of therapeutics for the treatment of fibrotic diseases and excessive scarring. This has been a common, serious, and difficult area — until now. FibroGen’s extensive worldwide cooperation with university scientists has prompted the development of lead compounds which block fibrosis and collagen deposition. In addition, new treatments for inflammatory diseases, the aging of skin and other connective tissue disorders are under development. Cell and animal models relevant to human disorders are also to be undertaken. Other key areas will involve evaluating drug delivery systems and toxicity as well as pro-drug development.

FibroGen is currently building an active, in-house team at all levels. We are looking for individuals in the following areas:

**Organic Drug Synthesis**

**Medicinal Chemistry**

**Pharmacology**

**Biochemistry**

**Cell Biology**

**Assay Physiology**

**Assay Development**

The successful candidates for our new team will assess the potency of enzyme inhibitors as modifiers of collagen synthesis in vitro, in tissue and cell culture, as well as in animal models. They will synthesize modified forms of enzyme inhibitors, develop drug delivery systems, and evaluate toxicity.

FibroGen has recently opened a new laboratory facility in the San Francisco Bay Area. To learn more about our company and our current activities, we invite you to send your C.V./resume to: FibroGen, Inc., 772 Lucerne Drive, Sunnyvale, CA 94086 or fax to: (408) 720-7212. We are an equal opportunity employer.

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**INJURY ➔ INFLAMMATION ➔ FIBROSIS**

**FIBROGEN**

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**BESSELAAR**

A Corning Pharmaceutical Services Company

There's never been a better reason to team up with Besselaar, a global leader in clinical drug development.

**REGIONAL CLINICAL RESEARCH ASSOCIATES**

Based from your home, you will monitor Phase II and III clinical trials of drugs and biologics. Qualified candidates will possess a minimum of two years of extensive field monitoring experience and a BA/BS in the life sciences or nursing.

**SENIOR CLINICAL RESEARCH ASSOCIATES**

You will serve as a Project Manager for Phase II and III clinical trials and assist with monitoring on an as-needed basis. Requirements include a BA/BS, preferably in the life sciences or nursing, and a minimum of four years of field monitoring and project management experience. Supervisory experience preferred.

**CLINICAL RESEARCH ASSISTANTS/ASSOCIATES**

Travelling throughout North America to monitor Phase II and III clinical trials, assisting in study administration and providing data QA are the major responsibilities for CRAs. Requirements include a BA/BS, preferably in the life sciences or nursing, and previous experience in a medical/clinical research environment. Monitoring experience preferred.

**REGULATORY AFFAIRS ASSOCIATES**

You will utilize your knowledge of GCPs and GLPs in a QA/QC environment to conduct both internal and field audits. You will also assist the packaging group in the design, labeling, and distribution of clinical supplies. Qualified candidates will have a BA/BS in the life sciences or pharmacy and previous experience in Regulatory Affairs, QA or Clinical Research.

Besselaar offers competitive salaries and excellent benefits, including a comprehensive medical/dental plan, 401(k), and company-funded pension plan. Please send your resume with salary requirements to: Human Resources, Dept CS-Sci, G.H. BESSELAAR ASSOCIATES, 210 Carnegie Center, Princeton, NJ 08540-6233. Only those selected for further consideration will be contacted. Principals only. Drug screening is a condition of employment.

An Equal Opportunity Employer M/F/D/V

The reasons for teaming up with Besselaar have never been stronger.
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 non-approval 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 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 years 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, gastroenterology, 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, manufacturer 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 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 campus of the National Institutes of Health 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 $60,281 to $92,856. In addition, some positions may include a Physician’s Comparability Allowance. For scientists (other than M.D.), Civil Service salary range for GS-11 through GS-15 is $36,174 to $93,166. 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) and/or current detailed Curriculum Vitae, along with bibliography, statement of regulatory/research interest, transcript, and names of three references to:

FDA/Center for Biologics Evaluation & Research
1401 Rockville Pike
Suite 200N - HFN-50
Rockville, MD 20852-1448
ATTN: Ms. Blumenthal (181)

FDA/Center for Drug Evaluation & Research
5600 Fishers Lane
HFD-505, Rm. 6B-17
Rockville, MD 20857
ATTN: Recruitment Staff (237)

Bioscience Career Opportunities Start Here...

As the nation’s original producer of professional job fairs designed for the biotech, pharmaceutical and medical device industries, Life Science Associates has provided a forum for the best scientific talent to meet directly with the country’s leading firms for over six years. See what opportunities await you at Life Science Associates BioExpo Career Fairs

Parsippany, NJ
March 30 - 3PM to 7PM
March 31 - 9AM to 1PM
Embassy Suites Hotel
909 Parsippany Blvd.

Plus other 1995 events...
May 5 - San Francisco
July 10-11 - Boston
September 19 - San Francisco
October 23 - Boston
"East Coast Diversity Day"

Opportunities exist throughout the U.S. for BS/MS/PhD through management level professionals. Register FREE at the door for the New Jersey event, or for registration information on future LSA job fairs, send request to: LSA, 2100 Embarcadero, Suite 101, Oakland, CA 94606. Companies interested in recruiting call 510-436-3976.
A CAREER OF DISCOVERY
-Postdoctoral Positions-
California and Japan

Tanabe Research Laboratories, USA, Inc., is an established drug discovery laboratory dedicated to the design of small molecules for subsequent development as anti-inflammatory therapeutics. We are focused on cell adhesion antagonists as well as antagonists of signal transduction pathways.

We will be holding interviews at the FASEB/experimental biology Conference in Atlanta, GA from April 10th-13th. Interviews to be held during the conference will be arranged prior to the event. We invite immediate response from qualified PhD scientists interested in meeting with us at the conference to discuss post-doc positions in San Diego, CA and the laboratories of our parent company Tanabe Seiyaku in Japan. Tanabe Seiyaku is one of the top ten pharmaceutical companies in Japan.

SAN DIEGO POSITIONS

The following positions are located in San Diego, CA, an outstanding scientific environment for research in the pharmaceutical sciences:

**MOLECULAR BIOLOGIST:** Experience in gene expression in yeast and mammalian cells required; experience with two-hybrid system desired.

**CELL BIOLOGIST/BIOCHEMIST:** Prefer interest in inflammatory processes and/or osteoarthritis.

OSAKA/TOKYO POSITIONS

The following positions are located in either Osaka or Tokyo (some positions may be located in the U.S. initially, prior to relocation to Japan):

- **PHYSIOLOGISTS**  
- **PHARMACOLOGISTS**  
- **CELL BIOLOGISTS**  
- **BIOCHEMISTS**  
- **MOLECULAR BIOLOGISTS**

Along with highly competitive salaries, candidates selected for positions in San Diego, CA will enjoy an outstanding benefits package including medical/dental/ life insurance and a company-matched 401(k) plan. Candidates selected for positions in Japan will qualify for the Tanabe Seiyaku Benefit Program. If you’re interested in joining an intellectually stimulating, highly motivated group of scientific professionals, submit your resume along with cover letter and the names of three references immediately to: V. Smith, 4540 Towne Centre Court, San Diego, CA 92121; fax (619) 558-0650. We are an Equal Opportunity Employer.
BAYLOR COLLEGE OF MEDICINE
Chair, Department of Pharmacology

Baylor College of Medicine seeks outstanding candidates for the position of Professor and Chair of the Department of Pharmacology. The Department is regarded as a key basic science department, highly interactive with the College’s many clinical programs.

The successful applicant will be of international stature in his or her area of research and will provide academic leadership in the broadly defined area of Pharmacology. Applicants should also have demonstrated qualifications in education and administration.

Baylor College of Medicine is an Equal Opportunity/Affirmative Action employer. Women, minority, and international candidates are especially encouraged to apply. Letters of interest, CV, and names of references should be sent to:

Stuart C. Yudofsky, M.D.
Chair, Search Committee for the Department of Pharmacology
Chair, Department of Psychiatry and Behavioral Sciences
Baylor College of Medicine
One Baylor Plaza, Room 115D
Houston, Texas 77030-3498

CHIEF FINANCIAL OFFICER
SCIENTIFIC RESEARCH LABORATORY

A major biotechnology scientific research laboratory being formed in La Jolla, California, is seeking an energetic Vice President - Chief Financial Officer. His or her initial activities will focus on the design and construction of the facility and the development of the operating structure of the laboratory, with transition to ongoing operating functions within two to four years.

The qualified candidate will have an MBA or be a CPA or have equivalent skills, with strong budgeting, cash management, and accounting skills. Experience working in a scientific or related technical organization would be an advantage.

The successful candidate will be responsible for working with the development team during the building process, procurement of scientific equipment, designing employee benefit programs, and administering the ongoing operations of the laboratory.

Top academic and intellectual qualifications are a must. A highly competitive salary and benefits package reflects the importance of this appointment. Interested persons should forward a letter of interest, curriculum vitae and salary requirements to P.O. Box 2209, La Jolla, CA 92038-2209.

POSTDOCTORAL POSITIONS
UNIVERSITY OF CALIFORNIA, SAN FRANCISCO
SCHOOL OF DENTISTRY

Applications from DENTIST-SCIENTISTS are invited for several POSTDOCTORAL POSITIONS in fields related to diseases of oral biology. The primary goal of this new postdoctoral program is to augment/strengthen the research skills of dentist-scientists to enhance their ability to pursue independent research careers in either academic dentistry or industry. Senior, well-established research investigators will serve as mentors in the program. Opportunities are available to gain advanced research experience in cell and molecular biology of extracellular matrices (collagen, integrins, second messengers), bacterial and fungal adherence, microbial pathogenesis (regulation of virulence factors, heat-shock proteins), virology (herpesviruses, papillomaviruses, HIV), and craniofacial development (growth factors). Applicants must have a DDS or equivalent degree, advanced training in a recognized clinical specialty, and a recent PhD in Oral Biology or a relevant basic science. Positions are available beginning July 1, 1995.

Send curriculum vitae, a summary of research interests, and the names and addresses of three references to Amy Beinart, UC-SF Department of Stomatology, 513 Parnassus Ave., Room S612, San Francisco, CA 94143-0422, USA.

Enquiries about the position should be directed to:
Gary C. Armitage (tel: 415 476-8955/fax: 415 476-4204) or John S. Greenspan (tel: 415 476-5415/fax: 415 476-4204/email: stomffojohn@ccmail.ucsf.edu).

UCSF is an affirmative action/equal opportunity employer.
Women and minorities are encouraged to apply.
TOXICOLOGIST
Department of Pathobiology and Toxicology

Genentech, Inc. is a pace-setting international biotechnology company that discovers, develops, manufactures and markets pharmaceuticals for significant unmet medical needs. We have an opening for a Ph.D. Toxicologist in the Pathobiology and Toxicology Department.

The individual will be primarily responsible for the design, conduct, and the scientific evaluation of Safety Assessment studies conducted in vivo or appropriate alternative test systems in support of US and international marketing applications. Candidates will be expected to independently prepare comprehensive pre-clinical safety assessments in the support of these applications and to present and defend this data to regulatory authorities. Interacting with other scientists and working with project teams to provide expertise on all relevant safety issues regarding experimental and marketed Genentech products will also be key.

Qualified candidates will have a PhD or equivalent in Toxicology and a minimum of 4 years' experience in the Pharmaceutical industry working with a wide variety of pharmaceutical agents and classes of compounds. Experience with protein therapeutics would be a plus. Board certification in Toxicology is desirable.

Genentech offers an excellent salary and benefits package which includes child care resources, free health club membership and fully paid medical, dental and vision coverage. For immediate consideration, please send your resume to: Genentech, Inc., Human Resources, Attn: NSDT, 460 Point San Bruno Blvd., South San Francisco, CA 94080. We actively support and promote affirmative action and equal employment opportunity. Women and minorities are encouraged to apply.

Genentech, Inc.
PROGRAM IN MOLECULAR MEDICINE

The Mayo Foundation announces a major initiative in the area of molecular medicine, including expansion of programs in molecular genetics and gene therapy. This program will involve laboratory research, education and clinical practice. It is intended to bring together basic scientists and clinicians working toward medically important goals of genetic diagnosis and therapy of disease.

Seven new tenure-track faculty positions are available with associated laboratory space, equipment, start-up funds, and ongoing institutional support. Additionally, the program will incorporate the laboratories of individual Mayo scientists and clinicians currently working in this area and resources within the recently renovated General Clinical Research Center. The ten Mayo Research Core Facilities will be accessible to the program, and Mayo’s extensive patient population base and clinical investigative expertise will play an integral role in this endeavor.

Mayo Foundation is fully committed to the establishment and ongoing success of this program. Positions are available for individuals with an M.D. and/or Ph.D. degree who have a strong interest in commitment to the clinical application of human gene therapy, or basic disciplines such as molecular virology, vector development, and gene mapping/linkage analysis which are relevant to gene therapy. Appointments at all academic levels will be considered.

Interested applicants are asked to submit curriculum vitae, bibliography, statement of research interests, and names of three references to:

Laurence J. Miller, M.D.
Molecular Medicine Search Committee
Mayo Clinic and Foundation
1701A Guggenheim Building
200 First Street SW
Rochester, MN 55905

Mayo Foundation is an affirmative action and equal opportunity educator and employer.

Mayo Clinic

Mayo
Clinic

Rochester

Minnesota

POST-DOCTORAL TRAINING

DEPARTMENT OF MOLECULAR PHARMACOLOGY AND BIOLOGICAL CHEMISTRY

NORTHWESTERN UNIVERSITY

MEDICAL SCHOOL

The department is located on the Chicago campus of Northwestern University. Situated in the Gold Coast area of Chicago, the department and area offer a rich environment for first-rate biomedical research and cultural opportunities. There are excellent interactions and joint programs with faculty located at the Evanston campus and Argonne Laboratories.

Areas of training include: molecular biology and genetics, developmental biology, protein chemistry, X-ray crystallography of proteins and nucleic acids, analytical and synthetic chemistry, and structure-based drug design. Listed below are examples of potential mentors and research projects:

- W. Anderson: Proteins, structure and function.
- C. Bradford: Molecular biology of PAS family of proteins.
- M. Dubocovich: Melatonin receptors: circadian & visual function.
- M. Hossy: Signal transduction proteins & phosphorylation.
- T. Narahashi: Excitable cell ion channels.
- E. Silinsky: Mechanisms of synaptic transmission and modulation.
- M. Watterson: Molecular basis of calcium action in eukaryotic cells.

For further information about these and other projects and mentors, contact Ms. Paula Alexander, 303 E. Chicago Ave., Chicago, IL, 60611-3008.

Affirmative Action/Equal Opportunity Employer
NeXstar Pharmaceuticals, Inc., is a Boulder, CO based biotechnology company involved in discovery, development, and production of oligonucleotide-based diagnostic and therapeutic agents and the manufacture of liposomal drug formulations for the treatment of major diseases. NeXstar was formed as a result of the recent merger of NeXagen, Inc. of Boulder and Vestar, Inc. of San Dimas, CA. NeXstar is a fully integrated pharmaceutical firm with product sales of over $45 million, a proven clinical and product development capability, and a fundamental and patent protected drug discovery technology. We currently have career opportunities in both Boulder and San Dimas.

**Senior Director, Manufacturing**
This position will be located in our San Dimas, CA facility and oversee local manufacturing operations as well as contract manufacturing activities in Boulder, in California and overseas. The successful candidate will have a broad background in chemical/biochemical engineering or chemical/biochemistry. Significant experience in both the pharmaceutical and biotechnology industry is a prerequisite, with a focus on the problems of non-traditional product manufacturing, also required. Position 100.

**Senior Director, Analytical Sciences**
Located in Boulder, CO, this position will lead analytical and bioanalytical research and service groups in both locations. Requires a Ph.D. in chemistry, biochemistry or biophysics. Significant experience in both the pharmaceutical and biotechnology industry is required. Experience should include traditional HPLC/chromatographic techniques as well as macromolecule characterization. Experience in managing methods validation and documentation for regulation submissions to domestic and foreign agencies is required. This position will require frequent travel between the two sites. Position 101.

**Group Leader, Pharmacology/Toxicology**
We are seeking a senior level pharmacologist with industrial experience in the pharmaceutical industry to oversee the animal facility and pharmacology/toxicology studies in San Dimas. The successful candidate will have a Ph.D. in pharmacology or toxicology, successful managerial experience and the ability to support multiple research efforts simultaneously. Position 172.

**Senior Pharmacologist**
Located in Boulder, this individual will develop and conduct in vivo studies in animal models for preclinical efficacy. A Ph.D. in Pharmacology or equivalent with experience in developing and conducting in vivo efficacy models. Position 171.

NeXstar offers a competitive salary and benefits package. Interested candidates may submit their resume and cover letter to Human Resources as follows:

Position 171 and 172 reply to:
NeXstar Pharmaceuticals, Inc.
2860 Wilderness Place
Suite 200
Boulder, CO 80301

Position 100 and 101 reply to:
NeXstar Pharmaceuticals, Inc.
650 Cliffside Drive
San Dimas, CA 91773

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**NEW...........NEUROSCIENCE**

**THE EJLB FOUNDATION SCHOLAR RESEARCH PROGRAMME**

The EJLB Foundation announces that it will award each year up to six (6) grants for research projects in all areas of neuroscience that pertain directly or indirectly to schizophrenia and mental disease. 

Eligibility for such grants is restricted to young scientists who are pursuing an independent research career and have given evidence of having significant potential. It is also a requirement that these scientists have earned an MD and/ or a Ph.D. degree, have completed their post-graduate training and been admitted, after June 15, 1990, as faculty members of a leading university or an affiliated non-profit research centre, in Canada or elsewhere in the world.

Each grant totals CAN$300,000, is disbursed over three (3) years and is non-renewable.

The next closing date for receipt of letters of intent is June 15, 1995.

Full details and letter of intent forms may be obtained from The EJLB Foundation, 1350 Sherbrooke Street West, Suite 1050, Montréal, Quebec, H3B 1J1. Fax (for inquiries only) 514-843-4080.

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**BioProcess Development Center**

**Fermentation Microbiologist & Metabolic Pathway Engineer**

DuPont Central Research has recently established the BioProcess Development Center, a multidisciplinary R&D group aimed at the development of state-of-the-art industrial bioprocesses for the production of chemicals and polymers. We have immediate openings for two Principal Investigators to join our teams of Life Scientists and Engineers in this exciting new venture.

**Fermentation Microbiologist**

Requires Ph.D. in Microbiology, or a related field, and at least 5 years of industrial experience in fermentation optimization and scale-up. The successful candidate will research all parameters affecting the performance of microbes in fermentation processes. Preference will be given to candidates with experience moving research projects to large scale fermentations.

**Metabolic Pathway Engineer**

This candidate will primarily use the tools of molecular biology to develop novel metabolic pathways for the production of chemicals in microorganisms. The ideal candidate will have a Ph.D. in Biochemistry or Molecular Biology and strong post-doctoral work in pathway engineering.

At DuPont, you'll find a stimulating scientific environment in a modern research facility located near Wilmington, DE. Our Mid-Atlantic location offers a wide range of academic, cultural and recreational activities. Qualified candidates should send a resume with three references to: DuPont Human Resources, PSS-0099, Wilmington, DE 19989. An Equal Opportunity Employer.
RESEARCH SCIENTIST
RESEARCH DEPARTMENT

Connaught Laboratories, a major provider of quality biologicals for a healthier world, is pursuing its vision of expanding our global success as a leader within the world's premier biological company. To meet our objectives we seek out valued people dedicated to excellence and innovation, and introduce them to an environment worthy of their skills.

We have an immediate opening for a creative, enthusiastic individual capable of providing broad technical expertise to our Research Department. The successful candidate will be responsible for the design, execution and analysis of experiments together with the supervision of one Research Associate.

To be considered you must possess a Ph.D. with a minimum of 2 years post doctoral training in the area of Virology or Viral Immunology and have a proven research record. Expert knowledge of one (or several) of the following areas is required: Peptide/Protein Chemistry; Genetic Expression Systems; or Infectious Disease Animal Models.

We offer an attractive salary and benefits package and the potential for ongoing professional development with a growth-oriented organization. Please send your resume to: Human Resources, Dept. R.S., Connaught Laboratories, Inc., P.O. Box 187, Route 611, Swiftwater, PA 18370. Connaught is an equal opportunity employer M/F/D/V.

Connaught Laboratories Inc.
A PASTEUR MERIEUX COMPANY
Excellence in Biologicals for a Healthier World

NEUROBIOLOGY
TENURE TRACK FACULTY POSITIONS
University of Maryland Dental School
Department of Oral and Craniofacial Biological Sciences

The Department of Oral and Craniofacial Biological Sciences was recently established from the merger of the basic science departments in the Dental School. New full-time faculty are being recruited with broad expertise on the response of the nervous system to tissue and nerve injury, including receptors and signal transduction, regulation of gene expression, function and chemistry of spinal and brain stem neural networks, supraspinal modulatory systems, and animal models of pain and hyperalgesia. Core facilities in molecular biology, tissue culture, immunohistochemistry, and image processing are being established. Joint appointments in the medical school will be offered to those candidates who exhibit a strong potential for collaborative research.

Positions are primarily at the Assistant Professor level but outstanding candidates at any level will be considered. Salary is dependent upon qualifications and experience. Successful candidates will have a Ph.D. or equivalent, a record of outstanding research achievement, and a demonstrated ability to attract external funding. For best consideration, applications should be received by June 1, 1995.

Applicants should send a C.V., copies of their two most significant publications, brief descriptions of present research and future research plans, and the names of 3-5 individuals from whom recommendations can be obtained, to:

Dr. Ronald Dubner, Chair
Department of Oral and Craniofacial Biological Sciences
Dental School
Room 4-A-11
University of Maryland at Baltimore
666 W. Baltimore Street
Baltimore, Maryland 21201

We especially encourage women and minorities to apply. The University of Maryland is an AA/EEO/ADA employer.

POSTDOCTORAL FELLOWSHIPS AVAILABLE

The Center for Insect Science, through a training grant from the National Institutes of Health, is offering three to four postdoctoral fellowships on the interface between molecular biology and the biochemistry, physiology, neurobiology, genetics, and ecology of insects. Appointments are for two years, depending on availability of funds and satisfactory performance. In addition to a stipend, fellows receive funds to support their research. Fellows will also be encouraged to develop their own ideas in an atmosphere that is supportive, but that demands independent thinking and collaboration with colleagues. Applicants must have a Ph.D. degree, and according to the terms and conditions of the grant, must be U.S. citizens or permanent residents. Candidates with previous NRSA support should note the statutory limitation of three years total aggregate support. Application deadline: April 15, 1995 or until positions are filled.

To apply, please send an introductory cover letter with a statement of research interests, curriculum vitae, and names of three references to:

Dr. Edmund A. Arbas, Chair
Search Committee
Center for Insect Science
Life Sciences South, Room 225
University of Arizona
Tucson, AZ 85721

Applications from women and members of minority groups are particularly encouraged. The University of Arizona is an Affirmative Action/Equal Employment Opportunity/ADA Employer.
CAREER OPPORTUNITIES

Pfizer Inc, a Fortune 100 pharmaceutical company, can offer you a world of challenge and opportunity where you can make a significant contribution to the research and development of exciting new products to be introduced in the coming decades...and the new century. Challenging and rewarding opportunities exist for:

- **PhD Research Scientists**
  - Analytical Chemistry
  - Computational Biology
  - Diabetes & Obesity
  - Drug Metabolism
  - Food/Nutrition
  - Immunology
  - Molecular Biology
  - Osteoporosis
  - Pharmacokinetics
  - Clinical Research
  - CRA's (Groton based)
  - Regional CRA's (Boston, Los Angeles, New York City)
  - Biostatisticians
  - Clinical Programmers

In addition to a stimulating environment, we offer a competitive compensation and flexible benefits package, including relocation assistance to our southeastern shoreline community. Please submit CV or resume (indicating AD#1010) suitable for electronic scanning (i.e., eliminate italics, bullets, bolds, underlines, and staples) to: Manager of Employment (AD#1010), Pfizer Inc, Central Research Division, Eastern Point Road, Groton, CT 06340.

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

NEW PRODUCTS DISCOVERY

**Director, Pediatrics**
**Director, Geriatrics**
San Francisco Bay Area

Nicoderm®, Procardin®X*, Estraderm®, Testoderm®... some of the most recognizable products in the pharmaceutical industry. We're ALZA, the company that developed these popular products. If you would like to participate in the most exciting breakthroughs in pharmaceutical therapy, join ALZA today.

We have two positions available for individuals to investigate high priority therapeutic/patient categories of drugs. The objective will be to find optimal drug delivery candidates in the pediatric and geriatric fields for ALZA technological expertise. You will present viable product candidates to ALZA's New Products Review Committee. An MD, PharmD or equivalent advanced degree is required, along with 3-5 years' pharmaceutical industry experience in drug development, clinical pharmacology, or similar field. Sub-specialty training in pediatrics/geriatrics internal medicine or clinical pharmacology is preferred but not necessary.

For these San Francisco Bay Area positions, please send your resume to ALZA, Human Resources, 950 Page Mill Rd., P.O. Box 10950, Palo Alto, CA 94303-0950. Fax (415) 494-5115 or call (415) 494-5214 or our TDD line at (415) 494-5003. We are pleased to be an equal opportunity employer and encourage applications from qualified persons with disabilities. All trademarks are registered to their respective companies.

The Integrated Approach To Brain Disease

Trophix Pharmaceuticals, Inc. is a biopharmaceutical company devoted to developing novel therapeutics for neurological and neuropsychiatric disorders by integrating the latest advances in cell and molecular neurobiology, pharmacology and medicinal chemistry. We currently seek a number of highly motivated individuals to join our drug discovery team.

MOLECULAR PHARMACOLOGY

**Research Scientist**

The successful candidate will develop and implement high-throughput screening assays employing cell culture models, working closely with Medicinal Chemistry. Requirements include a Ph.D. in Pharmacology, Biochemistry or Neuroscience, Post-Doctoral training, and 3-5 years' industrial experience in drug screening (essential). Preference will be given to candidates with extensive experience in mammalian cell culture, radioligand binding and second-messenger assays.

**Research Associate**

Candidates should possess a BS/MS in Biology; other requirements include a working knowledge of receptor binding and second-messenger assays (e.g., PI turnover, CAMP, ELISA), experience with mammalian cell culture, and familiarity with computer spreadsheets and data analysis programs. Industrial experience, especially in drug screening, is preferred.

ELECTROPHYSIOLOGY

**Research Scientist**

We seek an individual with extensive experience recording from mammalian cells in cell culture, and experience in channel and receptor physiology. The successful candidate will have a Ph.D. and 2-4 years Post-Doctoral training. The project involves investigating the mechanism of action of novel channel blockers and will require close interactions with Pharmacologists and Medicinal Chemists.

BIOINFORMATICS

**Scientist**

We seek an individual with experience in implementing, managing and supporting a complete informatics system. Tasks will include sample management/tracking, sequence similarity search and analysis and sequence database management. The successful candidate will interact daily with Cellular and Molecular Biologists, thus preference will be given to individuals with a working knowledge of molecular biology and/or neuroscience. Industry experience is preferred.

SYNTHETIC ORGANIC CHEMISTRY

**Research Scientist**

The successful candidate will have a Ph.D. in Chemistry and Post-Doctoral experience, with a solid background in the multi-step synthesis, isolation and structural determination of complex organic compounds. Preference will be given to individuals with expertise in structure-based rational drug design and synthesis of small molecule libraries.

**Research Associate**

Candidates should possess a BS/MS in Chemistry with at least 2 years' full-time bench experience, preferably in the pharmaceutical industry. Trophix is located in South Plainfield, New Jersey, approximately 40 minutes from New York City. Send your resume along with salary history and references to: Trophix Pharmaceuticals, Inc., 40 Creekwood Road, South Plainfield, NJ 07080, Attn: Human Resources.

TROPHIX PHARMAcEUTICALS, INC.
### New Program Announcement

**Biotechnology**

**Bachelor of Science Degree**

Thomas Jefferson University, an academic health center in Philadelphia, is pleased to announce the inauguration of its bachelor of science degree in biotechnology. The first class will matriculate in September, 1995.

Under the auspices of the College of Allied Health Sciences, the University’s undergraduate division, the biotechnology program is offered by the Department of Laboratory Sciences. Students enter this two-year program as college juniors having already completed two years at another accredited college or university. Graduates are prepared not only for entry-level positions in biomedical research but also for graduate programs in molecular biology, immunology, genetics and related fields.

The curriculum includes didactic, laboratory and practical research experience in immunohemistry and immnodiagnostics; recombinant DNA and related molecular amplification techniques; cell sorting, flow cytometry, and other digital imaging methods; protein chemistry, molecular modeling, and chromatographic techniques; and cell and tissue culture.

For information about admission, call 1-800-522-2644 in Pennsylvania; 1-800-247-6933 outside Pennsylvania but in the U.S.; 215-955-8890 outside the U.S.

For other information about the program, call program director, Lydia McMorrow, Ph.D. at 215-955-0822. Or write: Thomas Jefferson University, 130 S. 9th Street, Philadelphia, PA 19107-5233.

### COLLEGE OF AGRICULTURAL AND ENVIRONMENTAL SCIENCES

**University of California, Davis**

Davis, CA 95616

Positions are 9-month tenure track appointments. Twelve-month term employment will be offered and continued based upon academic personnel review.

Assistant/Associate/Full Professor and Agronomist in the Agricultural Experiment Station, specializing in cropping systems, agro-ecology, soil, and international agricultural development. Develop a comprehensive research program on the analysis of production systems evaluating various management strategies of single and multiple cropping patterns. Provide a leadership role in addressing crop production issues relevant to California, national and international systems. Teach at the graduate level and contribute at the undergraduate level. Academic advising and graduate student training is expected. Apply to: Dr. D. William Rains, Committee Chair, Dept. of Agronomy and Range Science. Position open until filled. To ensure consideration, submit by May 1, 1995.

Assistant Professor and Agronomist in the Agricultural Experiment Station, specializing in quantitative ecology. Research the study and application of ecological principles and processes to enhance natural resource use and environmental compatibility in agricultural systems. Graduate and undergraduate teaching in quantitative methodology of agricultural and ecological systems. Apply to: Dr. Shu Geng, Committee Chair, Dept. of Agronomy and Range Science. Position open until filled. To ensure consideration, submit by May 1, 1995.

Assistant Professor and Agronomist in the Agricultural Experiment Station, specializing in wheat genetics and plant breeding. Develop a comprehensive modern genetics research program that emphasizes either molecular or quantitative approaches. Teach a graduate course in cropping systems and train graduate students. Apply to: Dr. Larry R. Teuber, Committee Chair, Dept. of Agronomy and Range Science. Position open until filled. To ensure consideration, submit by April 21, 1995.

### BIOTECHNICAL / PHARMACEUTICAL JOB FAIRS

**La Jolla, California**

**Embassy Suite Hotel**

**Cambridge, Massachusetts**

**M.I.T. Stratton Center**

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Interviewing Companies to date—

- DepoTech
- Ares
- Gen-Probe
- Serono Laboratories
- Systemix
- Allergan
- Centaur Pharmaceuticals
- Alpha Therapeutics
- Clintrials
- Baxter
- FDA—Center For Drug Evaluation & Research
- FDA—Center For Biologics Evaluation & Research

**CAREER CONNECTION**, the nation's leader in industry specific Job Fairs, provides a unique forum in which Biotechnical employers interview in private suites, experienced candidates with diversified levels of skill in: Biotechnical and Pharmaceutical Research & Development, Manufacturing, QA/QC, Validation, Marketing & Sales, Clinical Research, Regulatory Affairs, and many other positions in biology and chemistry. Candidates can pre-register by sending or faxing their resume to CAREER CONNECTION. Attending Candidates should bring extra resume copies and please dress in business attire. Admission is free. For more information please call:

**CAREER CONNECTION**

Dept. SM-395, P.O. BOX 7451, Thousand Oaks, CA 91359
(805) 374-8777 or (800) 967-0020 FAX (805) 494-1870
POSTDOCTORAL FELLOWSHIPS
IN MOLECULAR AND CELL BIOLOGY AT THE NIH

Postdoctoral Fellowships are available in the Genetics and Biochemistry Branch, NIDDK, NIH. The Branch is similar to a small academic department and has excellent laboratory facilities. The intramural program of the NIH offers an outstanding research environment. The Branch is located on the main intramural campus of the NIH in Bethesda, Maryland, a 20 minute ride from Washington, D.C. Applications are invited from individuals of the highest caliber with Ph.D., M.D., or M.D., Ph.D. degrees. Physicians may participate in either the NIH Interinstitute Endocrine or the NIH Interinstitute Medical Genetics Training Programs. Current research interests of the staff with positions include:

- The targeting of proteins to the secretory pathway in both eukaryotes and prokaryotes is being studied using a combination of in vivo and in vitro approaches. Current projects focus on the mechanisms of signal sequence recognition, the regulation of protein targeting by a new family of GTPases, and the function of recently discovered prokaryotic homologs of components of the eukaryotic sorting machinery (Harris Bernstein)

- Biochemistry and molecular biology of homologous recombination in eukaryotes and prokaryotes, the structure and function of novel complex DNAs, new methods for gene mapping and cloning (e.g. RARE) and gene targeting in mammalian cells, gene rearrangements in eukaryotes and novel approaches to gene therapy (Dan Camerini-Otero)

- The role of DNA structure in homologous recombination is being investigated. We are studying the kinetics of DNA branch migration and the role of recombination proteins in promoting branch migration. We are also interested in characterizing other enzymes involved in recombination and repair in eukaryotes (Peggy Hsieh)

- Molecular basis of mechanisms involved in hormonal and developmental control of gene expression. The immediate focus is on targeting factors of the steroid/thyroid hormone receptor gene superfamily. Future work will use homologous recombination to target genes of regulatory nuclear proteins (Vera Nikodem)

- Current projects involve gene targeting by homologous recombination to generate mouse models of lysosomal storage diseases, development of gene therapy for treatment of neurodegenerative disorders, and investigation of lysosomal enzyme structure and function (Rick Proia)

- The functional role of a family of neural-specific transcription factors, class III POU domain genes, is being investigated using a combination of molecular and embryological approaches in vertebrate embryos. The regulation of anterior-posterior patterning in the early vertebrate embryo is also under investigation (Sheryl Sato)

Interested candidates should send a letter stating their interests, their curriculum vitae and list of publications, and the names and addresses of three references to:

Dr. R. Daniel Camerini-Otero, Chief, Genetics and Biochemistry Branch, Building 10, Room 9D-15, National Institutes of Health, Bethesda, Maryland 20892; Telephone: 301-496-2710
NEW POSITION VACANCY

Founding Dean, Faculty of Pharmacy
The Health Sciences Center, Kuwait University

Health Sciences Center, Kuwait University, invites applications for the position of Dean, Faculty of Pharmacy. This is a new position established to provide leadership in the development of a new Faculty of Pharmacy. The Health Science Center includes the new Faculty of Pharmacy, a new Faculty of Dentistry, the Faculty of Medicine and the Faculty of Allied Health Sciences and Nursing. With the completion of the present expansion program in 1998, all faculties will be accommodated in a medical center complex adjacent to a major reaching hospital.

Candidates for Dean should be prepared to take lead responsibility for organization of a new faculty and a new, 5 year professional degree program, including a new curriculum. The selected candidate will have administrative responsibilities for academic, research, and service functions of the faculty, including:

- Faculty and University administration according to the policies of governance of the University and Ministry of Education/Higher Education
- Coordination of programs with concerned Ministries, agencies and professional societies
- Recruitment of Chairpersons and faculty members in accord with the University-HSC Five Year Development Project
- Curriculum development for a 5-year professional degree program in Pharmacy, in coordination with the Faculty of Science and Ministry of Public Health
- Promotion of research to support HSC's graduate programs and to advance professional development of academic staff. Leadership for post-graduate training and in-service education.

The position of Dean carries the academic rank of Professor and candidates must satisfy the criteria for professorships at Kuwait University. Candidates should possess a Ph.D, or its equivalent, and should present a history of sustained research publications. Experience in academic administration as Chairman and Dean is preferred with 10-15 years combined academic experience, including 3-6 years as Professor.

Conditions of employment:

Competitive salary and benefits, including sixty (60) days paid annual leave, a paid conference annually, gratuity, furnished accommodation, electricity and water free of charge, and free medical care. Free first class annual round trip air tickets to country of citizenship or permanent residence. Education for three (3) dependent children in Kuwait is provided from elementary through high school. There is no taxation and currency is transferable without restriction.

Applicants should submit a letter of intent, curriculum vitae (2 copies), and names and addresses of three (3) referees. Review applications will begin February 1, 1995, and continue until the position is filled. Employment could begin earlier, but not later than January 1, 1996.

Please mail applications to:

Vice President, Health Sciences Center
Chairman, Search Committee, Dean of Pharmacy
Kuwait University
P. 0. Box 24923
Safat 13110
KUWAIT
RESEARCH SCIENTISTS

Astra is a pharmaceutical company in a phase of rapid growth. The company's operations, which are highly international, consist in research, production and marketing of pharmaceuticals through subsidiaries, agents and licensees all over the world. The number of employees is about 14,400, of whom 5,300 in Sweden. Sales in 1994 amounted to SEK 28 bn (USD 3.65 bn).

ASTRA ARCUS AB
Astra Arcus, a research company in the Astra Group, is engaged in R & D in primarily two areas—CNS and Infection. Astra Arcus employs some 430 people and the company is located in Södertälje, 35 kilometres south of Stockholm.

Immunology, Preclinical R & D, Astra Arcus AB is seeking an immunologist to join the Department of Immunobiology, and a molecular biologist to join the Department of Molecular Biology & Chemistry.

If you would like to take part in the development of innovative immunological research, this is a unique opportunity. You will join a team of scientists engaged in explorative research aiming at the development of new drugs, mainly in the field of autoimmune diseases. Experience of the pharmaceutical industry is advantageous. The position requires good ability to co-operate within a group.

IMMUNOLOGIST
You will have a Ph.D. preferably with post doctoral experience in the field of immunology, with the emphasis on animal models of autoimmune diseases and on experimental animal systems (e.g. transgene, SCID, knockout). You will be a specialist within your particular area and have good technical skills as well as theoretical knowledge. Cellular as well as molecular immunology are equally familiar to you.

MOLECULAR BIOLOGIST
We are looking for an experienced scientist to actively pursue research within the area of eucaryotic molecular biology. Suitable background is a Ph.D. exam with post doctoral experience and a broad practical knowledge of techniques in molecular biology as well as skills in cloning and expression of proteins in eucaryotic cells.

Further information about the position as immunologist can be obtained from Dr Carl Harald Janson, tel +46-8-553 273 47 or Dr Mats Ferm, tel +46-8-553 286 87, and information on the position as molecular biologist can be obtained from Dr Kjell Stenberg, tel +46-8-553 260 93 or Dr Lars Janzon, tel +46-8-553 267 45.

We want your application before March 31, 1995 to Astra Arcus AB, Human Resources, Marianne Jonehed, S-151 85 Södertälje, Sweden.
DIRECTOR OF THE MRCLABORATORY OF 
MOLECULAR BIOLOGY, CAMBRIDGE

The MRC wishes to appoint a scientist with a distinguished international reputation in basic research to the position of Director of the MRC Laboratory of Molecular Biology in Cambridge on the retirement of the current Director Professor Sir Aaron Klug FRS in September 1996.

The Laboratory is known world-wide for its outstanding research record. The Director provides overall leadership and strategic direction to the Laboratory, as well as carrying out his/her own research. The Laboratory comprises around 50 tenured scientific staff, 50 short term post doctoral scientists, plus technical, administrative and secretarial support staff; the total core complement is around 200 posts. In addition, the Laboratory acts as host to a large number of visiting scientists and research students who make important contributions to the overall research programme. The scientific portfolio is covered within four Divisions: Structural Studies, Protein and Nucleic Acid Chemistry, Cell Biology and Neurobiology.

The Laboratory is well served in terms of workshops, computing facilities and networks, and other routine research requirements. The accommodation is purpose built and located within the MRC Centre, Hills Road, Cambridge, which provides centralised administrative services to the Institute and to other local MRC establishments.

Close links are maintained with Cambridge University, the Clinical School, local MRC Units and the MRC Interdisciplinary Research Centre in Protein Engineering. In addition, there is a strong track record of interactions with industry.

The salary is negotiable in the range for MRC Special Appointments (up to £57,000 pa) but more may be available for an exceptional candidate. Assistance towards the costs of relocating to Cambridge will be available.

A job description and other information may be obtained from Dr Diane McLaren, MRC Headquarters, 20 Park Crescent, London WIN 4AL (telephone 0171 636 5422).

Applicants should send a brief outline of their vision for the future strategic direction of the Institute, brief proposals for his/her own research team, an up-to-date curriculum vitae and publications list, plus the names of three referees to Sir Dai Rees, Chief Executive of the Medical Research Council at the above address, no later than 20 April 1995.
Astra is a pharmaceutical company in a phase of rapid growth. The company’s operations, which are highly international, consist in research, production and marketing of pharmaceuticals through subsidiaries, agents and licensees all over the world. The number of employees is about 14,400, of whom 5,300 in Sweden. Sales in 1994 amounted to SEK 28 bn (USD 3.65 bn).

Astra Arcus AB
Astra Arcus, a research company in the Astra Group, is engaged in R&D in primarily two areas—CNS and Infection. Astra Arcus employs some 430 people and the company is located in Södertälje, 35 kilometres south of Stockholm.

A postdoctoral research position is immediately available for studies related to apoptosis in autoimmune diseases at the department of Immunobiology, Immunology, Preclinical R&D, Astra Arcus AB. Suggested topics of research include, but are not limited to:

- the regulation of apoptosis in autoreactive immune cells
- the importance of organ specific survival factors in the induction of autoimmune processes
- the pathology of apoptotic mechanisms

You will join a team of researchers engaged in explorative research aiming at the development of new drugs, mainly in the field of autoimmune diseases. Your work will not be dependent on ongoing projects and will provide opportunities for a creative individual. Collaboration with external academic groups as well as the publication of results is encouraged. The position is for 2 years, which might be extended.

Further information of the position can be obtained from Dr. Carl Harald Janson, telephone +46-8-553 273 47, Dr. Mats Ferm, telephone +46-8-553 286 87 or Dr. Alf Larsson, telephone +46-8-553 271 30; FAX: +46-8-553 270 60. Send application with curriculum vitae to ASTRA ARCUS AB, personnel, S-151 85 Södertälje, Sweden.

We want your application before March 31, 1995, to Astra Arcus AB, Human Resource, Marianne Jonehed, S-151 85 Södertälje, Sweden.
NERC Centre for Population Biology

Postdoctoral Researcher

We seek a theoretical or experimental ecologist to complement our broad but focused research programme. The position is open to well-qualified applicants in any field of ecology relevant to the Centre. Key areas are:

- Aquatic ecology (eg algae-zooplankton-microparasite foodwebs, dynamics and co-evolution).
- Microbial ecology (eg ecosystem processes in model terrestrial communities in the Ecotron).
- Conservation ecology and global environmental change (eg habitat fragmentation and responses to climate change).
- Experimental population dynamics (any group of organisms).

Applicants should have a PhD and relevant research experience. A 2-year contract is offered, with the possibility of renewal. Salary range £13,941 - £20,953.

Further details from Miss C Challis, tel 01344 294475; Centre for Population Biology, Imperial College at Silwood Park, Ascot, Berks SL5 7PY, UK.

Applications to be received by 21 April 1995.

The College is striving towards Equal Opportunities.
Enzymologist

Arris Pharmaceutical Corporation is a growing biopharmaceutical company dedicated to the rapid development of novel human therapeutics. We are committed to an innovative multi-disciplinary & team-oriented approach that encourages both creativity and collaboration. We currently have an exceptional opportunity for an experienced Enzymologist.

Candidates must have 3-5 years’ post-doctoral experience in enzyme kinetics, inhibitor characterization, protein purification, spectrophotometric and fluorometric assay methods. Good communication skills and the ability to interact in a highly interdisciplinary environment are expected. Supervisory experience and familiarity with high-throughput assay methods are pluses.

Arris offers generous salaries & benefits, the potential for career advancement and the opportunity to make significant scientific contributions. For consideration, please send resume & cover letter to: Arris Pharmaceutical Corp., Human Resources, Attn: Job# S0317-E, 385 Oyster Point Boulevard, Suite 3, South San Francisco, CA 94080.

EOE

MOLECULAR BIOLOGISTS

There’s no better place to pursue a research career than with CIBA, a company recognized worldwide for innovative drug therapies that fulfill unmet medical needs. As part of an ongoing commitment to research excellence, we have several opportunities for molecular biologists with proven research experience.

Join a world-class research effort on the forefront of discovery

Working with a multidisciplinary team of scientists involved in drug discovery research, you will use your knowledge of molecular biology to identify, clone, express and purify recombinant proteins. Qualified candidates must have experience in cloning, DNA sequencing, recombinant protein expression and similar processes. A background in gene isolation, protein purification and cell culture techniques will be considered an asset. A Bachelor’s degree and laboratory experience are required; a Master’s is preferred.

We offer a competitive salary, excellent benefits and an environment designed for professional development. For confidential consideration, please send your resume with salary requirements to: Staffing Center, Ciba Pharmaceuticals Division, Department NJ-395-8, 556 Morris Avenue, Summit, NJ 07901. We are an equal opportunity employer M/F/D/V.

Preparing for the future

CIBA

Postdoctoral Position in Neural Development and Function

THE SALK INSTITUTE

Position is available to study the roles of several signaling pathways in neural development and function by various approaches including gene-targeting technology. Areas of current interest include neurotrophins and their receptors (Cell 69, 737-749; Science 263, 1447-1449; Nature 366, 147-150; Cell 77, 503-512), and corticotropin-releasing factor and their receptors, and glia growth factor receptors. A doctoral-level degree is required, and a strong background in neurobiology, neuroendocrinology, and/or molecular biology is preferred.

Applicants should send curriculum vitae, statement of research interests and experience, and names of three references to: The Salk Institute, Attn: Dr. Kuo-Fen Lee, 10010 N. Torrey Pines Road, La Jolla, CA 92037. The Salk Institute is an Equal Opportunity/Affirmative Action Employer.

As a world technology leader with a patent portfolio that ranks second to none (we were awarded 1,008 new U.S. patents in 1993 alone), Eastman Kodak Company offers innovative thinkers a professional environment to grow. Our new initiatives in the Scientific Imaging Systems Unit offer opportunities in the following areas:

SCIENTIST (New Haven, CT)

This position will participate as a member of the Research and Development team creating digital documentation, storage and retrieval systems for the scientific market. We require a minimum of a BS with 3 years of broad experience using IBM/Apple computers, NIH Image/PhotoShop software, optical media hardware with proficiency in digital imaging, optics and photo science as applied to laboratory techniques for scientific imaging; Life Science background a plus.

TECHNICAL SUPPORT (Rochester, NY)

The successful candidate will function within the Customer Assistance Group, providing technical and applications support to customers as well as feedback to internal development, planning and marketing groups. The selected individual will be required to communicate with customers on a daily basis. We require a BS or MS with a working knowledge of Molecular Biology/Life Science techniques as well as hardware and software proficiency to support digital document storage retrieval systems for the scientific laboratory market.

Both positions offer Eastman Kodak’s salary/benefits package and a stimulating professional environment. Relocation assistance is available. For confidential consideration, please send your resume to: Professional Staffing Dept. SNC, EASTMAN KODAK COMPANY, 343 State Street, Rochester, NY 14650-1139. Eastman Kodak is an equal opportunity employer. We invite people with disabilities to notify us of their need for accommodations.

Kodak
TENURE-TRACK FACULTY POSITION
ASSISTANT PROFESSOR
Department of Biochemistry and Molecular Biology
University of Kansas Medical Center

Candidates should have a Ph.D. or M.D./Ph.D. in Biochemistry, Molecular Biology, or a closely related field. Qualified applicants with an M.D. degree will also be considered. Applicants should have research experience in the area of gene regulation/gene structure. Applicants with experience in gene targeting, transgenic technologies, genetic manipulation, and/or protein-DNA interactions are preferred. The successful candidate will have made significant scientific contributions and will be expected to develop a well-funded research program.

Teaching responsibilities include courses at both the undergraduate and graduate levels. The department currently has eighteen tenured-track faculty and nine research track faculty with research interests in two major areas: structural biochemistry and gene expression. There are strengths in this department and at this Medical Center in reproductive biology, cell and developmental biology, molecular matrix biology, neuroscience, virology and immunology. The Medical Center is currently recruiting an endowed professor in Molecular Medicine and the successful candidate will have an opportunity to interact with this person. Send curriculum vitae and names of three references to: Chair, Search Committee, Department of Biochemistry and Molecular Biology, University of Kansas Medical Center, Kansas City, KS 66160-7421. Review of applications will begin as soon as they are received and will continue until this position is filled. The University of Kansas is an Equal Opportunity/Affirmative Action Employer.

ASSISTANT PROFESSOR OF BIOLOGY
TENURE TRACK—FALL 1995

The Marist College Division of Science invites applications for a tenure-track position at the level of ASSISTANT PROFESSOR of Biology beginning in the fall of 1995. Qualified candidates must have completed a Ph.D. degree and have teaching experience in undergraduate education. Candidates are expected to have a commitment to excellence in teaching and to establish a program of research that involves undergraduate students. Preference will be given to candidates with previous college-level teaching experience.

Teaching responsibilities include: upper-level courses in genetics, microbiology, cell biology and molecular biology; freshmen-level general biology courses for majors; and biology courses for non-majors.

Marist College is a four-year, independent liberal arts institution centrally located in the scenic and historic Hudson Valley River Valley, less than two hours north of New York City. The college has a student body of approximately 1600.

Please submit a resume, a description of teaching goals and research plans, and three letters of recommendation. Review of credentials will begin March 21, 1995. Credentials will be accepted until the position is filled. Please address to: Dr. Andrew Molloy, Division of Science, Marist College, MPO Box 905, SCI-BIO, Poughkeepsie, NY 12601

Marist College is an Equal Opportunity/Affirmative Action Employer.

Environmental Scientists: Tenure-track position at the ASSISTANT PROFESSOR level (Ph.D. required) to start in September 1995. Eckerd College seeks qualified individuals to contribute to a newly formed, interdisciplinary Environmental Education Program. Candidates will use techniques: a) interdisciplinary (e.g., environmental geology; marine or estuarine biogeochemistry; hydrology; environmental toxicology); b) familiar with aspects of resource management and/or policy; c) excellent teachers; d) active scientists who intend to maintain productive research programs, ideally involving undergraduate students; and e) strongly committed to environmental issues. Experience with the environmental consulting field and familiarity with political and regulatory entities would be helpful. Candidates must have an M.S. or Ph.D. in Environmental Science or related discipline. This is a new faculty position in the College’s General Education program. Please send curriculum vitae, teaching evaluations (if available), graduate transcripts and three letters of recommendation to: Dr. Greg B. Brooks or John E. Reynolds III, Marine Science Department, Eckerd College, 4200 54th Avenue South, St. Petersburg FL 33709. The Committee will begin to review applications after 15 April 1995. An Equal Opportunity Employer. Minority candidates are encouraged to apply.

RESEARCH POSITION
ASSISTANT PROFESSOR
DEPARTMENT OF DERMATOLOGY

The Department of Dermatology is seeking applications for a TENURE-TRACK FACULTY position at the assistant to associate professor level to establish a basic science laboratory. Areas of interest include: drug design, cell biology or biochemistry. The successful candidate will be expected to develop a strong research program and to supervise graduate and/or postdoctoral students. Applicants must have a Ph.D. or M.D./Ph.D. degree.

Please send curriculum vitae with a complete bibliographic, representative reprints, description of research interests and the names of three references to: Dr. Evan R. Farmer, M.D.

Department of Dermatology
550 North University Boulevard
Suite 3240
Indianapolis, IN 46202

Indiana University is an Equal Opportunity/Affirmative Action Employer.

ASSISTANT/ASSOCIATE PROFESSOR OF BIOLOGY
DEPARTMENT OF BIOLOGY
University of New Mexico, School of Medicine

Applications are invited for two TENURE-TRACK FACULTY positions in the Department of Microbiology. Candidates must have a Ph.D. or equivalent postdoctoral experience, and a publication record indicating research productivity. Research experience in the study of immunological aspects of infectious disease, the potential to participate in collaborative research within the School of Medicine, and teaching experience in the preparation of the next generation of medical students is desirable. The appointment is at the Assistant Professor level and the salary is commensurate with the candidate’s experience and qualifications.

Candidates should submit a letter including a description of research interests, plans and support, a curriculum vitae, and the names, addresses and telephone numbers of three (3) references. Materials should be mailed to: Dr. Jerry X. Griffith, Chair, Search Committee, c/o Dolores Tarin, Department of Microbiology, University of New Mexico, Albuquerque, NM 87131 for receipt by May 8, 1995. Telephone: 505-277-3814; FAX: 505-277-6022. The University of New Mexico is an Equal Employment Opportunity/Affirmative Action Employer.
**Research Scientist – Cell Biology**

*Rhône-Poulenc Rorer Research & Development, a world leader in pharmaceutical research, has an opportunity available in the Biology Department of our Collegeville, Pennsylvania research site.*

To qualify, you should have a Ph.D with 1-3 years of post-doctoral research experience in the cellular biology of hematopoietic systems/bone marrow stromal cell lineages. The ability to isolate and characterize clonal populations of cells as well as prior experience with primary cultures is required. A working knowledge of intracellular techniques such as measurement of intracellular calcium and microinjection is preferred.

Rhône-Poulenc Rorer offers a highly competitive salary, excellent benefits, a challenging work environment, and opportunities for advancement. Qualified candidates should send their resume including salary requirements to: Rhône-Poulenc Rorer Research & Development, P.O. Box 1200, Mail Code H37, Dept. 94R-132, Collegeville, PA 19426-0107. Equal Opportunity Employer, M/F/D/V.

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**Excellence in Biopharmaceutics**

*Cortech, Inc.* is a publicly-held biopharmaceutical company in Denver, Colorado committed to developing new therapies for inflammatory and immunological disorders. Cortech has two opportunities available in our chemistry department. The successful candidates will join a multi-disciplinary team devoted to structure-based drug design, thereby adding their expertise to that of our medicinal chemists, biochemists and X-ray crystallographers.

**Computational Chemist**

The ideal candidate will possess a Ph.D and have expertise in modeling enzyme-inhibitor interactions. Extensive experience in applied molecular modeling with knowledge and experience in other areas of computational chemistry preferred.

**Analytical Chemist/NMR Spectroscopist**

The ideal candidate will possess a Ph.D in Analytical Chemistry with postdoctoral and practical experience in modern 2D and 3D techniques related to high field Nuclear Magnetic Resonance spectroscopy. Preference will be given to candidates with experience in the art of structural and conformational determination as it relates to drug discovery. Familiarity with NMR techniques associated with metabolic studies necessary.

*Cortech, Inc.* offers a competitive salary, full benefits, stock options and relocation assistance. Please send resume with salary requirements to: Cortech, Inc., Attn: Human Resources, 7000 N. Broadway, Denver, CO 80221. Fax: 303-666-2701. No phone calls please: EOE.

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**Research Scientists (Crop Protection)**

DuPont Agricultural Products in Newark, Delaware is seeking highly motivated and creative individuals to join our multidisciplinary Insect Biochemistry and Physiology Group working on the discovery and development of new crop protection products. Successful candidates should be able to work and communicate effectively in a diverse group of biologists, entomologists, chemists, biochemists, molecular biologists, and toxicologists.

**METABOLISM CHEMIST/TOXICOLOGIST**

We are seeking a metabolism chemist/toxicologist whose responsibilities will include the isolation and identification of metabolites of experimental crop protection chemicals from insect, animal, plant, and soil matrices. A Ph.D. in analytical chemistry, toxicology, biochemistry or equivalent science is required. Post-doctoral or industrial experience is desirable. Of particular interest is experience with LC/MS. A working knowledge of insect and mammalian biochemistry/toxicology is also desirable.

**INSECT ELECTROPHYSIOLOGIST/BIOCHEMIST**

A significant component of our insecticide discovery program involves research focused on the elucidation of mechanisms of action of crop protection chemicals. An opening is now available for a postdoctoral level insect electrophysiologist/biochemist in support of this effort. The responsibilities for this position include basic research on the mode of action of new compounds and the identification and pharmacological characterization of novel biochemical processes effecting insect control. A Ph.D. in insect biochemistry/physiology with demonstrated expertise in insect electrophysiology and biochemistry is required.

**PLANT PHYSIOLOGIST/BIOCHEMIST**

We also are seeking a plant physiologist/biochemist. The person filling this position will be expected to contribute to an understanding of the biochemical and physical dynamics of movement and metabolism of experimental insect control agents in selected crops. A Ph.D. in plant physiology/biochemistry or equivalent science and a strong background in analytical chemistry, LC/MS, and related technologies is required. An understanding of plant/insect interactions is desirable. This individual will also be an integral part of a larger team conducting similar research for plant disease and weed control.

**VIROLOGIST**

We are seeking a molecular virologist to join a group of scientists working on the development of genetically modified baculoviruses for the control of insect pests in agriculture. This position requires the development of a program focused on gene regulation and expression relative to enhanced insect control, e.g., viral stability, host range, and replication. A Ph.D. or equivalent experience in virology with a strong background in molecular or cell biology is required. At least 5 years of industrial and/or academic experience and a working knowledge of insect pathology is highly desirable. Strong leadership and effective communications skills are required.

**BIOCHEMIST**

The control of insect pests by natural endemic baculoviruses is generally too slow to provide effective crop protection. Genetic modification of these selective viruses has therefore focused on the cloning and expression of insect specific peptides to enhance their activity. The individual filling this position will be expected to contribute to the isolation, purification, and characterization of insect specific toxins or regulatory peptides to be expressed in baculoviruses for control of insect pests in agriculture. In addition, isolation of these expressed toxins for further characterization, e.g., pharmacokinetics, mode of action, toxicity, etc., is expected. A Ph.D. in biochemistry or closely related science with demonstrated expertise in protein isolation and characterization is required. Experience in toxicology and immunology is highly desirable.

We are also accepting resumes from scientists with a bachelor's degree in chemistry, biochemistry, or molecular biology who wish to be considered for openings in our Discovery Research programs.

Interested candidates are invited to forward their resumes and a list of references to:

Human Resources
P.O. Box 5633
Newark, DE 19714-5633

DUPONT IS AN EQUAL OPPORTUNITY EMPLOYER

AGRICULTURAL PRODUCTS
ASSOCIATE/ASSOCIATE PROFESSOR
PHARMACEUTICAL SCIENCES

The Washington State University College of Pharmacy, Department of Pharmaceutical Sciences has available an annual tenure-track appointment at the ASSOCIATE/ASSOCIATE PROFESSOR level. This appointment, effective Fall 1995, is a 9-month position. A Ph.D. in pharmacy or a related discipline is required. Postdoctoral experience in immunologic/allergic disease is preferred. The position requires the development of research in the area of immunology and teaching of courses in the graduate program. The successful candidate will be expected to develop a competitive research program, establish a sizeable extramural research program, and teach undergraduate and graduate students. Applicants for this position should submit a curriculum vitae, a statement of research interests, and three letters of recommendation to: Dr. Gary A. Trelfa, College of Pharmacy, Washington State University, Pullman, WA 99164-6510. Telephone: 509-335-4750. Washington State University is an Equal Opportunity/Affirmative Action Educator and Employer. Members of ethnic minorities, women, Vietnam-era or disabled veterans, persons of disability, and/or persons 40 and over are encouraged to apply.

ASSOCIATE PROFESSOR
Department of Forest Resources Management
(Position in Urban Management)

Applications are invited for a tenure-track position in Forest Resources Management at the ASSOCIATE PROFESSOR level to support the new Faculty of Forest Resources Management at the University of British Columbia. This position is subject to final budgetary approval. The successful candidate will be expected to develop and teach undergraduate and graduate courses which focus on conservation policy and management of forested lands and watersheds, participate in research, and achieve extramural funds. Postdoctoral experience in related research is required. Strong interpersonal skills and strong oral and written communications skills are required. The closing date for applications is May 30, 1995. Letters of application, curriculum vitae, and the names, addresses and telephone numbers of three referees should be sent to: Dr. Gordon Baskerville, Head, Department of Forest Resources Management, University of British Columbia, 270, 2357 Main Mall, Vancouver, BC V6T 1Z4 Canada.

TENURE-TRACK POSITION NO. 151

The Department of Pharmaceutical Sciences at North Dakota State University invites applications for a tenure-track position at the rank of ASSOCIATE PROFESSOR, with appointment beginning July 1, 1995. The successful candidate will be expected to establish an extramurally funded independent research program, teach and direct graduate students, and participate in the graduate program. Active areas of research interest include pharmacology, pharmacokinetics, medicinal chemistry, and related areas. Candidates should have a Ph.D. in one of the pharmaceutical sciences (pharmacology, pharmacometrics, medicinal chemistry or related areas) and at least two years of postdoctoral experience with a strong record of scholarship and experience using state-of-the-art approaches to address problems at the cellular or molecular level. The applicant must also have a strong commitment to teaching, as well as good interpersonal and oral and written communication skills. All qualified individuals are encouraged to apply, particularly those with research interest in drug metabolism, electrophysiology, targeted delivery, or molecular biology. A professional pharmacy degree is desirable, but not required. Applications should include a curriculum vitae, three letters of recommendation, and a brief description of future research plans to: Dr. Stephen T. O'Rourke, College of Pharmacy, North Dakota State University, Fargo, ND 58105. Review of applications begins April 15, 1995, and will continue until a suitable candidate is selected. North Dakota State University is an Equal Opportunity/Affirmative Action Employer.

CARDIAC PHARMACOLOGY
IDAHO STATE UNIVERSITY

The Department of Pharmaceutical Sciences in the College of Pharmacy, Idaho State University seeks outstanding and enthusiastic applicants for a tenure-track faculty position in Pharmacology at the level of ASSISTANT or ASSOCIATE PROFESSOR, effective July 1, 1995. The candidate should have a Ph.D. in Pharmacology or a closely related discipline and should preferably have a background in Cardiac and/or Renal Pharmacology. Ability to teach Cardiac Pharmacology to professional pharmacy and graduate students is essential and to teach Renal Pharmacology to advanced pharmacy students. The successful candidate will be expected to establish a competitive research program in the area of cardiac or renal pharmacology and to actively participate in the graduate program. The candidate is also expected to participate in cardiology and/or in areas which complement the research program of the Department. Applications should include a letter of application, a curriculum vitae, a letter of recommendation, and a statement of research interests. The review of applications will begin April 3, 1995, and will continue until the position is filled. Applications should be submitted to: Dr. James C. Lai, Pharmacology Faculty Search, College of Pharmacy, Idaho State University, Campus Box 8334, Pocatello, ID 83209. Idaho State University is an Equal Opportunity/Affirmative Action Employer and encourages applications from women, minorities and members of underrepresented groups.

ASSOCIATE PROFESSOR
MOLAR BIOLOGIST

A RESEARCH ASSISTANT PROFESSORSHIP is available to develop novel strategies for studying the role of messenger RNA in its nuclear function as it relates to the differentiation and transdifferentiation of growth hormone and prolactin producing cells and the role of cytoplasmic-membrane intermediate lobe in regulating anterior pituitary function. Both rodent and bovine model systems are utilized. We currently study these processes at the single, living cell level by employing a broad spectrum of current and cell strategies which include (but are not limited to) combinations of the following techniques: reverse hemolytic plaque assays for quantifying hormone production, light and video imaging of cells transfected with luciferase-promoter constructs for assessing gene expression in real time, and microinjection (cytoplasmic and nuclear) for selectively introducing modulator of gene expression into single cells. A Ph.D. or substantial postdoctoral experience in molecular biology is required. An outstanding opportunity for a creative scientist to interact in an excellent research environment. Salary and benefits are highly competitive and commensurate with experience. Send curriculum vitae, a brief statement of research interests, and the names, addresses, and telephone numbers of three references to: Dr. L. Stephen Frawley, Department of Cell Biology and Anatomy, Medical University of South Carolina, Charleston, SC 29425-2204. Telephone: 803-792-3526; FAX: 803-792-0664. Women and minorities are encouraged to apply. An Equal Opportunity/Affirmative Action Employer.

ASSISTANT PROFESSOR
BIOLOGY/MICROBIOLOGY

Tenure-Track, Fall 1995

Ph.D. in Molecular Biology with emphasis in Biochemistry, Molecular Biology, or Immunology, preferred, and a demonstrated ability to teach science at the undergraduate level. Teach first-year biology and upper-level courses in biochemistry, immunology, and molecular biology, advise students, and be committed to the development of state-of-the-art teaching and research mechanisms at the cellular or molecular level. The candidate must also have a strong commitment to teaching, as well as good interpersonal and oral and written communication skills. All qualified individuals are encouraged to apply, particularly those with research interests in signal transduction, ion channels, or vascular smooth muscle/membrane physiology. A competitive and desirable position in molecular biology is desirable, but not required. Applicants should submit a curriculum vitae, three letters of recommendation, and a brief description of future research plans to: Dr. Stephen T. O'Rourke, College of Pharmacy, North Dakota State University, Fargo, ND 58105. Review of applications begins April 15, 1995, and will continue until a suitable candidate is selected. North Dakota State University is an Equal Opportunity/Affirmative Action Employer.

ASSISTANT/ASSOCIATE/FULL PROFESSOR

(Deadline extension due to late announcement)

The Center of Marine Biotechnology of the University of Maryland Biotechnology Institute seeks to fill a tenure-track faculty position with a highly qualified researcher in aquaculture and fisheries biotechnology and molecular biology. Preference will be given to exceptional candidates who have published research in the areas of marine transgenics, vertebrate molecular neuroendocrinology, immunology, or developmental biology. Applicants should have a Ph.D. in ASSOCIATE, ASSISTANT, or FULL PROFESSOR levels, and the starting rank of the position will be commensurate with the qualifications of the candidate. Individuals who have demonstrated outstanding research ability should forward a curriculum vitae, a brief description of research plans, and names of three references to: Dr. Tsan Z. Liu, Dean of the School of Medical Technology, Chang Gung University of Medicine and Technology, 259 Wen-Hwa 1st Road, Kewen-Shan, Taoyuan, Taiwan, ROC.

ASSISTANT PROFESSOR
BIOLOGY

CHANG GUNG UNIVERSITY OF MEDICINE AND TECHNOLOGY TAIWAN, ROC

The School of Medical Technology at the Chang Gung College of Medical Technology is seeking applicants for a tenure-track ASSISTANT PROFESSOR position, which will be available starting August 1995. Candidates should have a Ph.D. degree in Microbiology and at least two years of postdoctoral or equivalent experience in a related area. The ability to teach undergraduate Clinical Microbiology and to participate in the teaching of graduate courses is expected. The successful applicant must have an undergraduate degree in Medical Technology or a Medical Technologist license, and have demonstrated excellence in publications. Applicants should submit a curriculum vitae, a brief description of future research plans, and three letters of recommendation by April 15, 1995, to: Dr. Tsan Z. Liu, Dean of the School of Medical Technology, Chang Gung University of Medicine and Technology, 259 Wen-Hwa 1st Road, Kewen-Shan, Taoyuan, Taiwan, ROC.

ASSISTANT PROFESSOR

(Deadline extension due to late announcement)

A Ph.D. in Internal Medicine and Gastroenterology. Applications to: Dr. D. M. Bissell, Liver Center Laboratory, Building 40, Room 4102, St. Vincent Hospital, 444 East Last Street, Baltimore, MD 21202. The University of Maryland is an Equal Opportunity/Affirmative Action Employer. Women and minorities are encouraged to apply.
Three Scientist Positions

A private, established biotechnology company located in the Boston, Massachusetts area is recruiting scientists to staff its newly constructed research facility. The company is a pioneer in the development of therapies based on the circadian regulation of mammalian metabolism and immunity. It will interact with a multidisciplinary group of scientists including molecular biologists, biochemists, cell biologists, endocrinologists, immunologists, physiologists, and chronobiologists to study two research areas: 1) circadian neuroendocrine regulation of metabolism in Type II diabetes and 2) neuroendocrine regulation of immune function at the cellular and organismal level and it relates to tumor immunity and autoimmune disease. The company seeks to fill the following positions:

Metabolic Physiologist

Applicants should have a PhD with a strong background in biochemistry and physiology with an established record of expertise in lipid and carbohydrate abnormalities associated with insulin resistance, particularly as it relates to interactions between hepatic glucose output and free fatty acid oxidation, as well as to lipoprotein metabolism.

Hypothalamic Neuroscientist

Applicants must have a PhD and proven track record in a neurophysiology related area, and must have extensive experience in hypothalamic anatomy and physiology as it relates to the regulation of metabolism and/or immune function. Candidates must have expertise in neurotransmitter (dopaminergic, serotonergic, peptide) receptor assay techniques (scatchard analysis, PCR identification, in situ hybridization).

Tumor Immunologist and Autoimmune Disease Immunologist

Candidates should have a PhD with a strong background in cellular immunology or equivalent to study neuroendocrine regulation of macrophage activation, lymphokine production, and B cell, T cell, NK, and LAK activation as they relate to cancer or autoimmune disease. Previous experience in macrophage, natural killer cell, and T cell function as well as inflammatory response processes and experience with animal models of autoimmune disease, inflammation, or neoplasia is required. Applicant should send a complete curriculum vitae, a brief description of research experience, and names of three references to:

Ms. Gina Tyrrell, Personnel Manager
Ebasco Science Incorporated
100 First Ave, 4th Floor
Charlestown, MA 02129
(617) 241-8999

The Division of Biomedical Sciences
School of Graduate Studies and Research
Meharry Medical College

Present
Twelfth Symposium in Neuroimmunology, Biochemistry, and Molecular Biology of Tropical Diseases
Monday, April 3, 1995
8:00 a.m.-5:00 p.m.

West Basic Science Building
Meharry Medical College

About the Symposium... This one day symposium on "Recent Advances in the Immunology, Biochemistry, and Molecular Biology of Tropical Diseases brings together molecular biologists, immunologists and biochemists in the southeastern region of the United States who share an interest in parasitic disease research. The presenters and topics for six sessions are: Jean G. Ford, M.D. (Harlem Hospital Center), "Molecular Epidemiology of Tuberculosis," Elizabeth Wirtz, Ph.D. (The Rockefeller University, Laboratory of Molecular Parasitology), "Inducible gene expression in parasites mediated by prokaryotic repressors." Kojo Mensa-Wilmot, Ph.D., (The University of Georgia, Department of Zoology), "Control of Glycophosphatidylinositol Cleavage in Toxoplasmosis and Leishmania amazonensis." Donna Russo, Ph.D., (Meharry Medical College, Department or Microbiology), "Human T Cell immunization." Rick Tarleton, Ph.D., (The University of Georgia, Department of Zoology), "Chagas' Disease: The role of T Cells in Immune Control and Disease Development."

William P. Weidanz, Ph.D., (University of Wisconsin Medical School, Department of Microbiology and Immunology), "The role of innate immunity in Malaria." Registration... The registration fee for the symposium is $50 with graduate students paying $30. For more information: Dr. George C. Hill, Ph.D., Professor, Division of Biomedical Sciences, Meharry Medical College, Nashville, TN 37208. T: (615) 327-6193 F: (615) 327-2999 Internet: Hillge7@ccvax.mmc.edu
POSITIONS OPEN

SENIOR RESEARCH FACULTYPOSITIONS
Center for Allergy and Immunology
La Jolla Institute for Allergy and Immunology

The La Jolla Institute for Allergy and Immunology invites applications for two senior positions: one in Allergy and one in T Cell Biology. Possible areas for the T Cell Biology position include: vaccine development, immunoregulation, tumor and infectious disease immunology, and cytokine research. Applications from other areas of T Cell immunology are also welcome. These positions include set-up funds and laboratory support.

We encourage applications at the level of ASSOCIATE or FULL PROFESSOR from individuals with recognized, well-funded research programs. Interested candidates should send a letter of research interests and a curriculum vitae to Faculty Search Committee, La Jolla Institute for Allergy and Immunology, 13149 North Torrey Pines Road, La Jolla, CA 92037.

ASSISTANT/ASSOCIATE PROFESSOR—CELL/DERIVED BIOLOGICAL DEVELOPMENT

The Department of Anatomy at the Louisiana State University Medical Center—New Orleans seeks to identify a FACULTY candidate with a Ph.D. and at least three years of postdoctoral experience. Scientists with experience in single cell research programs in the general area of cell/developmental biology that use molecular biology techniques are especially encouraged to apply. Salary levels are competitive with ample potential for additional funds. Candidates must work in the Cancer and Neuroscience Centers of Excellence are encouraged. Teaching responsibilities will be in the area of introductory cell biology, human anatomy, tumor or immune system, research interests, and names of three references to: Dr. R. Renney Mize, Head, Department of Anatomy PhB-2, LSU Medical Center, 1901 Perdido Street, New Orleans, LA 70112. An Equal Opportunity/Affirmative Action Employer.

ASSISTANT or ASSOCIATE PROFESSOR—The Section of Molecular Cardiology at the Albert Einstein College of Medicine invites applications from individuals with an M.D. and/or Ph.D. degree, an outstanding record of publications, and the ability to bring or develop a strong, externally funded research program. Although expertise in mouse genetic molecular approaches is preferred, any aspects of cardiovascular development, physiology or disease will be considered. The Albert Einstein College of Medicine provides a highly interactive scientific community, well-supported by core facilities and training opportunities. Strong salary and start-up package are available. Please submit a curriculum vitae and statement of research interests, with the names of three references, to: Dr. Anthony A. O. COM, Jack and Paul Resnick Campus, Ullman 1225, 1300 Morris Park Avenue, Bronx, NY 10461. An Equal Opportunity Employer.

The Center for Drug and Alcohol Programs (CDAP) at the Medical University of South Carolina is recruiting for biochemical/molecular neuropharmacologists at the ASSOCIATE/ASSOCIATE PROFESSOR level. CDAP is an expanding research, training and treatment facility with basic science and clinical laboratories, and a productive interdisciplinary research group. Candidates must possess a Ph.D. and postdoctoral experience in pharmacology, neurosciences, and molecular biology, and be expected to maintain a funded research program in the general area of drug and alcohol abuse. Interest in receptor and second messenger systems as well as experience in utilizing electrophysiology and/or tissue culture is desirable, but not essential. Applicants should send curriculum vitae, statement of research interests, and three letters of reference to: CDAP Search Committee, c/o Dr. H. C. Beck, Beck Psychiatry, Medical University of South Carolina, Charleston, SC 29425. Affirmative Action/Equal Opportunity Employer.

Electrophysiologist. Tenure-track position at the ASSISTANT/ASSOCIATE PROFESSOR level for Ph.D. experienced in single/double-barreled microelectrodes to study Ephaptic epileptogenesis. Patch clamp and lead salary and time independent research support. Send curriculum vitae and names of three references to: Dr. C. O. Beck, Department of Neurology, Tulane University Medical Center, SL-35, 1430 Tulane Avenue, New Orleans, LA 70112. Tulane University is an Equal Opportunity/Affirmative Action Employer.
INDUSTRIAL BIOTECHNOLOGY

Energy BioSystems is a young, well funded, industrial biotechnology corporation specializing in the application of biotechnical systems to the chemical and energy industries. The company is expanding its R&D laboratories in the northern Houston suburb of The Woodlands, and is seeking personnel for its molecular genetics and biochemistry programs. This is an opportunity to join a rapidly growing biotechnology company at an early stage in its development.

Senior Research Scientist-Molecular Genetics

Duties include planning and executing research to identify, clone, determine function, etc., of genetic elements of multi-step biodesulfurization pathway & creatively use gene regulation/expression systems to deregulate pathway. Requirements of this position include a Ph.D. in Molecular Genetics, Biochemistry or related field and 5+ years experience. Strong knowledge of microbial biosynthetic/ biodegradative pathways. Demonstrated ability to obtain results with strong publication record. Demonstrated ability to manage group of 2-3 Ph.D. scientists involved in multiple research projects. Team player able to interact meaningfully with multidisciplinary group.

Biochemist/Enzymologist

Duties of this hands-on bench scientist position involve the characterization of a multi-enzyme pathway resulting in the removal of sulfur from heterocyclic compounds. The successful candidate will be involved in the purification and characterization of the proteins involved in this process, the discovery of enzyme mechanisms, the affects of inhibitors and the development of the enzymology of the process with the goal of enhancing the rate of catalysis. Requirements include a Ph.D. in Biochemistry or Enzymology and at least 2 years postdoctoral experience in academics or industry, a strong record of publication, preferably in the area of catalysis and enzyme mechanisms, knowledge of redox reactions a plus, working knowledge of microbial biosynthetic and catabolic pathways, and strong protein purification chemistry skills.

Please send resume in confidence along with a cover letter stating the name of the position. Also send the names, addresses and telephone numbers of relevant references to:

Human Resource Manager
Energy BioSystems Corporation
4200 Research Forest Drive
The Woodlands, Texas 77381

No Phone Calls - EOE

Senior Scientist

Identify in vitro models of ocular toxicity that correlate with clinical observations and establish in vitro procedures for evaluating the bio compatibility of materials for refractive surgery and for studying wound healing processes in ocular tissues. Design and establish an in-house laboratory for microbiological testing and studies in support of new product development and a laboratory for cell culture. Design and conduct studies in the identification of new preservative systems that have a good balance of antimicrobial activity and ocular safety. Direct and coordinate internal and external resources to test physiological concepts of ocular irritation and evaluate irritation potential of prototype products, and external resources for microbiological studies pertinent to new product development, competitive product evaluations, and support of product claims. Conduct tests of ophthalmic formulations to ensure ocular safety of new products, tests to determine nutrient diffusion through hydrogels and to evaluate epithelial cell growth over synthetic materials to be used in refractive surgical procedures, ex vivo studies related to the attachment of corneal grafts and tests to evaluate wound healing preparations. Validate and standardize cell culture and microbiological protocols to ensure consistency among testing laboratories. Coordinate and support studies in surgical procedures for refractive error correction and in histological evaluation of tissues. Collaborate in the design and preparation of ophthalmic compositions (materials and solutions) to establish critical product attributes with respect to ocular biocompatibility. Serve as internal consultant in microbiology to the Regulatory Affairs Department. Knowledge of mammalian cell culture, microbiology, ocular physiology, in vivo experimentation and international regulatory agency requirements with regard to microbiological and toxicological testing of ophthalmic products. An MS in Biology and 3 years experience in job offered or 3 years experience as Scientific Researcher (Biology) required. Position is Monday - Friday 9-5. $57,500/year. Send 2 resumes to: Case No. 50351, Box 8968, Boston, MA 02114.

STAFF SCIENTIST

Genetic Systems

Stratagene, with over 200 employees, is located in a very attractive part of La Jolla, California. Known for our innovative, high quality products for cutting edge research, we are expanding our program in the area of genetic systems.

The successful candidate will have a postdoctoral and/or industrial experience with expertise in one or more of the following areas:

- Eukaryotic gene expression
- Protein expression
- Yeast two-hybrid screening
- Viral Vectors

We offer an excellent salary and benefits package. Candidates interested in joining a highly successful, progressive company with room to grow are encouraged to submit resume to: Stratagene, Attn: Professional Staffing 21014-950, 11011 N. Torrey Pines Rd., La Jolla, CA 92037. AA/EOE.

Case No. 50351, Box 8968, Boston, MA 02114.
DIRECTOR OF RESEARCH  
CALIFORNIA ACADEMY OF SCIENCES

The California Academy of Sciences invites applications for the position of Director of Research at the Academy, a natural history museum founded in 1853 and located in San Francisco, has strong emphases in systematics, conservation, and natural history both in its research and educational programs. The Director of Research serves as administrator and external liaison for the 100 members of the scientific and research staff. We seek candidates with research, development, and administrative accomplishments and the ability to contribute to the Academy's mission.

POSITIONS OPEN

PROFESSOR AND CHAIR  
Department of Pharmacology and Toxicology  
Dartmouth Medical School

Applications are invited for the position of PROFESSOR AND CHAIR of the Department of Pharmacology and Toxicology at Dartmouth Medical School. The department participates in the training of M.D., Ph.D., and M.D./Ph.D. students. Members of its faculty conduct research on a wide range of interdisciplinary topics, with a strong emphasis on cellular and molecular pharmacology, drug development, and biomedical research. The department is located in a number of laboratories in Dartmouth Medical School and Dartmouth College, to the Veterans Administration Medical Center and the Dartmouth-Hitchcock Cancer Center. Applicants should have an active research program and have the leadership qualities necessary for developing the faculty and promoting the research and academic programs of the department.

HEAD OF NUCLEAR MEDICINE  
AT HADASSAH MEDICAL ORGANIZATION  
JERUSALEM

This position is open to candidates with Board certification in Nuclear Medicine. The Department, located at the Hebrew University Hadassah Medical Center in Ein Karem, provides service to all the departments of the two Hadassah Hospitals, as well as to outpatient clinics from within and without the Hadassah Organization in Jerusalem and countrywide. Hadassah Hospitals are the clinical teaching arms of the Hebrew University–Hadassah Medical Center. The department is linked with the senior academic status at the Medical School, with responsibility for teaching nuclear medicine at the undergraduate, graduate, and residency levels. The Department has large, recently modernized facilities with up-to-date equipment, including research laboratories.

FACULTY POSITION  
ISCHEMIA REPERFUSION RESEARCH

The University of Arizona, College of Medicine, is seeking a FACULTY member to fill a position in the Department of Pharmacology and Toxicology. This position will be involved in research on the pathophysiological mechanisms of ischemia and reperfusion injury. Applicants should have a background in basic research and be capable of establishing an independent, extramurally funded research program. The successful candidate will be expected to develop a research program in the area of ischemiareperfusion injury. The University of Arizona is an Equal Opportunity/Affirmative Action Employer.

LECTURER in Biology: Penn State Erie, The Behrend College, invites applications for the position of Lecturer in Biology, beginning fall 1995. Applicants must have a strong background in organismal/cell biology and genetics. Primary responsibilities will be to teach lower division biology and to supervise and develop teaching laboratories. An M.S. in biology is required; Ph.D. and teaching experience are preferred. Send resume, transcripts, and arrange that three letters of reference be sent to: Dr. Roger Knacke, Division of Science, Department BiOL-8, The Pennsylvania State University at Erie, Erie, PA 16563-3005. The University of Pittsburgh is an Affirmative Action/Equal Opportunity Employer. Women and minorities are encouraged to apply.

The University of California, Los Angeles (UCLA) Department of Neurology seeks M.D. or Ph.D. neuroscientists. Basic aspects of basal ganglia function, degenerative diseases, and neurodegeneration are of greatest interest. TENURE-TRACK POSITION, newly remodeled molecular biology laboratories, and start-up funds are available. Applicants should have demonstrated research productivity and extramural support. Curriculum vitae and letters of interest should be directed to: Jeffrey Scott, Ph.D., Department of Neurology, UCLA School of Medicine, 710 Westwood Plaza, Los Angeles, CA 90095-1769, An Equal Opportunity Employer.

The University of Michigan, Department of Ophthalmology, is seeking a FACULTY member to fill a position that combines patient care in the subspecialty area of retina, along with basic research into biomedical application of femtosecond laser for medically based experiments. Responsibilities will be split equally between these areas. Applicants must be certified by the American Board of Ophthalmology and have subspecialty fellowship training in ophthalmology retina, along with expertise in retinopathy of prematurity. The candidate should also have credentials which demonstrate accomplishment in biomedical application of ultrafast optical laser science. Position will be research or tenure-track as the associate, associate or professor level, based on the individual's academic qualifications and experience. Send resume and background information, along with a statement of research plan, to: Dr. Paul A. Sieving, Search Committee Chair, W. K. Kellogg Eye Center, Department of Ophthalmology, University of Michigan, 1000 Wall Street, Ann Arbor, MI 48105. The University of Michigan is an Equal Opportunity Employer.

SYSTEMATIC BOTANIST

The California Academy of Sciences is reopening its search for an ASSISTANT CURATOR of Botany. Applications are solicited from individuals with primary interest in and commitment to active, field- and collection-oriented research in vascular plant systematics and the curation, operation, and development of a major herbarium. Candidates must have a Ph.D., an active research program with demonstrated accomplishment and competence in a particular group of vascular plants, and be prepared to participate in a variety of curatorial, administrative, and public educational activities. Information about the Academy and its research departments is available on the Academy's gopher server (gopher.calacademy.org) or WWW server (http://www.calacademy.org). Applicants should forward a curriculum vitae, description of research goals, copies of significant publications, and the names, addresses, and telephone numbers of three references to: Human Resources, N.O., ACB, California Academy of Sciences, Golden Gate Park, San Francisco, CA 94118-4599. Deadline for applications is 15 September 1995. An Equal Opportunity Employer.

POSTDOCTORAL position available immediately to study the differential expression of gap junction proteins in vascular wall cells. Ph.D. with experience in molecular biology and chemistry of membrane proteins preferred. Send letter, curriculum vitae and names of three references to: Dr. David M. Larson, Mallory Institute of Pathology, Boston University School of Medicine, 80 East Newton Street, Boston, MA 02118. FAX: 617-534-1000; E-mail: dam@bu.edu. An Equal Opportunity Employer.
The National Institute on Drug Abuse, a component of the NIH, supports over 300 predoctoral and postdoctoral researchers through individual fellowships and at the 40 training sites highlighted below. For information on these training sites, please contact the project directors. For information on individual awards or general information on NIDA research training programs, contact NIDA at 301/443-6071. Women, the disabled, and members of ethnic groups underrepresented in the health sciences, are especially encouraged to apply. All candidates must be U.S. citizens or have been lawfully admitted for permanent residence.

**PREDCTORAL ONLY**

**Neuropeptides**

- Martina W. Adler, Ph.D.
  - Temple University
  - (215) 221-3242
  - (215) 221-1904 (fax)

**Behavioral Pharmacology, Neuroimmunology, Neurobiology**

- Linda Dykstra, Ph.D.
  - U. North Carolina
  - (919) 962-6595
  - (919) 962-2537 (fax)

**Pharmacology**

- Barry B. Wolfe, Ph.D.
  - Georgetown U. Medicine
  - (202) 687-1420
  - (202) 687-6437 (fax)

**POSTDOCTORAL ONLY**

**Human Behavioral Pharmacology**

- George Bigelow, Ph.D.
  - Johns Hopkins U.
  - (410) 550-0035
  - (410) 550-0030 (fax)

**Substance Abuse, AIDS & Sexually Transmitted Diseases (SAS) Prevention**

- Brian R. Play, D.Phil.
  - U. of Illinois-Chicago
  - (312) 996-7222
  - (312) 996-2703 (fax)

**Pharmacology: Molecular, Cellular, Behavioral**

- Joseph Goldfarb, Ph.D.
  - Mount Sinai School of Medicine
  - (212) 241-7014
  - (212) 831-0114 (fax)

**Behavioral Pharmacology, Treatment, Animal Behavioral Neuroscience**

- John Grabowski, Ph.D.
  - U. of Texas HSC
  - (713) 792-7925
  - (713) 794-1425 (fax)

**Treatment Research**

- Sharon M. Hall, Ph.D.
  - U. of California, S.F.
  - (415) 750-2183
  - (415) 476-7734 (fax)

**Biomedical**

- Andrew Heath, Ph.D.
  - Washington U.
  - (314) 362-9400
  - (314) 362-9420 (fax)

**Etiology and Treatment**

- Herbert D. Kleber, M.D.
  - Columbia U.
  - (212) 960-5570
  - (212) 795-8860 (fax)

**Molecular Pharmacology**

- Charles Chavkin, Ph.D.
  - U. of Washington
  - (206) 543-4266
  - (206) 685-3822 (fax)

**Neuroscience**

- Steven R. Childers, Ph.D.
  - Bowman Gray Medicine
  - (919) 716-3791
  - (919) 716-7738 (fax)

**Biological Bases of Drug-seeking Behavior**

- John C. Crabbe, Ph.D.
  - Oregon Health Sciences U.
  - (503) 273-5298
  - (503) 273-5331 (fax)

**Epidemiology & HIV/AIDS**

- Roger Detels, M.D.
  - UCLA
  - (310) 206-2837
  - (310) 206-6039 (fax)

**Pharmacology**

- William L. Dewey, Ph.D.
  - Medical College of Virginia
  - (804) 786-0732
  - (804) 786-1664 (fax)

**Neuroscience**

- Robert P. Elde, Ph.D. and Virginia S. Seybold, Ph.D.
  - U. of Minnesota
  - (612) 624-9406
  - (612) 624-8118 (fax)

**Immunne Response, AIDS, Brain & Immunity, Infectious Diseases**

- Herman Friedman, Ph.D.
  - U. of South Florida
  - (813) 974-3281
  - (813) 974-4151 (fax)

**Molecular/Cellular Approaches**

- Steven E. Hymans, M.D.
  - Harvard Medical School
  - (617) 724-5715
  - (617) 724-9610 (fax)

**Pharmacology & Neuroscience**

- Charles E. Inturrisi, Ph.D.
  - Cornell U. Medical
  - (212) 746-6235
  - (212) 746-8835 (fax)

**Behavioral Sciences**

- Bruce Johnson, Ph.D.
  - Medical & Health Research Assn. of NYC, Inc. / NDRI
  - (212) 966-8700
  - (212) 334-8058 (fax)

**Neural & Pharmacological Mechanisms**

- Kenneth M. Johnson, Ph.D.
  - U. of Texas Medical
  - (409) 772-9623
  - (409) 772-9642 (fax)

**Genetics**

- Gerald E. McLellan, Ph.D.
  - Pennsylvania State U.
  - (814) 865-1428
  - (814) 865-3282 (fax)

**Pharmacology, Neuroscience, Behavior**

- Donald E. McMillan, Ph.D.
  - U. of Arkansas
  - (501) 686-5511
  - (501) 686-5521 (fax)

**Nursing, Populations at Risk, Prevention, Early Detection**

- Shirley A. Murphy, Ph.D.
  - U. of Washington
  - (206) 543-8509
  - (206) 685-9551 (fax)

**Molecular Biology, Neuropharmacology**

- Eric J. Nestler, M.D., Ph.D.
  - Yale U. Medicine
  - (203) 789-7151
  - (203) 562-7079 (fax)

**Treatment, HIV**

- Charles P. O'Brien, M.D., Ph.D.
  - U. of Pennsylvania
  - (215) 222-3200 Ext 132
  - (215) 386-6770 (fax)

**Neuropsychopharmacology**

- Lewis S. Selden, Ph.D.
  - U. of Chicago
  - (312) 702-9640
  - (312) 702-3003 (fax)

**Psychoneuroimmunology**

- Burt Sharp, M.D.
  - Minneapolis Medical Research Foundation
  - (612) 337-7381
  - (612) 347-3915 (fax)

**Neurobehavioral Pharmacology**

- Sheldon Sparber, Ph.D.
  - U. of Minnesota
  - (612) 625-5657
  - (612) 625-8408 (fax)

**Interdisciplinary**

- James H. Woods, Ph.D.
  - U. of Michigan
  - (313) 998-6500
  - (313) 998-6508 (fax)
POSTDOCTORAL POSITIONS

Molecular and Cellular Endocrinology

POSTDOCTORAL FELLOWSHIPS are available to study the mechanisms governing pituitary hormone secretion as they relate to the differentiation and transdifferentiation of growth hormone and prolactin producing cells and/or the neurological aspects of their differentiation. A Ph.D. in Molecular Endocrinology or related discipline. Please send curriculum vitae and three letters of recommendation to: Dr. L. Stephen Frawley, Department of Cell Biology and Anatomy, Medical University of South Carolina, 171 Ashley Avenue, Charleston, SC 29425-2204. Telephone: 803-792-3526; FAX: 803-792-0664.

POSTDOCTORAL ASSOCIATES (two): one will conduct electrophysiological experiments on single spinal cord neurons and the other will be used to study CNS function in vivo with data analyses requiring a familiarity with Macintosh data acquisition. Ph.D. or foreign equivalent, research experience and knowledge of electrophysiological methods and experience in electrophysiological recording is required. Training/research experience in pain pathways or transmitter activity is desired. Second position will monitor neurotransmitter release from peripheral tissue slices. Ph.D. or foreign equivalent, research experience/training in HPLC, ELISAs, or RIA's and three years of experience in neuroscience is required. Training/research experience in pain transmission using immunohistochemical and molecular biological approaches will be useful. Applicants should possess a Ph.D. and/or M.D. and demonstrated experience in one or more of the following areas: (1) in vivo or in vitro electrophysiology studies, (2) computer assisted chemical and pharmacology, and (3) placental and fetal endocrinology. Send curriculum vitae and arrange for three letters of recommendation to be sent to: Dr. Hazel H. Szezo, Department of Pharmacology, Cornell University Medical College, 1300 York Avenue, New York, NY 10021. Email: hhszezo@med.cornell.edu. An Equal Opportunity/Affirmative Action Employer, Women and minorities are encouraged to apply.

POSTDOCTORAL POSITION

Available immediately to study placental transfer and fetal adrenal development. Applicants should possess a Ph.D. and/or M.D. and demonstrated experience in one or more of the following areas: (1) in vivo or in vitro electrophysiology studies, (2) computer assisted chemical and pharmacology, (3) placental and fetal endocrinology. Send curriculum vitae and arrange for three letters of recommendation to be sent to: Dr. Hazel H. Szezo, Department of Pharmacology, Cornell University Medical College, 1300 York Avenue, New York, NY 10021. Email: hhszezo@med.cornell.edu. An Equal Opportunity/Affirmative Action Employer, Women and minorities are encouraged to apply.

POSTDOCTORAL POSITION

Signal Transduction

A POSTDOCTORAL POSITION is available to study the regulation of soybean phospholipase C at the post-translational level. Experience in protein chemistry and a strong background in biochemistry are essential. Interested candidates should contact: Dr. Madan K. Bhattacharya, Plant Biology Division, Noble Foundation, P.O. Box 1957, Ardmore, OK 73402. Telephone: 405-223-5810; FAX: 405-221-7380. The Noble Foundation is an Equal Opportunity Employer.

POSTDOCTORAL POSITION

At Amgen, you'll discover a research environment that emphasizes collaboration, intellectual honesty, scientific integrity, and a supportive culture. This unique approach has helped us grow into a global biotechnology leader in just thirteen years.

**NEUROSCIENCES**

The Neuroscience Department seeks a BS/MS level Research Associate to work on neurodegenerative disease models of the CNS. Experience with neurochemistry, behavioral pharmacology, and histochemistry is required. Experience with molecular biology and computers is preferred.

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, an on-site fitness center, and three weeks' vacation. Please mail your resume/cv to: Amgen Inc., Staffing, Job Code: OXP-SC-2260, Amgen Center, Thousand Oaks, CA 91320-1789. Principals only, please. For information on other research opportunities available at Amgen, please call 1-800-446-4007. EEO-Affirmative Action Employer M/F/D/V. We recognize that diverse perspectives are a key factor in the process of discovery.

The University of Alberta is committed to the principle of equity in employment. As an employer we welcome diversity in the workplace and encourage applications from all qualified women and men, including Aboriginal peoples, persons with disabilities, and members of visible minorities.

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**Research Associate**

At Amgen, you'll discover a research environment that emphasizes collaboration, intellectual honesty, scientific integrity, and a supportive culture. This unique approach has helped us grow into a global biotechnology leader in just thirteen years.

**Cell & Molecular Biology of Eukaryotic Systems**

The Department of Biological Sciences in the Faculty of Science at the University of Alberta invites applications for a Research Scholar faculty position with research interests in cell and molecular biology of eukaryotic systems. The effective date of employment will be July 1, 1996. The candidate should have expertise in the use of molecular genetics techniques and have experience in any aspect of modern cell biology, typically in research areas such as developmental biology, cell cycle regulation, parasitology, immunology, neurobiology, etc. The candidate must have a PhD and two or more years of postdoctoral research experience.

Appointments may be made at levels of Assistant Professor ($39,230 - $55,926), or Associate Professor ($48,527 - $69,664). The position will be long-term and will be funded through an external agency, but the incumbent will enjoy the privileges of the University academic rank at which the appointment is made. The granting of these awards is by competition and is made on the basis of excellence. In accordance with Canadian immigration requirements, priority will be given to Canadian citizens and permanent residents of Canada. Candidates should forward a curriculum vitae, list of publications, a statement of research interests and the names of three referees to:

Dr. William Paranych
Department of Biological Sciences
CW-405 Biological Sciences Bldg.
University of Alberta
Edmonton, Alberta
Canada T6G 2E9

Closing Date:
April 30, 1995

The University of Alberta is committed to the principle of equity in employment. As an employer we welcome diversity in the workplace and encourage applications from all qualified women and men, including Aboriginal peoples, persons with disabilities, and members of visible minorities.

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**Research Scientists**

The Biological Sciences group in Central Research and Development has four openings for Visiting Research Scientists to work with members of our research staff. These are one year postdoctoral positions with a possibility for extension, and are available immediately. They offer the opportunity to carry out exciting fundamental research in areas of commercial importance.

1) You will study the xenobiotic degradation of various chemicals, including nitroaromatics. In addition, we are pursuing state-of-the-art industrial bioprocesses for the production of chemicals and polymers. The suitable candidate will be familiar with microbial biochemistry, metabolite and degradation pathway identification, enzyme purification and characterization, and biocatalysis. Knowledge of molecular biology techniques will be an advantage.

2) In this role, you will develop bioluminescent detection of environmental (bio) mutagens. The project involves expression of luminescence genes in "Streptomyces griseus." The suitable candidate will have experience in microbial physiology/biochemistry and molecular biology.

Experience with "Streptomyces" genetics is desirable.

3) You will join our group involved in an ongoing effort to characterize the enzyme biotin synthase. We are looking for candidates with a strong background in enzyme mechanisms and/or bioorganic chemistry.

4) This position involves identification and characterization of glutathione-S-transferase enzymes involved in plant herbicide metabolism. The successful candidate should have research experience in molecular biology, an excellent understanding of biochemistry, and an interest in studying basic research problems with practical agricultural applications.

We are located in Wilmington, DE, an area that offers an attractive lifestyle with easy access to all the cultural, academic and recreational activities of the Eastern Seaboard. To be considered, please forward your resume to: DuPont Human Resources, SSA-0101, Wilmington, DE 19898. An Equal Opportunity Employer.

Central Research and Development
POSTDOCTORAL POSITIONS ARE AVAILABLE AT THE UNIVERSITY OF KENTUCKY IN THE DEPARTMENTS OF BIOLOGY AND ENVIRONMENTAL SCIENCE.

POSTDOCTORAL POSITIONS IN REPRODUCTIVE BIOLOGY

Two positions are available at The University of Tennessee, Knoxville, for highly qualified individuals to conduct research in the areas of reproductive biology and biochemistry. Applicants must have a Ph.D. degree in reproductive biology or a related field, and should demonstrate a strong interest in research related to the field. Starting dates can vary, and applications will be reviewed on a continuing basis.

POSTDOCTORAL POSITIONS IN MOLECULAR BIOLOGY

Three positions are available at the University of California, San Francisco, for individuals to conduct research in the areas of molecular biology and biochemistry. Applicants must have a Ph.D. degree in a relevant field, and should demonstrate a strong interest in research related to the field. Starting dates can vary, and applications will be reviewed on a continuing basis.

POSTDOCTORAL POSITIONS IN BIOCHEMISTRY

Two positions are available at the University of California, Los Angeles, for highly qualified individuals to conduct research in the areas of biochemistry and molecular biology. Applicants must have a Ph.D. degree in a relevant field, and should demonstrate a strong interest in research related to the field. Starting dates can vary, and applications will be reviewed on a continuing basis.

POSTDOCTORAL POSITIONS IN IMMUNOBIOLOGY

Two positions are available at the University of Utah, for highly qualified individuals to conduct research in the areas of immunology and biophysics. Applicants must have a Ph.D. degree in a relevant field, and should demonstrate a strong interest in research related to the field. Starting dates can vary, and applications will be reviewed on a continuing basis.

POSTDOCTORAL POSITIONS IN BIOCHEMICAL SCIENCE

Two positions are available at the University of California, San Francisco, for highly qualified individuals to conduct research in the areas of biochemical science and molecular biology. Applicants must have a Ph.D. degree in a relevant field, and should demonstrate a strong interest in research related to the field. Starting dates can vary, and applications will be reviewed on a continuing basis.

POSTDOCTORAL POSITIONS IN NEUROBIOLOGY

Two positions are available at the University of California, San Francisco, for highly qualified individuals to conduct research in the areas of neurobiology and molecular biology. Applicants must have a Ph.D. degree in a relevant field, and should demonstrate a strong interest in research related to the field. Starting dates can vary, and applications will be reviewed on a continuing basis.

POSTDOCTORAL POSITIONS IN PHYSIOLOGY

Two positions are available at the University of California, San Francisco, for highly qualified individuals to conduct research in the areas of physiology and molecular biology. Applicants must have a Ph.D. degree in a relevant field, and should demonstrate a strong interest in research related to the field. Starting dates can vary, and applications will be reviewed on a continuing basis.
Innovative research at Sandoz has been enhancing medicine around the world for over a century. Pioneering drugs have extended and improved the quality of life for countless individuals and revolutionized basic scientific concepts within the transplantation and mental health fields. Opportunities now exist for Postdoctoral Fellows within our Preclinical Research Department.

**MOLECULAR BIOLOGY/BIOCHEMISTRY - DIABETES**

Exciting opportunity to work on a project concerned with the regulation of expression of genes relevant to the development and/or treatment of insulin resistance and non-insulin-dependent diabetes mellitus. The ideal candidate will have a recent Ph.D. or equivalent in Biochemistry, Molecular Biology or a closely related subject, with a background and interest in hormone action, signal transduction or the regulation of gene expression. (Position #PD-023)

**NMR SPECTROSCOPY**

Ph.D. or equivalent in Organic Chemistry, Biochemistry or a related field with specialties in NMR spectroscopic techniques required. The successful candidate should be completely familiar with modern multiple dimension NMR as it applies to structure determination, and must have experience with or at least have practical knowledge of Diffusion NMR techniques. (Position #PD-029)

Postdoctoral appointments are for one year but are renewable for a second year by mutual agreement. Sandoz Research Institute provides our scientists with an environment that encourages creative thinking and ample opportunities for publication and research presentations.

Sandoz offers comprehensive health, dental, and savings plans as well as an attractive location in northern New Jersey. For consideration, please specify the number of the position you are responding to and forward your curriculum vitae and the names and addresses of three references to:

**SANDOZ PHARMACEUTICALS CORP**
Staffing Department
Building 122/3
East Hanover, NJ 07936-1080
An Equal Opportunity Employer M/F/D/V

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**The Angiogenesis Foundation**
**Charting New Pathways to Health for the 21st Century**

**International Symposium**
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Co-Sponsored by
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June 16-27, 1995 Porto Carras, Greece

**Inaugurating The Angiogenesis Society**
A network of academic and industry professionals
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**Awarding Angiogenesis Research Fellowships**
For promising young investigators engaged in outstanding
research in an established laboratory.

For information:
Shawna Cornelius, Executive Director
The Angiogenesis Foundation, Inc.
15 Grove Street Suite 3, Boston, MA 02114 USA
Tel: 617.722.0112 fax 617.493.2277

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**DIRECTOR**
**Division of Drugs & Technology Standards**

The AMA seeks a forward-thinking manager/team leader to enhance our role as the premier name in science, technology and medical therapeutics. You'll track and interpret scientific advances, assist in policy, and medical practice standards development and advocate for sciences and research as the foundation of sound medical practice.

In addition to a health-science doctoral degree (M.D. preferred), we require 10+ years directly-related post-doctoral experience, proven clinical, research, publication, academic and/or governmental background, strong analytical and managerial abilities plus exceptional interpersonal/presentation skills.

Your talents and contributions will be met with a competitive salary and comprehensive benefits. Please forward your resume with salary history to: Division of Placement, Dept. CES-2872, AMERICAN MEDICAL ASSOCIATION, 515 N. State Street, Chicago, IL 60610. An Equal Opportunity Employer M/F/D/V.

**American Medical Association**
Physicians dedicated to the health of America

515 North State Street
Chicago, Illinois 60610
PHENOTYPING PATIENTS WITH AUTOSOMAL DOMINANT POLYCYSTIC KIDNEY DISEASE

POSTDOCTORAL/TENURE TRACK POSITIONS

POSTDOCTORAL TEACHER/RESEARCH ASSISTANT POSITION

An internationally renowned applied genetics laboratory is interested in acquiring a POSTDOCTORAL TRAINEE to learn an integrated application of genetic markers and cellular bio-logical problems, such as immunoglobulin allotyping, plasma protein and RBC enzyme genotyping by IEF, RFLP and PCR based DNA polymorphisms. Experience in population genetics, population biology, bio-logical anthropology, biochemists, or molecular biology desirable but not necessary. Good interactive skills with people, telephone and written skills, and sympathetic flexibility about the necessity to Ph.D. required. Position would require one year of postdoctoral training, with the possibility of appointment to full-time Assistant Directorship upon completion of training. Application should accompany three references, and sample publications if available by May 15, 1995, to: Dr. Moses S. Schafnian, Analytical Genetic Testing, 7808 Cherry Creek South Drive, No. 201, Denver, CO 80231. FAX: 303-750-2171.

POSTDOCTORAL POSITION

POSTDOCTORAL RESEARCH TRAINING FELLOWSHIPS

Available to residents of North America with Ph.D., M.D., or comparable degree and less than one year of postdoctoral laboratory experience by application date for beginning training in basic biomedical research. Applicants must submit a stipend of $25,000 for the first year, $27,000 for the second year, $29,000 for the third year; $2,000 per annum research allowance, travel to fellowship location; annual meeting. Application should consist of a detailed statement of research interests and a letter of recommendation, and should be submitted immediately following July. For application forms, write: The Helen Hay Whitney Foundation, 450 East 63 Street, New York, NY 10021; or FAX: 212-688-6794.

POSTDOCTORAL FELLOWSHIP

Available in Neurosciences/Membrane Biophysics focusing on the pathogenesis of Alzheimer's disease. Biophysical techniques such as X-ray scattering will be used to study protein/membrane structure. Requires recent Ph.D. in Biophysics, Biochemistry, or related field with experience in protein or lipid chemistry preferred. Send curriculum vitae, reprints of recent publications, statement describing research experience and goals, names, addresses, and telephone numbers of three references to: Dr. Christopher H. Lowrey, Box 7506, Dartmouth Medical School, Hanover, NH 03756. FAX: 603-660-6841; Email: c.lowrey@dartmouth.edu.

POSTDOCTORAL FELLOWSHIP

The Legacy Department has an open postdoctoral position beginning July 1995. Successful candidate will conduct basic thermophysical research on the mechanisms of fever and/or endotoxin shock in the laboratory of Dr. A. A. Romanovsky. Requirements include M.D. and/or Ph.D. in endotoxin research and related sciences, published papers in the field, good surgical skills, and experience of conducting chronic experiments in laboratory animals. Computer, biochemical and histological skills are welcome. This is a one-year position with an option of extension for a second year. Stipend and benefits are very competitive. Application deadline is May 30, 1995. Submit curriculum vitae, reprints of published papers, a description of research interests, experiences, and career goals, as well as names and telephone numbers of three references with a letter of recommendation to: Dr. A. A. Kiesow, Ph.D., Chief, Legacy Research, 2001 North Ganseenbe Avenue, Portland, OR 97277. Legacy Health System is an Equal Opportunity Employer.

POSTDOCTORAL/RESEARCH ASSOCIATE POSITION(S)

Research involves enzyme mechanism and enzyme-structure-function studies and requires experience in protein purification and characterization and recombinant DNA techniques. Send curriculum vitae, statement of research interests and experience, and the names and telephone numbers of three references to: Dr. C. A. Capellini, Division of Pharmacology and Medical Chemistry, College of Pharmacy, University of Cincinnati Medical Center, 3223 Eden Avenue, Cincinnati, OH 45267-0004.

POSTDOCTORAL FELLOWSHIPS

DRUG ABUSE TREATMENT RESEARCH

The NIH/National Institute on Drug Abuse, and the DHHS/PHS/NIH/CDA for Drug Evaluation and Research announce a three-year program to train physi-cians for careers in drug abuse research training and the design, conduct, and interpretation of clinical trials to develop new medications for treatment of drug abuse. The FELLOWSHIP includes clinical, research management, and drug regulatory training. Must be United States citizens, or plan citizenship within one year, and should be Board eligible upon entering the program. Stipends are reviewed annually and are for salaries and compen-sation. Openings July 1995 and July 1996. Contact: June Cory, F.D.A., Parklawn 9B-04, 5600 Fishers Lane, Rockville, MD 20857; Telephone: 301-443-3000. F.D.A. is an Equal Opportunity Employer and has a smoke-free environment.

POSTDOCTORAL POSITIONS

A POSTDOCTORAL POSITION is available to study collagen gene regulation. In particular, the potential for singe-strand DNA replication in the human beta-globin locus. The fellow will help characterize cis-acting elements which regulate the formation of tissue-specific chromatin structural domains and then use these results to develop a novel gene therapy prod-uct. Experience in molecular biology is necessary and in the use of retroviruses desirable. Send curriculum vitae, reprints of recent publications, statement describing research experience and goals, names, addresses, and telephone numbers of three references to: Dr. Preston Ma-sson, Ph.D., Associate Professor, Medical College of Pennsylvania and Thomas Jefferson University Campus, Neurosciences Research Center, 320 East North Avenue, Pittsburgh, PA 15212-4772. An Equal Opportunity Employer.

POSTDOCTORAL FELLOWSHIP

Postdoctoral position available for protein biochemist/molecular biologist in well-funded laboratory investigating molecular basis of endothelial cell cytoskeletal organization and cell-cell interactions in the regulation of barrier function. Experience in molecular biology, signal transduction, and protein phosphorylation preferred. Send curriculum vitae and names of three references to: Dr. Simeon Goldblum, University of Maryland School of Medicine, Medical Research Service, 800 North Greene Street, Baltimore, MD 21201. An Affirmative Action/Equal Opportunity Employer.

POSTDOCTORAL FELLOWSHIP

Available immediately for biochemist/physiologist with recent Ph.D. to work as part of an interdisciplinary team investig-atigating in vivo mechanisms of dopamine neurotransmission. Applicants should have experience in neurotransmitter biochemistry and/or pharmacology for two years with an opportunity for career advancement. Salary: approximately $29,000 per year, plus fringe benefits (20%). Please send curriculum vitae and references with a letter of recommendation to: Professor J. R. Barrio, Department of Molecular and Medical Pharmacology, B-086A Center of the Health Sciences, UCLA, Los Angeles, CA 90095-6948.

POSTDOCTORAL FELLOWSHIP

In Molecular Biology—A fellowship is available for working in the mechanism of transformation of human epithelial cells, mainly on cytogenetics analysis and targeted inser-tion of genes. The successful candidate should have experience in molecular biology and cytogenetics. Ph.D. in molecular biology and/or molecular cytogenetics or re-search experience are required. Please send curriculum vitae and references to: Dr. Jose Russo, Director-Breast Cancer Research Laboratory, c/o M. Michini, Fox Chase Cancer Center, 7701 Burholme Avenue, Phil-adelphia, PA 19111. FAX: 215-728-2682. We are an Equal Opportunity Employer.

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Scientific Research Study

We are looking for qualified SCIENTISTS from a number of different countries to join a Scientific Steering Committee. The committee is currently directing a 10-year coordinated research study on the role of hereditary factors in lowering cancer risk in the United Kingdom, and wants to expand the study to include participants from other countries. Applicants should have: a strong background in molecular genetics and/or in cancer epidemiological studies, preferably with an emphasis on this dimension, and be resident in one of the following countries: Austria, Belgium, France, Germany, Italy, Luxembourg, Netherlands, Sweden and Switzerland.

Please contact: World Cancer Research Fund, Department C.S., 11-12 Buckingham Gate, London SW1E 6LB.

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The Ecological Society of America (Ithaca, NY) receives 1,000 manuscripts per year and publishes 4,200 pages in three research journals and a bulletin. The Managing Editor directs policies for this journal and supervises the editorial and production staff. The Editor has full responsibility for choosing the contents of the journal, and for selecting, reviewing, and editing manuscripts. The Editor also contains and arranges book reviews, maintains computer databases, supervises copy editing, works with printer to produce finished products. For full job description send resume to: Brian Kelly, 2010 Massachusetts Avenue, NW, DC 20036.

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As a respected Biotech Recruiter, it is my ongoing responsibility to identify and track above average talent in the Bioscience marketplace. I have national clientele seeking a combination of Industry and Academic experience in these research areas: Molecular Biology; Immunology; Microbiology; Genetics; Cell Biology; Virology; Oncology; Gene Therapy; and Infectious Diseases. Other clients need Sales and Marketing Analysts. If you are published, have a Ph.D. and solid research or applicable experience, call/send résumé in complete confidence to: Richard Rush. Cold Spring Division Manager-Biosciences, Wallace-Watkins International, 3845 FM 1960 West, Suite 370, Houston, TX 77068. Telephone: 713-537-0490; FAX: 713-444-6898.

POSITION OPEN

World Cancer Research Fund
Scientific Research Study

We are looking for qualified scientists from a number of different countries to join a Scientific Steering Committee. The committee is currently directing a 10-year coordinated research study on the role of genetic factors in lowering cancer risk in the United Kingdom, and wants to expand the study to include participants from other countries. Applicants should have: a strong background in molecular genetics and/or epidemiological studies, preferably with an emphasis on this dimension, and be resident in one of the following countries: Austria, Belgium, France, Germany, Italy, Luxembourg, Netherlands, Sweden and Switzerland.

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