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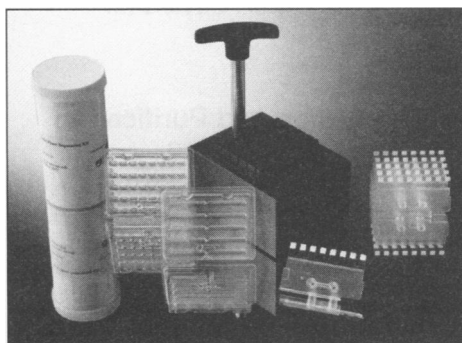
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The BioMax Chemiluminescent Detection System for Nucleic Acids detects peroxidase-linked probes and can be used for Southern (DNA) blotting, Northern (RNA) blotting, slot/dot blotting, and colony and plaque screening. The system features a dry chemistry matrix, a self-contained system with all the components for the detection step layered on a clear, solid support. When the dry chemistry matrix is placed over a wet blot, a cascade of chemical and enzymatic reactions generates light in seconds. The

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The AutoLoad Solid Phase Sequencing Kit improves the handling, processing, and sequencing of biotinylated polymerase chain



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Literature

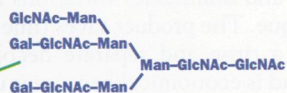
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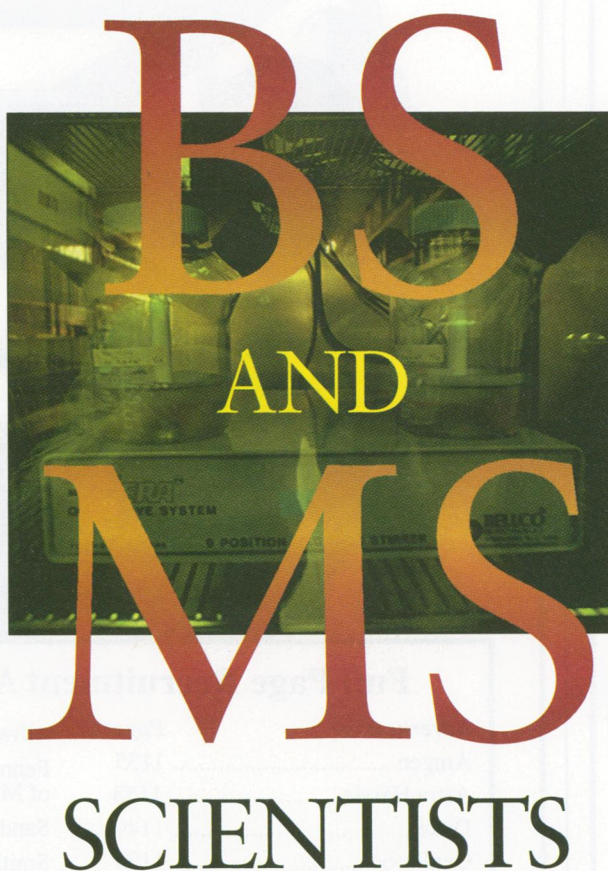
Choosing a Future: Career Opportunities and Academic Options for

Industrial Careers:

Scientists and employers discuss opportunities at SmithKline Beecham, Amgen, Allergan, Gen-Probe, and Ligand
Page 1130

Academic Careers:

Neuroscience at UC Irvine; the ACCESS program at UCLA; PhD and MD programs at NYU; Research at the Scripps Research Institute
Page 1142



by John Timpane

ting government spending, the world of academic science—not to mention the commitment needed to complete a PhD—now stands in a qualified light.

But consider science today: a pioneer era in the life sciences and natural sciences, with new discoveries at a stunning rate. BS and MS scientists hold down many fulfilling jobs in this pioneer time.

The choice of a future must, however, be an informed choice. Below, we examine career paths for the BS/MS scientist. We start with industry, visiting SmithKline Beecham, Amgen, Allergan, Gen-Probe, and Ligand, looking at different jobs held by BS/MS scientists in discovery research, product management, and clinical and regulatory affairs. We visit Lab Support for a look at the newly burgeoning world of the on-assignment scientist. Then we move to advanced-degree programs at the University of California at Irvine, UCLA, and NYU. We close with three very happy BS/MS scientists doing the latest in research at the Scripps Research Institute. Despite all the changes, one thing is clear: if

you want to do science, it is out there waiting to be done.



ven in the best of times, job-searching and job-getting can seem intimidating to the BS/MS scientist. Should one get out into the job world immediately or go on for a higher degree? If the choice is

industry now, what kinds of jobs are out there? If the route is academic, will it lead to medical school or a PhD, a career in medicine or a life as a researcher?

Recent economic and political changes have shaken the branches of the decision tree. Biopharmaceutical companies continue to rightsize and regroup, rendering the employment market more competitive. The health care professions are changing rapidly, and with the mania for cut-

Keeping Ahead of the Changes: SmithKline Beecham

"What we're seeing are some tremendous opportunities at our organization for BS and MS scientists over the coming years." That's Joe Ambrosino, manager of U.S. university relations at SmithKline Beecham (SB). He and Janice Pastor, manager of worldwide R&D employment, are ticking off the areas of need within their large and growing company. Those needs, while specific to SB, resemble those of companies almost anywhere.

"There's no question that we have a need for BS and MS scientists," Pastor says. "We have always hired them and will continue to—but our efforts are especially strong now." Molecular biology is clearly the science of the moment. "That's

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research in the healthcare industry. In seeking to forge new advances in genetic medicine, we build on a strong heritage of innovation that has discovered some of the world's most important medicines to become the world's number one vaccine company and a leader in diagnostic clinical laboratory services.

If you have a bachelor's or master's degree in molecular biology, microbiology, microbial genetics, chemical engineering, environmental engineering, organic chemistry, statistics, bioinformatics or information resources and would like to work in an

environment dedicated to the discovery of value-added drugs, please send your resume to: U.S. University Relations, SmithKline Beecham, Department BS/MS, One Franklin Plaza, FP1340, Philadelphia, PA 19101. We are an Equal Opportunity Employer, M/F/D/V.

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Challenging the natural limits.

Overlapping images: Howard Sochurek, *Genes/DNA*, 1992 and Indian cave paintings, Southwestern U.S.



a growing area for us here at R&D," Pastor says. "As a discipline, it is becoming more integrated throughout the scope of discovery research. One finds relevant positions in biopharmaceutical R&D, pharmacology, and microbiology."

Recently, SB shifted one research department from the United Kingdom to the suburban Philadelphia area. Pastor explains: "Our microbiological research unit is being transferred to the United States, meaning that we will be recruiting for large numbers of people in microbiology, molecular biology, and microbial genetics." Moreover, microbiological research is adding a department of molecular pathogenicity.

Ambrosino sees "specific, degree-related needs within the field of chemical engineering." There is also some call for environmental engineering and package engineering, which, in his words, "have come of age over the last few years."

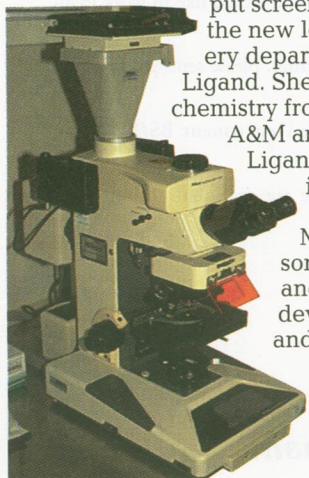
Chemists with strong organic chemistry backgrounds, especially emphasizing combinatorial chemistry, and chemists with a heterogeneous skill base are in great demand. Other areas of interest are genetics, drug metabolism, pharmacokinetics, pharmacoeconomics, statistics, bioinformatics, and computer science.

Three indispensables are excellence in science, a skill set that fits company needs, and a superior work ethic. For recent graduates, advantages include a good GPA, work experience (summer jobs, co-ops, internships), participation in a research project, and publication. "Beyond those things," Ambrosino says, "we want people who can work as part of a team, champion change, and inspire innovation."

Pastor calls this "an exciting time" that offers BS/MS scientists many opportunities to contribute. "Science is moving so quickly," she says, "and we're determined not just to move with it, but to stay ahead of it and to lead it in our areas of expertise. BS and MS scientists are an important part of that effort."

On the Bench

Debbie Inman, scientist, is a manager of the automation group in the high throughput screening lab in the new leads discovery department at Ligand. She has a BA in chemistry from Texas A&M and came to Ligand after stints in physics research at M. D. Anderson Hospital and in vaccine development and immunology at Johnson and Johnson. Her position



requires a great deal of information management and supervisory work. "We do intracellular cotransfection assays and binding assays," she says. "I don't get to do much lab work at all these days, and I do miss it sometimes, but I do have to know what's going on at all stages. It's a little biology and a little pharmacology. We have great scientists here, and they're really willing to teach everything they know. That is what's truly wonderful about Ligand. You can talk to everyone from the most senior directors all the way down to the most junior people. The brightness and openness is refreshing, and it drives the science." Weekly seminars keep the information flowing. When Inman needed more background on signal transduction, she was shy about approaching two of Ligand's transduction scientists, Peter Lamb and Martin Seidel. "But after meeting with them over three days and seeing how eager they were to answer all my questions," she says, "I felt not only well informed but also very at ease."

Ligand's culture encourages people to stay and develop their expertise. It can, however, be hard to coax BS scientists to do that. "They all want to go on to med school and graduate school, and of course we encourage that," Inman says, "but we need them all the same." In hiring, Inman looks first for excellent science and next for teamwork capabilities. "We ask a lot of questions to assess a candidate's team-readiness," she says. "Questions like 'Have you ever worked as part of a team? What was that like? Would you rather be the batter or the pitcher? A cliff diver or a quarterback?'"

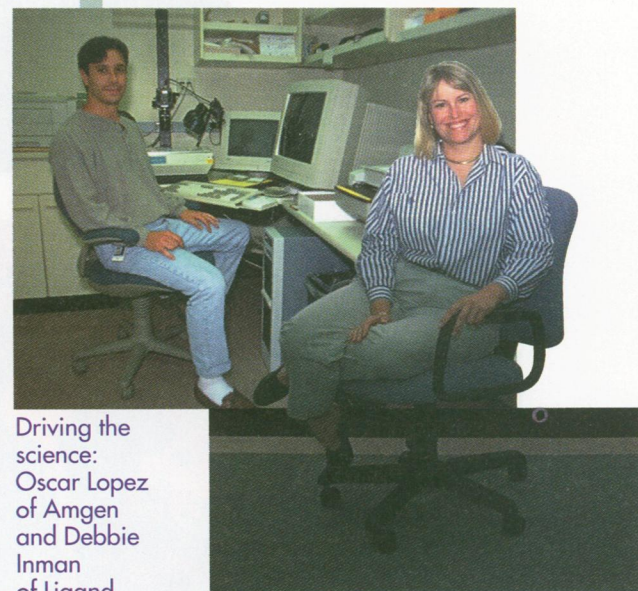
As a BA scientist in what usually is a PhD position, Inman thinks constantly about a higher degree, but family life and a long work week take up the available time. "My opportunities for advancement here are really good," she says. "Almost everyone treats me as an equal—partly because few people at this company have this much breadth in what they do."

Oscar Lopez is a research associate in the neurobiology department at Amgen—"the hot department," he says, "as far as we're concerned." As a biology student at Northern Illinois University, Lopez got the taste for research in a graduate honors course in biochemistry and behavioral neuroscience. "I knew right then I belonged in the lab," he says. "The discovery is what I like. So much is unknown, so little is given, nothing is easy."

When cutbacks at his first company forced him to look elsewhere, Lopez saw an ad in *Science* for a job at Amgen and did exactly what you are not supposed to do. He sent in his résumé—"I sent it to 'Human Resources,' not even to a name!"—was brought in for the interview, and got the job. "It was totally unexpected,"

he says. "I wasn't from Harvard, didn't have a higher degree. I was just a boy from the middle of the cornfields."

It turns out that he has a knack for surgery under the microscope. "We do in vivo stroke models in rats," he says, "and you need steady hands. Even a minor flinch can translate into a mess." Senior



Driving the science: Oscar Lopez of Amgen and Debbie Inman of Ligand

colleagues often do Lopez the compliment of asking for his help in their experiments. His lab is studying Lou Gehrig's disease, cutting selected nerves, measuring effect and regeneration. "What's great about Amgen," he says, "is that there is still a lot of basic research here, like an academic environment. I spend about half my time doing basic research and half of it screening."

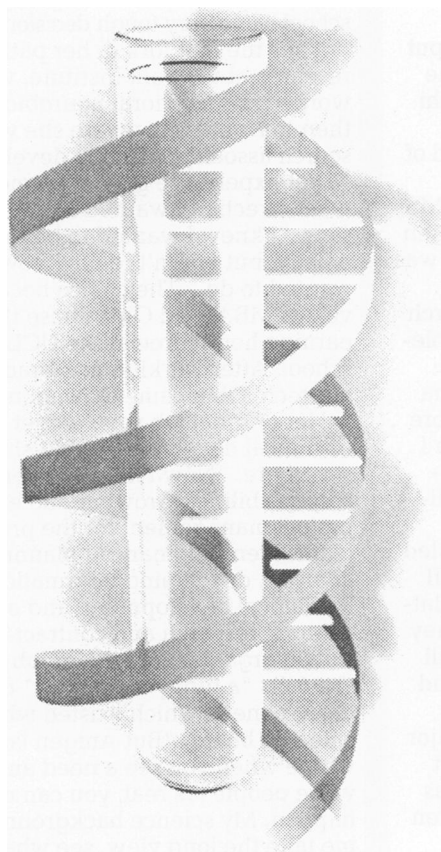
Does Lopez foresee an advanced degree? "If I do go to graduate school, it will probably be in medicine, to take advantage of the surgical expertise I've gained here," he says. "But that's not a decision I'm making right now. I love this field, especially the laboratory work. It's exciting to be part of a drug's progress through clinical studies. When you're working in the trenches, you feel part of it. It makes you feel good, it really does."

New Approaches at Gen-Probe

Gen-Probe of La Jolla, California, is a DNA-probe-based diagnostic company. For a decade, Gen-Probe has been applying powerful new approaches to diagnostics. The company is about to begin human clinical studies of an HIV antisense product, and it has also recently opened a new therapeutics wing.

BS/MS scientists make up most of Gen-Probe's work force, working everywhere from management to the bench. Mathew Longiaru, director of advanced technology at Gen-Probe, says, "They are the ones generating the data, pushing the projects forward." Henry L. Nordhoff, president and CEO, says, "We think they have a very significant role to play. In

From the next step in DNA probe technology, to a giant leap in the treatment of disease.



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Playing significant roles: Mathew Longiaru and Vivian Jonas of Gen-Probe

talent and ability, some of our BS and MS people are every bit as bright as those at the PhD level."

Brian Uhlik is a research assistant at Gen-Probe's new therapeutics department. "I've learned more in three months here than in all my classes in college," he says. Uhlik, who has a BS in microbiology from Colorado State University, works in a molecular biology lab. "Here we move at quite a pace," he says. "I'm exposed to a new technique one day and the next day I'm expected to be an old pro at it."

Vivian Jonas, program manager in diagnostics, was the seventh person hired at Gen-Probe. Jonas, who has a BS in genetics from UC Berkeley and an MS in biology from San Diego State University (SDSU), learned hybridization technology from David Kohne, one of the company's cofounders. She is currently responsible for all the respiratory projects in diagnostics and has been at Gen-Probe for eleven years. "I started in a lab in which I was the only student working towards a terminal master's degree," she says, "and now I oversee eight scientists in what is definitely a PhD-level position." She says that her lack of that degree has not held her back. "Most people here don't form preconceived notions based on your degree level," she says. "The focus has always been on what you can produce rather than on your title."

Josephine Cheung, research associate in diagnostics R&D, has a BS and an MS in biochemistry from UC Riverside. "I'm not thinking of a PhD at the moment," she says. "For my work now, which I enjoy a great deal, my education and work experiences have prepared me well for the challenges I face every day. Currently, I am involved in a project that detects *Chlamydia trachomatis* in male and female urogenital specimens. It's a specific and very sensitive test using nucleic acid amplification technology."

Gen-Probe's needs are changing as the company grows. Nordhoff thinks that "therapeutics and regulatory affairs will see some growth." Specific needs include human genomics, genetics, and expertise in disease management and monoclonal antibody technology. As at many biopharmaceutical companies, BS and MS scientists are encouraged to explore a

range of career paths. Some stay in research. Some gravitate toward the business side. Others evolve toward regulatory affairs, clinical affairs, or marketing.

Uhlik says, "I'm not sure what my next move will be. There's lots of opportunity right where I am." But Cheung sees promise in her dual role as researcher and giver of feedback. "I act as both scientist and customer," she says. "For example, recently I was testing the physical qualities of swabs from different vendors, went over the results with my supervisor, Martha Bott, and helped decide which vendor was best. I like the aspect of bringing business and science together."

Planners and Managers



It was 1984. I'd come to the big decision. Should I go for the PhD or go into industry? I liked the collaboration I saw in industry, so I decided to put the PhD on hold."

In the intervening eleven years, Mike Narachi has followed a path through discovery research to his present position as head of strategic planning at Amgen.

Narachi had completed his BS and MS in molecular genetics at UC Davis. When he came to Amgen (total staff: 100), it was early days yet for the biotech industry. Narachi went right to work as a research associate, conducting research in a molecular biology laboratory for four years and later working on gamma and alpha interferon development. "I learned more science in my first few years here than I ever would have learned in a PhD program," he says. "It was so multidisciplinary, and I had access to the latest equipment." But in 1988 Amgen dangled a new adventure before him. "Phase III trials on our granulocyte-colony stimulating factor (G-CSF) had just started. They said to me, 'We need someone who will lead the product development team and get G-CSF approved worldwide.' This was an opportunity to help make a major contribution, and of course I jumped at it." After G-CSF, Narachi took a post as vice president of development at Amgen Japan, where he was responsible for building Amgen's development capability in the new Tokyo office.

In his most recent assignment, Narachi is helping Amgen define its corporate strategy. His job takes him all over the world; he especially enjoys his role as facilitator. "I'm a mirror," he says. "I talk to people, put people together. To Dr X I'll say, 'Did you know that Dr Y is thinking about this issue too?'" Planning is part forecasting and part looking backward, trying to predict where each option will lead. "It's a Darwinian mutation approach to strategy," Narachi says, "except that the big difference between Amgen and a biological organism is that we can decide which mutation to adopt."

Asked whether he still considers himself a scientist, Narachi replies, "Definitely. I don't produce or discover, but I have to interpret different sciences across disciplinary boundaries. Hot skills are not what matters. What matters is the process: understanding science, enjoying the uncertainty of it, and building a future out of that. I do enjoy it."

"Some of it is being in the right place at the right time. Some is being creative. And some of it is a willingness to take on new things." That is Janice Ohta, associate director of business planning and analysis for Amgen, and she is trying to account for the career course she has taken.

That course began with a BA in psychology at UC San Diego. With her eye on medical school (and a career as a neurosurgeon), Ohta did minors in biology and organic chemistry. As graduation neared, she realized that her heart wasn't really in medicine. "Not going to med school was a very tough decision," she says.

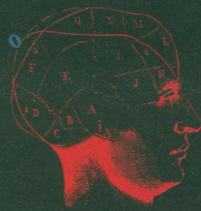
Thus the first fork in her path led to research at the Salk Institute, where she worked in behavioral neurobiology, and then to Hybritech, where she was a research associate in assay development. "That experience gave me time to decide what direction I wanted to go in," she says. "I knew I wanted to be in biotechnology, but I didn't really know what I wanted to do." The choice became PhD versus MBA, and Ohta chose the latter, earning her degree at the UCLA business school. After working at Biorad and Chimeritech, Ohta came to Amgen.

Her original job was budget planning in clinical development. But she didn't stay there. "Now I have a diverse set of responsibilities: growing and expanding project management for the product teams, general financial planning and analysis, developing information systems for clinical development, and evaluating contract research and contract administration organizations." Her job is what she calls "a funny mishmash" of functions, none of which existed when she came on board. "But Amgen is a place where when you see a need and can convince people it's real, you can make it happen. My science background helps me take the long view, see what the issues are, and apply that knowledge to developing products. The focus is different, but it's science nevertheless."

Does Ohta anticipate new turns in her future career path? "My philosophy with career planning is that I don't plan it so much as take advantage



Being at the right place at the right time: Janice Ohta of Amgen



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of opportunities. One thing I do know: if you're not having fun, you're probably not being productive."

Michael McClurg, project analyst in the discovery research planning group of Ligand, is an excellent example of a scientist combining science and business. Ligand is involved with partnerships with huge pharmaceutical companies such as Allergan, SmithKline Beecham, Glaxo Wellcome, Abbott, and American Home Products. Each partnership is independent, and each needs to be monitored. That's where McClurg comes in. "We used to do such things in a more informal manner," he says, "but we have gotten too big for that."

McClurg monitors Ligand's contractual obligations with these partners. "I'm using my science all of the time," he says, "reading all the contracts, staying in contact with groups of scientists at Ligand and eight other companies, and tracking milestones. I have to keep up constantly as part of my job, perusing the literature and attending relevant scientific meetings."

McClurg earned his BS in biology from the University of California at San Diego (UCSD); after twelve years in industry, he added an MBA from the University of San Diego School of Business. "I never

contemplated getting a business degree," he said. "Graduate school was an option, but I never pursued it." He worked at the Scripps Research Institute, the UCSD Medical Center, Immunetech Pharmaceuticals, and Ligand in areas such as monoclonal antibody technology, immunology, and intracellular receptor research.

While still at Immunetech, McClurg began to earn his MBA at night. That decision was driven by a number of considerations. "One was the perception of an invisible ceiling in industry for people without advanced degrees," he says. "I saw more opportunities in the business side, especially with so many biotech companies just coming into maturity here in San Diego." Keeping lines of communication open, staying abreast of scientific work at forefront companies across the United States and Europe, McClurg feels more than in touch with science. "I may not wear a lab coat anymore," he says, "but I'm doing science for sure."

Crossover Science at Allergan

In the medical device field as in biopharmaceuticals, disciplinary



Crossing over at Allergan (left to right): Portney, Tarantino, Christ, McNicholas, Knight

boundaries are eased or erased to speed creation of new products. Patricia M. Knight, vice president of research, development, and engineering for AMO Surgical Products at Allergan, points out that "ours are diverse products, meaning AMO has fairly diverse hiring needs." These include biologists, polymer chemists, analytical chemists, physicists, and biomedical, mechanical, electrical, and software engineers. About 25 percent of AMO scientists have PhDs and/or ODs and MDs; the rest have BSs or MSs.

In hiring BS/MS scientists, Knight looks for a good technical foundation, good interpersonal skills, team orientation, and what she calls "evidence of initiative and persistence, which is going to come in ever handier in the coming health care environment."

Richard Christ, director of surgical research, and Tom McNicholas, director of intraocular lens development and engineering, agree that theirs is a hybrid area bringing together engineers, biologists, and physicists of varied description.

In their departments, engineers with initiative get to do more than engineer. "One nice thing about the medical device business," says McNicholas, "is that at a relatively mid-level technical position, you can have your own projects. They're small, they have variety, they're self-contained. You get exposure to strategic marketing, finance, and operations. The responsibility is yours, if you're ready for it."

Both Christ and McNicholas are excited by the concept of "concurrent engineering," which means, in Christ's words, that "you're designing the product and the manufacturing process at the same time." In this confluence of optics, biocompatibility, and polymer science, everyone has to think like a biomedical engineer, even if that is far from their formal education. "That means understanding not only the basic science of the product but also what the body's response to it will be," Christ says.

The crossover between science and business is becoming more common at Allergan and throughout industrial science. Kenneth E. Kadziauskas, director of phacoengineering for Allergan, considered an MBA right after finishing his BS in chemical engineering from the University of Illinois in 1984, but he decided to get some work experience first. "I wanted a better understanding of business, marketing, and finance. I wanted to go along a technical management track. To be effective at that, I need to speak the language of business."

Kadziauskas' project is a phacoemulsi-

Nicholas Tarantino, OD, FAAO, director of worldwide clinical research Allergan Medical Optics

Clinical research is an area not many people think of when they consider science careers, but it's a real opportunity. Many people just fall into it by accident and find that they really like it. People will start off on a scientific track, working in the labs—and then they'll hear about clinical, become intrigued, and come here. About a third of our employees have come over from the labs. And they stay. The average person in clinical research has about six to seven years experience. Most come from the life sciences, some from the natural and social sciences, and some are nurses, who are valuable because of their clinical background.

There's a lot of variety; it's not all desk work. The job is ten to fifteen percent travel—enough to make it interesting but not so much that it takes over your life. You have a great deal of contact with health care practitioners, surgeons, and researchers on the leading edge. You're always learning new things about your area.

What we look for are people with research experience. The opportunities are there more than ever at colleges and universities today, and people should take advantage of them. Learn the scientific process, the use of statistics, the way clinical studies are set up, how hypotheses are tested.

I came to clinical research by my own tortuous route. I have a BS in biology from SDSU and an OD from Southern California College of Optometry. I was in practice for three years, and much of my practice was in extended-wear lenses. I found I was spending more time in clinical research than I was in the practice. One of my previous instructors was head of clinical research for contact lens care at Allergan. We had a chat, and that's how I came in.

Regulatory affairs is an area very similar to clinical research in that people gravitate to regulatory from a variety of backgrounds. In regulatory affairs as in clinical research, you generally hire people with strong science backgrounds who understand how a drug is developed and can communicate the facts about that development knowledgeably and effectively. The more intelligently an FDA filing can be assembled, the easier it will be for the product to be approved.

No one here ever dreamed they'd land in regulatory or clinical—but few ever dreamed they'd like it so much.

Between College And Graduate Or Medical School Is The Perfect Time To Do Your Own Research.

The National Institutes of Health is pleased to announce a special opportunity for recent college graduates who wish to explore biomedical research careers before applying to graduate or medical school. The experience you gain in this program is unparalleled. First, it will provide an opportunity for you to "test the scientific waters" at the largest institution in the world devoted to biomedical research. In a way, you'll be doing your own research, determining if this is the career path you truly want to pursue. And second, you'll assist in investigations that may well effect future generations.

The NIH Predoctoral Intramural Research Training Award (IRTA) provides support for a year-long research training experience in our state-of-the-art laboratories in Bethesda, Maryland. To be considered, you must have graduated from an accredited college or university no more than 12 months prior to starting the fellowship and

intend to apply to graduate or medical school within the next year. Awards may be granted for an initial 12-month period and be renewed one time for an additional 12 months, based on satisfactory progress towards matriculation at an accredited graduate or medical school. Upon acceptance to graduate or medical school, you may be eligible for additional NIH training awards.

The experiences you gain at the NIH in this program will be valuable wherever your career takes you. Interested candidates should submit a *curriculum vitae*, three letters of recommendation emphasizing your research potential, a statement of your research interests and an official copy of your college transcript to the Coordinator of Student Programs, NIH Office of Education. Candidates must be U.S. citizens or permanent residents.



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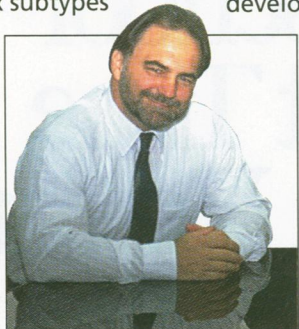
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Alex Nadzan
senior director
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I'm responsible for Ligand's chemistry contribution to our joint venture with Allergan. We're developing anti-cancer drugs, new generations of retinoids, based on vitamin A acid, which have effects on gene regulation. We are targeting six subtypes of retinoid receptors using the intracellular receptor technology developed by Ron Evans at the Salk Institute. Compounds with improved selectivity or specificity for these receptor subtypes are resulting from the studies; these agents will provide drugs with greater specificity of action and reduced toxicity.



Many of Ligand's scientists are BS or MS chemists and biologists. These people are crucial to our efforts, conducting fundamental and applied research toward the development of new therapeutic agents. Most are either making molecules (working either independently or in close consultation with PhDs) or evaluating the biological activities of molecules, doing fundamental mechanism-of-action studies, or developing new assays to study drug candidates.

Accordingly, they are intimately involved in all aspects of the drug development process. They attend

project meetings and our larger company-level meetings. We feel very strongly that these people should know how their efforts relate to the whole project. My philosophy is to involve them and their ideas in the decision-making process.

Some of our research scientists have gone from the lab into management. Others have joined our

development team, supporting the commercialization of drug candidates. Many BS/MS scientists choose to stay in research, where they can advance by developing their skills within their area of expertise. Depending on where they want to go, there's a lot of opportunity.

In hiring, the qualities we look for are mastery of science, first and foremost. People with academic or industrial work experience have a decided advantage. Almost everyone who comes here has done some sort of undergraduate project or summer research work. Other desirables include a strong work ethic, the ability to function independently, good computer skills, and positive verbal and writing skills. Finally, we look for flexibility, an especially important attribute in a growing biotech firm. Scientists must be able to wear many hats and perform tasks that go beyond their formal training. Adaptability is a really important quality.

fier—a computer-controlled device that surgeons use to remove cataracts from the eye. Managing this product has taken all the scientific and business expertise Kadziauskas can muster. "I meet almost constantly with folks in marketing and finance, and with senior level management," he says. "My role is to bridge the technical and business ends of this process, almost like an interpreter. Now I know how to speak both languages."

Val Portney, principal scientist in research, development, and engineering for AMO Surgical Products, is in optical science, which involves physiological science as well as engineering. Engineers (mostly master's-level) are involved in every step of product development, from lens design to process design. Portney's hiring interests are in traditional optical engineering, mechanical engineering with optical applications, optometry, physiological optics, and biomedical engineering.

In this crossover company, it is hardly surprising to hear Portney say, "The future of science lies in the conjunction of different fields." What can the BS/MS scientist do to prepare for such a polyglot market? "Focus on a specialty," says Portney, "but also have some knowledge

of other fields—not only science, but also marketing, patent law, and regulatory affairs. Strict divisions between the technical, business, and disciplinary sides of science are disappearing."

Scientists on Assignment: Lab Support



We think of scientists as working full-time in the same laboratory for their entire working lives, when in fact some scientists change positions every few years, other scientists work part-time, and still others work "on assignment."

Lab Support, a division of On Assignment, is a service providing science professionals on temporary assignment to the biotechnology, environmental, chemical, pharmaceutical, food and beverage, and petrochemical industries. Kathy WestPrather, senior vice president and COO, says, "There are plenty of companies nationwide seeking high-quality employees in the sciences. Our clients include Amgen, Pfizer, Unilever, Merck, and Monsanto. For college graduates

without experience, we can function as a kind of apprenticeship."

The average Lab Support worker is 25 and holds a BS in chemistry, biology, microbiology, molecular biology, or biochemistry. Margaret Deneher, vice president of support services, says, "Some are placed in R&D, but we see more placements in QA and QC. It's easiest for us to place people with lab experience and good interpersonal skills. Our clients have both general and specific requests. We hear both 'Give me a bright person with a science degree and I'll do the training in methods and techniques' and 'I need an HPLC and GC operator, someone with X years of experience.'"

Lab Support's account managers are experienced scientists who can match industry needs with employee skills. They personally coach each candidate on the client company and job requirements. "The way demand has been," says Deneher, "account managers can usually place good candidates very quickly."

More than 12,000 scientists have worked with Lab Support. About 20 to 25 percent convert to permanent employment with a given client. Close to 70 percent go on to multiple assignments. The average length of an assignment is three and a half months. Employees are eligible for health benefits, paid holidays, a 401k program, and an employee stock purchase plan. "It's a great chance for a scientist to gain a skill set," Deneher says. "With us, you can get yourself started in industry and see what it's all about."

One scientist who did just that is Colin Trout. After receiving his BS in biology from New Mexico State University, he moved to Los Angeles, worked for a year in the television industry, then started hankering for science again. "Lab Support was great, especially my account manager," he says. "She explained everything carefully and prepared me well." His first placement was a three-week stint at a Keebler Foods QA plant. Next came seven months in the stability department of Baxter Biotech, after which Trout transferred to protein therapeutics, where he worked for another eight months

on a drug for classic hemophiliacs.

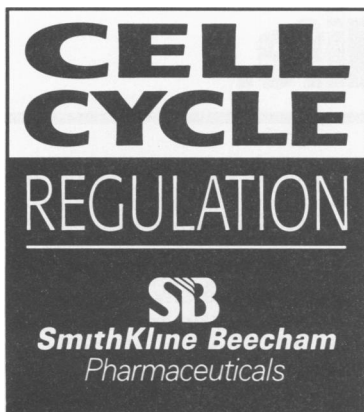
Although a hiring freeze at Baxter precluded a regular position, Trout's supervisor had some connections at Amgen, and Trout was eventually hired to run HPLC machines in the analytical resources department of the biochemistry group.

"I'd definitely recommend doing what I did," he says. "If you have no experience or connections, it's an excellent way to gain experience, both short-term and long-term, in industrial science. Places like Lab Support have access to many different companies. I would never have broken into Baxter or Amgen without it."



Matching needs and skills: Margaret Deneher (left) and Kathy WestPrather (right) of Lab Support

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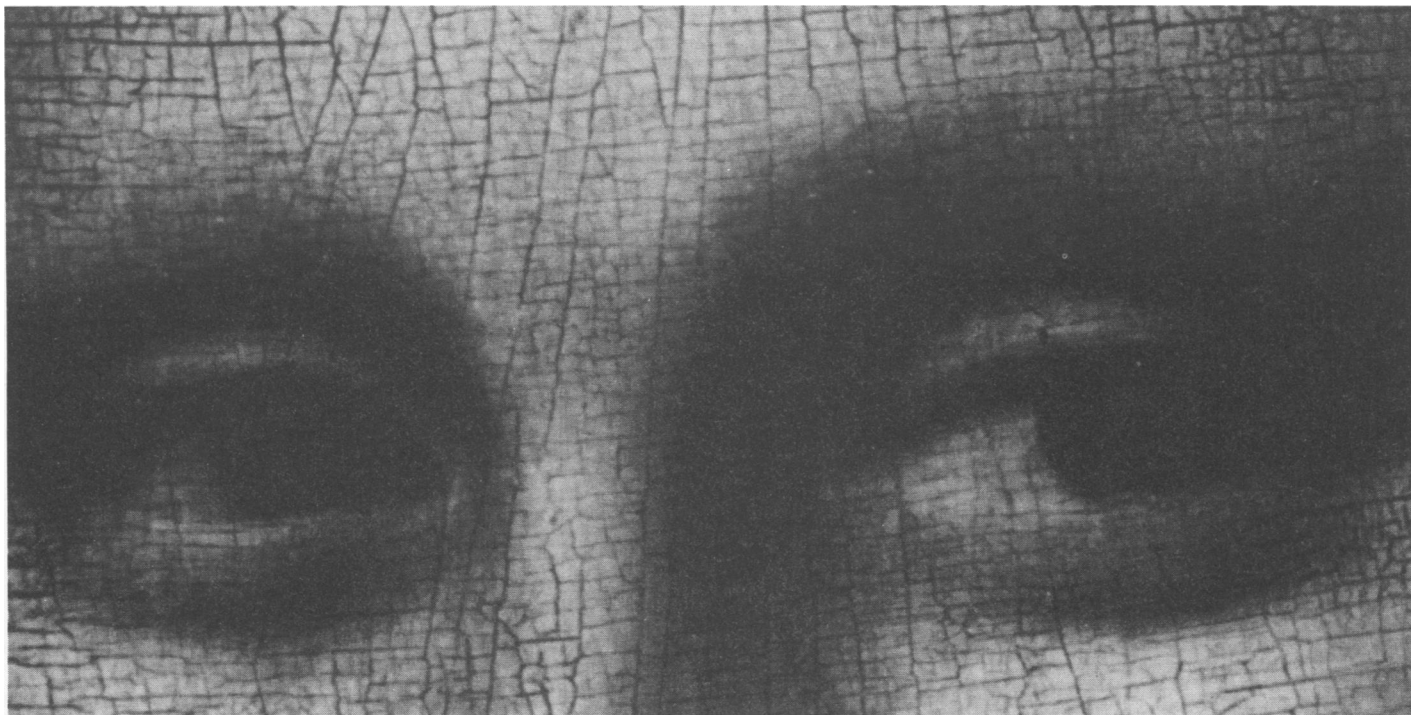
Clinical Data Management - Clinical Data Coordinators to review computerization and quality control of patient data from clinical trials, in compliance with standard operating procedures. Requires experience in collection, review, computerization and validation of clinical/medical data, and an understanding of database design. **Job Number 95080BSMS**

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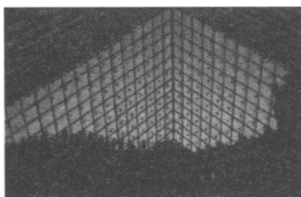
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Below, we hear faculty, students, and researchers from four diverse and well respected academic programs—UC Irvine, UCLA, NYU, and the Scripps Research Institute—discuss how people today are making career decisions in the newly unsettled scientific environment.

Asking the Right Questions: Neuroscience at UC Irvine

If neuroscience wasn't born at UC Irvine, it certainly grew up here. Thanks to the teaching and research efforts of James McGaugh, Gary Lynch, and many others, Irvine is a premier world site for investigating the biology of the brain and the mind. The following is a round table discussion featuring researchers at all levels of scientific endeavor at Irvine. They include:

- Roberto Galvez, undergraduate senior
- Celia Perez, second-year graduate
- Richard Robertson, professor and interim chair, anatomy and neurobiology
- Cedric Williams, a postdoctoral researcher on his way to an academic post in psychobiology at the University of Virginia

Perez: When I started college at the University of Arizona, I didn't know what I

Questioning the mind: Celia Perez and Richard Robertson of UC Irvine

Higher Degrees and Academic Research

wanted. I explored engineering, but I didn't feel the passion until I began to take biology courses. I work in molecular and cellular biology. I'm interested in how axons find their targets, in the factors within the cortex that can promote or limit axon activity.

Williams: Throughout my graduate career, I eagerly followed publications coming out of Irvine, and I knew I wanted to come here. I'm studying the role of brain stem nuclei in receiving input regarding changes in peripheral visceral states. I want to know how hormones and steroids can influence the brain without actually reaching the brain themselves. I think that somehow the chemical message is transferred into a neural message.

Robertson: I came to Irvine in 1967 as a graduate student, left for six years, and then came back. Why? Because of the breadth and the depth of talent, the opportunities for collaboration. I've been here ever since, and throughout that time, neuroscience has just kept exploding.

Galvez: I decided on Irvine based on what my high school counselors said. I first did some volunteer work in veterinary medicine, but I didn't like the way all the questions had set answers. Two years ago I started working at Dr. James McGaugh's lab, looking at the release of neurotransmitters in the amygdala and their role in memory. Right away, I realized that this is what interested me—the physical bases of this abstract thing, memory, that I'd always taken for granted.

Selected MD/PhD Programs at U.S. Medical Schools, 1994-1995

	Anatomy	Biochemistry	Biomedical Engineering	Biophysics	Cell Biology	Genetics	Immunology	Microbiology	Molecular Biology	Neurosciences	Pathology	Pharmacology	Physiology	Other Disciplines
California														
UC Irvine	•	•		•				•	•			•	•	•
UCLA	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Connecticut														
Yale		•		•	•	•	•	•	•	•	•	•	•	•
Georgia														
Emory	•	•		•	•	•	•	•	•	•	•	•	•	•
Illinois														
Chicago Medical	•	•		•	•	•	•	•	•	•	•	•	•	•
Maryland														
Johns Hopkins	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Michigan														
University of Michigan	•	•	•	•	•	•	•	•	•	•	•	•	•	•
New Jersey														
Robert Wood Johnson	•	•	•	•	•	•	•	•	•	•	•	•	•	•
New York														
Albert Einstein	•	•		•	•	•	•	•	•	•	•	•	•	•
Columbia	•	•		•	•	•	•	•	•	•	•	•	•	•
New York University		•		•	•	•	•	•	•	•	•	•	•	•
North Carolina														
Duke		•	•	•	•	•	•	•	•	•	•	•	•	•
Pennsylvania														
Hahnemann	•	•		•	•	•	•	•	•	•	•	•	•	•
Jefferson	•	•		•	•	•	•	•	•	•	•	•	•	•
University of Pennsylvania	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Texas														
Baylor		•	•	•	•	•	•	•	•	•	•	•	•	•
Texas A&M	•	•		•	•	•	•	•	•	•	•	•	•	•
Washington														
University of Washington		•	•	•	•	•	•	•	•	•	•	•	•	•



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Located at New York University Medical Center, one of the largest teaching and research complexes in the world, the Sackler Institute offers research opportunities and training in the basic medical sciences. The Institute encompasses the Basic Medical Science Departments at the Medical Center that offer a variety of interdisciplinary training programs. More than 220 Ph.D. and M.D./Ph.D. candidates, and a similar number of post-doctoral fellows, pursue research in an unparalleled academic environment with an internationally recognized faculty. Competitive stipends and housing are available to all students.

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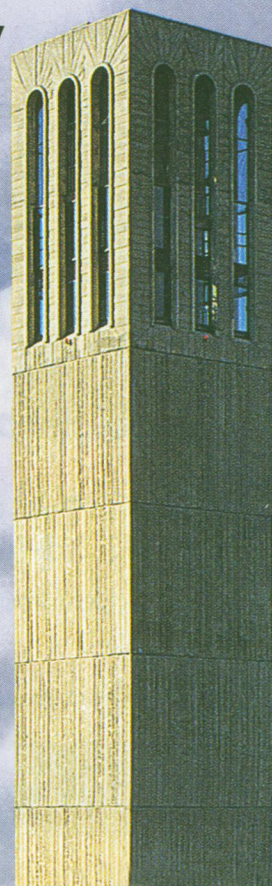
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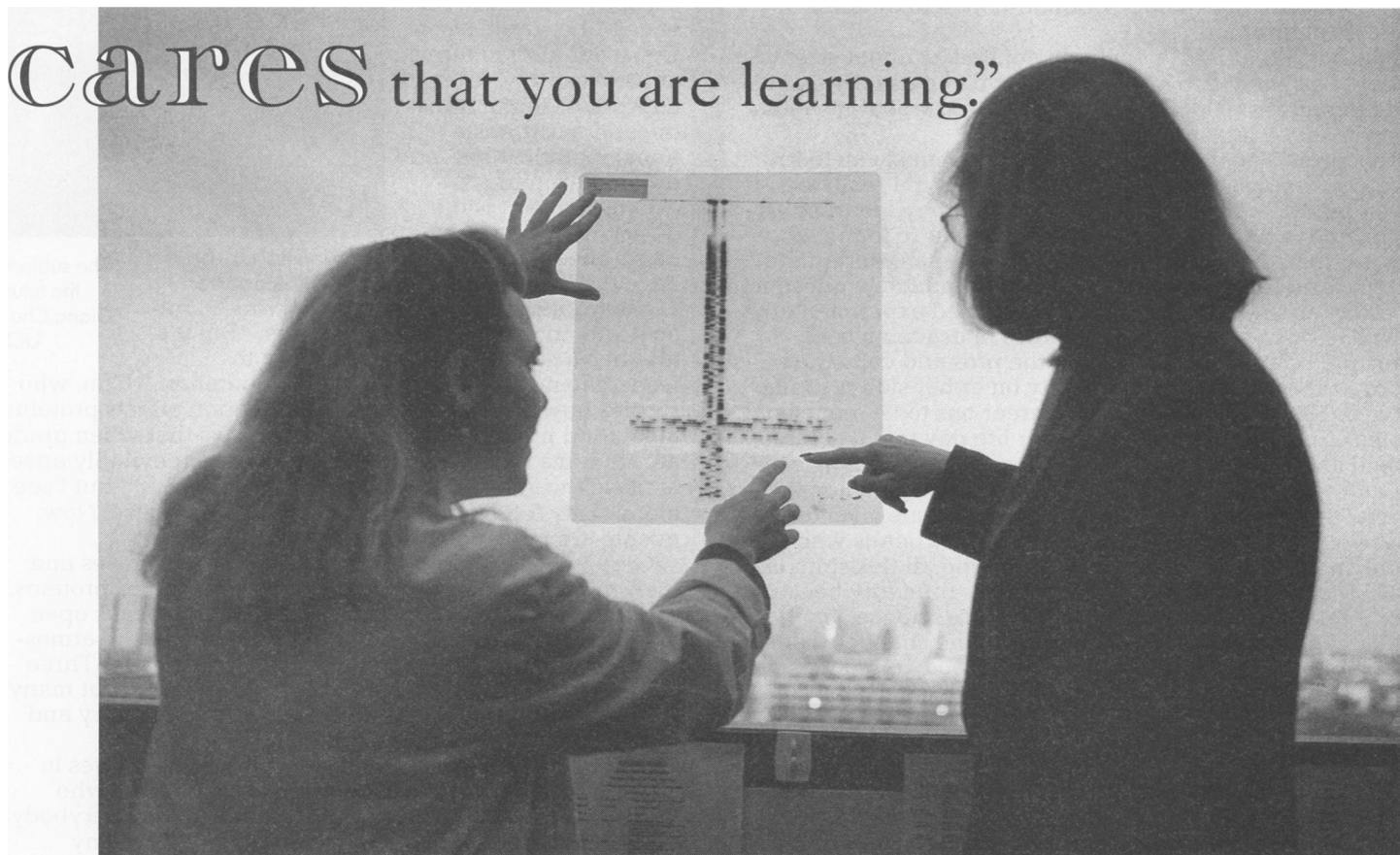
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*Graham-Diamond Study (1995) John Hopkins University Press.



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from someone who
cares that you are learning.”



Those are the words of a student who recently chose the Division of Biology and Biomedical Sciences at Washington University for graduate training. Even a short visit made it clear that graduate study at Washington University takes place in an atmosphere of unobstructed collaboration and collegial support. ♦ The 11 flexible, interdepartmental and interdisciplinary programs will allow you to follow your scientific interests wherever they lead. And, over 300 faculty members are available to provide the direction you need as you begin your career as a scientist. For more information and an application, contact us at: 1-800-852-9074, or e-mail: dbbs_office@wums.wustl.edu.



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Robertson: Collaboration and discipline-crossing have been our history. It's hard even to list all the faculty members on campus—in the college of medicine, the departments of psychobiology, development and cell biology, cognitive science, and others—who are doing neurologic research. We have a new neuroscience facility staffed with scientists from all over the disciplinary map. The University of California has established two interdisciplinary Organized Research Units (ORU's) at Irvine. At each ORU, people from many departments come together to work on a common problem. One ORU is devoted to memory research, the other to brain aging and dementia.

Perez: People should just jump in and try doing research to see if it's for you—keep your mind open to different avenues of thinking.

Williams: What most people do not realize about science is that to arrive at one hot discovery, you've usually already had ten failures. People call it trial-and-error, but it should be error-and-trial.

Robertson: The most valuable skill a scientist can learn here is how to pose a question and answer it. I really believe that. We offer courses on brain anatomy, neurophysiology, and molecular biology, but once you're in the lab, the questions become, How do you choose and formulate an answerable question? How do you formulate a question precisely enough that it can be approached experimentally?

Williams: I examined opportunities in academic and industrial science, and I decided the pros and cons were equal—that is, the level of security on either side is similar.

Perez: The choice of a science career has to be a personal choice of how you want to live your life day to day. I have looked at industry and at academic science, and right now I'm more motivated toward academic science. I enjoy the people, the teaching, and the freedom to pursue my interests.

Galvez: You have to love to learn. I have friends who look at me and say, "You can't really like doing all this stuff, can you?" Many have tried to dissuade me—primarily because they think there's no money in it. To be in science, you have to like to do what you do. Regardless of the changes that are coming, if you like science, don't let anybody dissuade you.

Getting Rid of the Old Labels: The ACCESS Program

ACCESS, the UCLA program in molecular and cellular life sciences, pools more than 170 members of eleven departments, making all these experts available to students for lab rotations. David Meyer, professor of biological chemistry and director of ACCESS, says, "The idea is to allow students to make one application, go through one round of interviews, and have access to their choice of experts as potential mentors of thesis research."

Jonathan Gary, who is studying molecular biology, found such flexibility irresistible. "The chance to cross disciplinary boundaries was very attractive," he says. "Most of the faculty seemed to have interests similar to mine, which lies in cellular biology problems approached biochemically." Diana Chu, also in molecular biology, says, "I was attracted by the sheer size of the faculty. And they interact really well. I do a lot of protein biology, and when I need information, I can just go to the appropriate lab and ask."

Incoming graduate students do three lab rotations their first year, after which they join their chosen mentor's department. Jun Urano, in microbiology, says, "I'm interested in the molecular biology of disease, and at UCLA the medical school and college of letters and science interact closely, giving me the opportunity to design many kinds of cross-disciplinary research. My rotations have been in microbiology and molecular genetics; molecular, cellular, and developmental biology; and human genetics."

PhD programs all over the United States are taking on

this cross-disciplinary and combinatorial look, which, after all, reflects the state of contemporary science. "A growing number of students are interested in the medical and clinical relevance of the new biologies," Meyer says. "And look at Diana, doing biochemistry in a yeast genetics lab! There aren't any technological or disciplinary barriers anymore."

Students here do cloning, metabolic labeling, enzyme assays, chromatography, radiolabeling, Southern blots, genetic manipulations, and yeast and *Drosophila* genetics—but there's no one hot trend or skill. Meyers says that labels such as *genetics*, *biochemistry*, and *molecular biology* don't work as field markers any more. "Everybody uses those sciences," he says. "Now we're thinking in terms of problems the research addresses: signal transduction, posttranslational modifications, and protein targeting."

One constant is the decision awaiting students once they're done. Some, like Urano, have their hearts set on academic science: "Perhaps it's because I've always worked in an academic environment," he says. "But it's also because it feels most conducive to research and cross-disciplinary collaboration." Chu, who studies how posttranslational modification affects proteins mediating protein transport in yeast, says that when graduate students talk, the subject of the future inevitably arises. "I myself want to go into academics," she says, "but I see more of my fellow classmates going into industry. Now people are more open generally to such careers."

Gary, who is studying protein methyltransferases and their role in the repair of damaged or isomerized proteins, prefers an academic future but is keeping his eyes open. "If I see that the opportunities are not there or the atmosphere is not as I'd hoped, I might look at industry. Three years ago I would not have said the same thing, but many people I respect as scientists are going into industry and have good things to say about it."

Recent changes in science—and ominous changes in how science will be funded—give pause to those who design programs like ACCESS. "One thing on everybody's mind," says Meyer, "is, 'Are we educating too many PhDs?' If shrinking funds shrink the employment base—and by the way, I don't think it's shrinking as much as people fear—we may be turning out an excess." The UCLA solution is to create the best program and turn out the best-prepared students possible. As Urano puts it, "We're here because we like to solve problems that haven't got an answer yet. I can't think of a better place in the world to do it."

Science in New York: The NYU Graduate Programs in Science and Medicine

With approximately 50,000 students, New York University (NYU) is the largest private university in the United States. NYU is both New York and national, both a great tradition and a center for the latest research in science and medicine.

Joel D. Oppenheim is associate dean for graduate studies and director of the Sackler Institute of Graduate Biomedical Sciences. "Our programs," he says, "tend to stress research, the importance of basic science, and an academic career course."

Each year between 30 and 40 students are admitted to doctoral programs in biochemistry, cell biology, environmental medicine, microbiology, parasitology, pathology, pharmacology, and physiology. About 150 PhD candidates



The subject is the future: Diana Chu of UCLA

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DEVELOPMENTAL BIOLOGY
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NEUROBIOLOGY
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STRUCTURAL AND COMPUTATIONAL BIOLOGY

To provide students with maximal choice and flexibility in selecting a research specialization, the basic science departments at UCLA offer a combined recruitment, admission and first-year program. This initiative, known as UCLA ACCESS to Programs in the Molecular and Cellular Life Sciences, represents a simple, flexible mechanism for maximizing research choices throughout the first year of graduate study. As part of this program, students are able to select research projects from 150 faculty mentors according to changing perceptions, interests and goals without regard to traditional departmental boundaries. Ethnic, gender and cultural diversity are both a strength and a priority at UCLA and we solicit and encourage applicants who will increase and strengthen our diversity.

All Ph.D. students are fully supported through a variety of sources including the following federally sponsored pre-doctoral training programs:

Cellular and Molecular Biology, Genetics, Atherosclerosis, Tumor Cell Biology, Biotechnology, Tumor Immunology, Microbial Pathogenesis, Chemistry/Biology Interface Training

For information and application materials:

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Molecular Biology Institute, University of California, Los Angeles
Los Angeles, CA 90024-1570
(800) ATG-UCLA or (310) 206-5280

join about 65 MD/PhD students and 600 medical students. Entrants are offered an integrated program in which they may do rotations within any department in the medical school during their first year, after which they choose a department. "Students have made it very clear that this initial flexibility is what they really want," Oppenheim says.

NYU is one of the major sources of future American research scientists, with about 75 percent of American-born students going on to academic science. Applicants should have a strong undergraduate science background, particularly in biology and chemistry. "That combination is vital today," says Oppenheim, "because most major research breakthroughs are happening on the molecular level."

There is no absolute baseline GPA although, as Oppenheim says, "we wouldn't ordinarily look much below a 3.0." NYU is looking for mastery of science, research experience, and a strong understanding of the program. Recruitment efforts have expanded nationwide, far exceeding the national averages in enrollments of women (over 50 percent) and minorities (over eight percent). "We're getting more applicants," Oppenheim says. "About 80 percent of the incoming class is American, as opposed to 60 percent in past years." MD/PhDs are a true elite. Only fifteen are chosen each year out of 200 applicants. They are required to have stellar grades, excellent MCATs, and extensive undergraduate research experience.

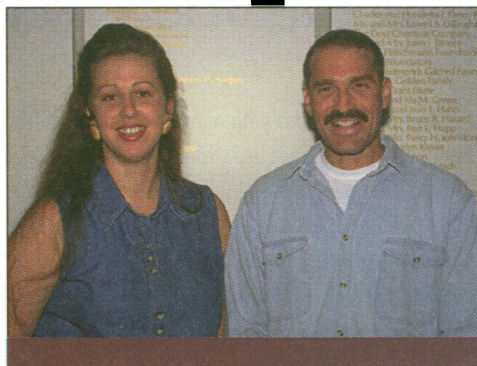
Small group teaching has become the norm, with students becoming more actively involved, serving on the education committee and initiating a course in new scientific techniques. New science is certainly an NYU forte: neuroscience and neurobiology; molecular biology; AIDS research; and cell communications. To focus on the sciences of the future—molecular mechanisms of pathogenicity, neuroscience, structural biology, and developmental genetics—NYU is bringing in 40 new full-time faculty members and a total of 250 additional scientists.

"It's a fascinating, exciting time here," Oppenheim says. "We're trying to create an esprit de corps among our students. New York makes that easy. There's so much cultural diversity, so much going on." Whether escorting students to the theater or busing them across town to hear a Nobel laureate speak, Oppenheim is encouraging his students to "allow their graduate experience to engage all their thinking processes."

BS/MS Scientists at Scripps

Trinette Ackermann is a research assistant in the vascular biology

department at the Scripps Research Institute. As an undergraduate at SDSU, she was picked for an NIH-funded program to introduce undergraduates to research in microbiology. "It was the best thing I ever did," she says. "I got to work in a virology lab for two and a half years. I even got paid." When decision time came, she chose research at Scripps. "I like being on the bench," she says, "the mystery of the unanswered questions, being the first to see the results. My lab is studying plasminogen activator inhibitor [PAI-1]. We know that PAI-1 is targeted to granules in blood platelets, but we want to know how. We're doing molecular cloning, PCR, sequencing, protein targeting, cell culture, and some in vivo work. There are so many new skills that it's hard to keep up, much less identify which skills are hot. They're all hot. At a lab like ours, the postdocs pass through in two years, while we technicians stay, learn the ropes, and end up running the place. Already I'm training postdocs. Some technicians—we call them 'lif-ers'—have been here for 20 years and more."



Trinette Ackermann and Rick Gulizia of the Scripps Research Institute

Will Trinette Ackermann become a lifer? "I haven't decided. Perhaps I will attend grad school here at Scripps. I'm still thinking about industry. And I might get a PhD and return to an academic setting. I have a lot of options."

Rick Gulizia, senior research assistant in immunology, came upon his field just as it was about to explode. "Immunology was coming of age as I watched," he says. After taking his BS in life science at the University of Nebraska, he stayed on at an immunology lab, working on the immune response to influenza. "Since then," he says, "I've been infatuated with immunology." He did a summer internship at Sloan-Kettering Cancer Center, applying to the MD/PhD program—but decided he didn't like New York. He was accepted into the MD/PhD program at UCSD, but he soon struck up a close working relationship with Don Mosier, then at the Medical Biology Institute (MBI). He started at MBI in 1986, and when Mosier was recruited by Scripps in 1992, Gulizia followed.

His research group has developed a unique modeling system. "We inject peripheral blood lymphocytes into severe combined immunodeficient mice and can thereby address basic questions regarding virology and antiviral therapies," he says. By now, he is passing his skills on to postdocs. "I consider a PhD from time to time, but the question arises: 'What's the point now after so many years of experience?' I'm going to international HIV- or AIDS-related meetings, I give presentations and posters, I do the things most postdocs do. For me, the decision to defer school and stay in academic science has at times been arduous. But I certainly haven't regretted it yet. It seems more relevant simply to do the science. If I want to take a new route, nothing sells on the job market as well as experience."

Elena Battenberg, senior research assistant, department of neuropharmacology, is a "lifer" who, through sheer experience, has attained PhD-level know-how and authority. Battenberg earned her BS in zoology from Connecticut College in 1968. "Of all the available subjects, zoology was most unfamiliar, and therefore most interesting," she says. "I applied to some PhD programs, but I had never actually done any real-world science at all."

One of her professors had shared a lab at Yale with Floyd Bloom, who was leaving Yale for the National Institute of Mental Health and needed a student assistant. Despite her lack of experience, Battenberg went. Since then, her career has followed Bloom's, to the NIMH in July 1968, the Salk Institute in 1975, and thence to Scripps. "I've picked up my skills on the job," she says. "Many of them, such as molecular biology and electron microscopy, now are being taught to undergraduates." Her skills include in situ hybridization and all aspects of microscopy and cell analysis. She also has developed technologies, including some innovative immunocytochemical techniques. "Now I'm trying to learn computers," she says with a laugh.

At Scripps, she is part of a massive (and computer-intensive) human brain mapping project and a collaborative project to locate specific molecular markers in the brain. That may be why Battenberg sees no further degrees in her future. "One reason I kept deferring a PhD," she says, "was that working on cutting-edge science is addicting."

Battenberg insists that she got lucky. "Floyd Bloom is a very kind person, and he has let me learn everything," she says, "but my experience is hardly typical. The setting has to be perfect—and it has been for me."

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

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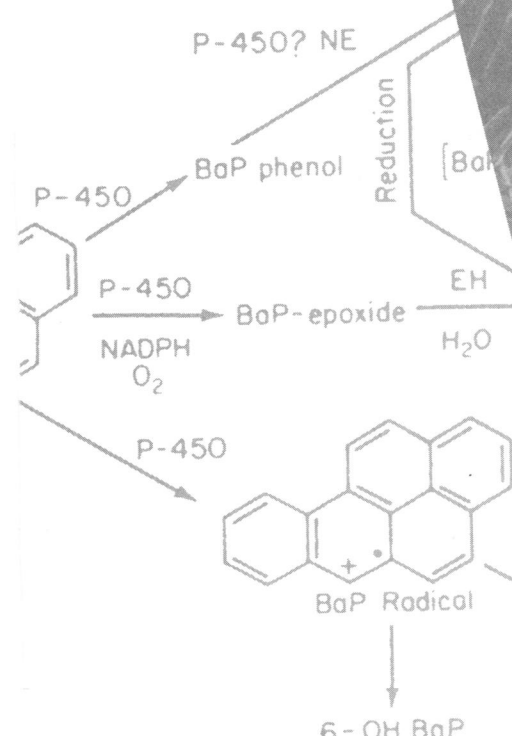
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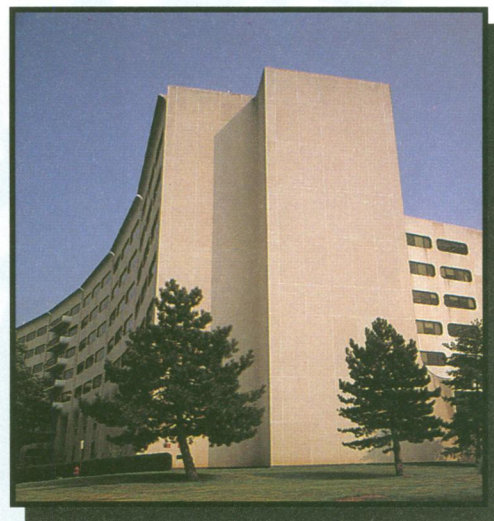
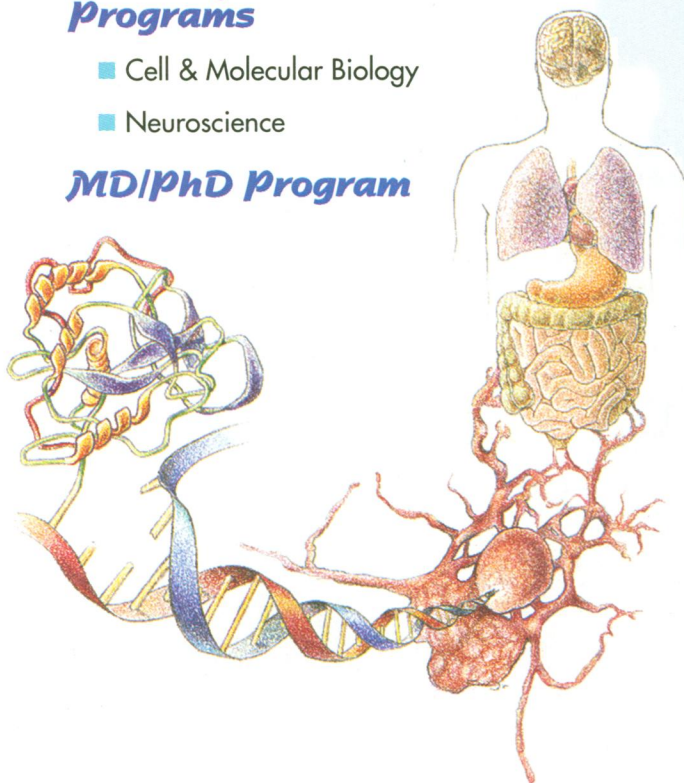
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Penn State's College of Medicine provides opportunities for graduate study in either departmental or interdepartmental graduate programs.

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Penn State's College of Medicine campus is part of The Milton S. Hershey Medical Center located in Hershey, Pennsylvania on the outskirts of Harrisburg, the state capital. This setting provides a pleasant atmosphere with easy access to several major metropolitan areas.

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Arris Pharmaceutical Corporation is a vibrant, entrepreneurial biopharmaceutical company headquartered in the San Francisco Bay Area. We're focused on the discovery & early development of small molecule therapeutics, and with so many promising collaborations and discoveries on the horizon, we've got several outstanding opportunities for a select group of talented professionals to join our interdisciplinary research team.

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We're expanding our focus on the design and development of inhibitors and other serine proteases. These activities are supported by a highly effective, novel and proprietary inhibitor design concept called "Delta Technology". You will be intimately involved in the exploitation of this technology, the definition and elaboration of its scope, and the effective application to novel protease targets. Ideal candidates will have 3-5 years' post-Ph.D. experience; a solid background in biochemistry, chemistry, enzymology and aspects of molecular biology; specific in-depth knowledge of enzyme mechanisms, enzyme kinetics, protein purification, and enzyme/enzyme-inhibitor characterization; a strong record of publication in enzymology & inhibitor characterization/development; and excellent leadership & supervisory skills. (Job# SCBM85)

Mass Spectroscopy Scientist

Working closely with a team of synthetic chemists, molecular biologists and pharmacokineticists, you will participate in the discovery of novel therapeutics by maintaining a diverse group of mass spectroscopic instrumentation, and by serving as the company's primary resource of mass spectrometrically based analytical data for organic molecules and proteins. Ideal candidates will have a Ph.D. in mass spectroscopy; at least 2 years of relevant post doctoral experience; and a solid record of publication. Applicants must also have experience with ESI, MALDI, FAB, EI, CI mass spectrometry and HPLC, SDS/PAGE, electroblotting and CZE separation techniques. (Job# SCJH85)

Research Associate

Support drug discovery efforts at ARRIS through the application of high throughput screening. Responsibilities will include automation of biological assays; screening of compound libraries; analysis of experiments & data; and written/verbal presentations. The position requires a BS/MS in biological sciences; 3+ years of relevant experience; compound screening & assay automation experience; proven ability to develop automated biological assays; and PC/Mac proficiency. (Job# SCGC85)

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At Hewlett-Packard's Bioscience Products Organization in Palo Alto, California, our investment in Research & Development is one of the highest among Fortune 500 companies. Currently, we are seeking creative, motivated professionals interested in expanding the boundaries of technology.

Molecular Biologist/Biochemist

This research position involves identification, isolation and analysis of nucleic acid target sequences to develop diagnostic assays for the detection of human diseases. You will participate in an aggressive, multidisciplinary effort directed toward the development of novel approaches and instrumentation for characterizing nucleic acids.

Requires a PhD in Molecular Biology or Biochemistry with 3+ years' laboratory experience in nucleic acids research. A successful candidate will have "hands-on" experience in techniques used to isolate and purify nucleic acids from biological samples, mRNA analysis, nucleic acid amplification strategies, hybridization methods including Southern and Northern blots, point mutation screening methodologies, cDNA cloning and sequencing. Familiarity with gene databases, probe design and nonradioactive methods for the detection and analysis of RNA and DNA preferred. Ad #2243/33441

Nucleic Acid Biochemist

This position will involve research in the substrate recognition requirements of various RNA and DNA polymerases. You will develop high yield, high fidelity methods for the incorporation of modified nucleotides into oligonucleotides and develop analytical methods for their analysis, as part of a multidisciplinary team developing instrumentation for characterizing nucleic acids.

Requires a PhD in Biochemistry with at least 3 years' experience in the following: enzymatic synthesis of RNA or DNA, nucleic acid amplification techniques, nonradioactive methods for the detection and analysis of RNA and DNA, and isolation and characterization of duplex and single stranded oligonucleotides. Research experience in the molecular recognition involved in substrate binding to polymerases a must. Preferred backgrounds include knowledge of gene databases, hybridization kinetics, and techniques used to characterize diagnostic gene sequences, as well as experience with buffer and metal ion effects on duplex structures, and the manipulation and characterization of chemically modified oligonucleotides. Ad #2243/33440

Bioanalytical Chemist, Project Lead

In this position, you will provide technical leadership of a research group which is responsible for the development of novel automated processes for the isolation of polynucleotides from biological/clinical samples in a multidisciplinary team approach.

Requires a PhD in Chemistry or Biochemistry with a focus on nucleic acids, minimum of 3 years' laboratory experience in extraction, isolation, purification and concentration of nucleic acids as well as extensive experience with research management and industrial product development. Experience with development of quantitative assays to determine reproducibility of sample preparation techniques and laboratory experience with HPLC, CE, PAGE are a must. In addition, experience in the following areas is desirable: non-radioactive methods for the detection of oligonucleotides, previous work with clinical samples, eukaryotic and prokaryotic culture techniques, and nucleic acid amplification. Ad #2243/29335

To apply for these Bioscience openings in Palo Alto, California, please send your resume to: **Hewlett-Packard Company, Attn: Ad #(insert ad number of interest), 1266 Kifer Road, MS100D-EY, Sunnyvale, CA 94086 or e-mail: elaine.yamani@hp2200.desk.hp.com** Hewlett-Packard Company is an equal opportunity employer dedicated to affirmative action and work force diversity.



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POSITIONS OPEN

MEDICAL MICROBIOLOGY AND IMMUNOLOGY ASSISTANT OR ASSOCIATE PROFESSOR

The Department of Medical Microbiology and Immunology, Texas A&M University College of Medicine, invites applicants for tenure-track faculty positions at the **ASSISTANT** or **ASSOCIATE PROFESSOR** level. Appointments are for 12 months with a competitive salary, excellent facilities and substantial start-up funds. Faculty members will be expected to participate in team-taught medical and graduate level courses and establish a vigorous and independent research program. Individuals with a research focus on microbial genetics and/or pathogenesis are especially encouraged to apply, but an emphasis on other subdisciplines, including immunology, will be considered. The department is located on the main campus of Texas A&M University, is affiliated with the Institute of Molecular Pathogenesis and Therapeutics, and participates in campus-wide programs in molecular and cell biology, genetics, and others. Review of applicants will begin immediately and continue until positions are filled. Interested applicants should send a detailed curriculum vitae, a brief statement of research interests and goals, pertinent reprints, and a list of three references to: **Van Wilson, Ph.D., Search Committee Chairman, Department of Medical Microbiology and Immunology, Texas A&M University, College Station, TX 77843-1114.** Additional details on current faculty interests may be viewed on Internet: www.tamu.edu, under web servers. *Texas A&M University is an Affirmative Action/Equal Opportunity Employer and encourages applications from women and minorities.*

ASSISTANT/ASSOCIATE/FULL PROFESSOR DEPARTMENT OF BIOCHEMISTRY UNIVERSITY OF ILLINOIS COLLEGE OF MEDICINE

Applications and nominations are invited for a tenure-track faculty position at the level of **ASSISTANT/ASSOCIATE/FULL PROFESSOR** in the area of molecular medicine with emphasis in developmental gene regulation and cell differentiation. We are especially interested in individuals using vertebrate systems to investigate problems related to gene expression in the context of development and medicine. Applicants should have a Ph.D., postdoctoral experience, a strong record of research accomplishments, and demonstrable potential for the development of an independent research program. The Department is one of six basic science departments in the largest College of Medicine in the United States and consists of 19 full time faculty and 13 joint appointees. In recent years we have recruited several senior and junior faculty and are most interested in fostering independent research in an environment of interactive collegiality. Applications should include a curriculum vitae, a summary of current and future research plans and the names, addresses, telephone/FAX numbers of at least three individuals for references. All inquiries will be held in confidence. Review of applications will begin after October 1, 1995. Send applications or nominations to: **Chair, Faculty Search Committee, Department of Biochemistry (M/C 536), University of Illinois College of Medicine, 156-29, California Institute of Technology, Chicago, IL 60612.** *The University of Illinois is an Affirmative Action/Equal Opportunity Employer.*

CALIFORNIA INSTITUTE OF TECHNOLOGY Division of Biology Assistant Professor—Developmental Genetics

The Division of Biology of the California Institute of Technology plans to hire an **ASSISTANT PROFESSOR** in the area of developmental genetics. We are looking for the best developmental geneticist, regardless of model system, experimental approach, or specific developmental problem. The term of initial appointment is normally four years, and appointment is contingent upon completion of a Ph.D. degree. Highly qualified applicants committed to a career in research and teaching are invited to send a curriculum vitae, reprints of publications, a list of at least three referees, and a description of research interests to: **Developmental Genetics Search Committee, c/o Ms. Gwen Murdock, Division of Biology 156-29, California Institute of Technology, Pasadena, CA 91125 USA.**

Caltech is an Equal Opportunity/Affirmative Action Employer. Women, minorities, veterans and disabled persons are encouraged to apply.

POSITIONS OPEN

ASSISTANT PROFESSOR MOLECULAR BIOLOGY/PHYSIOLOGY

The Department of Physiology at the University of Kentucky College of Medicine invites applications for a tenure-track position at the **ASSISTANT PROFESSOR** level. We seek an individual who will establish a strong research program which emphasizes the use of molecular biological approaches to the study of physiological functions and who will participate in our teaching program. Special consideration will be given to candidates who complement existing strengths of the department which include molecular, cellular and integrative aspects of neuro, endocrine, renal, respiratory and cardiovascular physiology. In addition to intradepartmental collaborations, interactions with other faculty within the Center on Aging, College of Medicine, School of Biological Sciences, College of Agriculture and the Markey Cancer Center provide a particularly stimulating research environment.

Applicants must have a Ph.D. or M.D. and at least three years of postdoctoral experience. Interested individuals should send curriculum vitae, a detailed statement of past experience, future research plans and three letters of reference to: **Dr. Phyllis M. Wise, Chair, Department of Physiology, College of Medicine, University of Kentucky, Lexington, KY 40536-0084.** Review of applications will begin on December 1, 1995.

Women and minority candidates are encouraged to apply. The University of Kentucky is an Affirmative Action/Equal Opportunity Employer.

ORGANIC CHEMIST

The Chemistry Department of Wesleyan University invites applications for a tenure-track position in organic chemistry at the **ASSOCIATE PROFESSOR** level, effective September 1996. Although all areas of research will be considered, applicants in the area of bioorganic or physical organic chemistry are particularly encouraged. The successful candidate will exhibit the potential for excellence in both teaching (undergraduate and graduate level) and research in a well-equipped department with an active Ph.D. program (presently 12 full-time faculty and 35 graduate students), and will be expected to aggressively pursue outside funding. Salary, fringe benefits, and start-up funds will be competitive. Interested applicants should submit a curriculum vitae and a description of research plans, and have three letters of reference sent to the **Chair of the Organic Search Committee, Department of Chemistry, Wesleyan University, Middletown, CT 06459** by November 1, 1995. *Wesleyan University is an Equal Opportunity/Affirmative Action Employer and actively seeks applications from women and minority candidates.*

FACULTY POSITION DEVELOPMENTAL BIOLOGY University of Texas at Austin

The Department of Zoology seeks an **ASSISTANT PROFESSOR** for a tenure-track position in any area of developmental biology. The Department has faculty investigating mouse developmental genetics, *Drosophila* development and neurobiology, frog development, organogenesis of the kidney and heart, invertebrate development and cell biology of the cytoskeleton. The candidate will be expected to teach at least one of the following undergraduate courses: Genetics, Cell Biology or Developmental Biology.

Applicants should submit a curriculum vitae, a two page summary of research interests, and have three letters of reference sent by October 15, 1995, to: **Chairman, Department of Zoology, University of Texas at Austin, Austin, TX 78712.** *The University of Texas at Austin is an Equal Opportunity/Affirmative Action Employer.*

ASSISTANT PROFESSOR. The Department of Physiology invites applications for one assistant professor position (tenure-track). Ph.D. degree or equivalent with three years of postdoctoral training. Candidates who plan to develop an independent research program in cellular, molecular or biophysical aspects of cell signaling systems or membrane biology are especially encouraged to apply. However, excellent candidates in all areas of cell physiology will be given serious consideration. Applicants should submit curriculum vitae and a brief statement of research plans and have three letters of reference sent to: **James T. Stull, Ph.D., Department of Physiology, The University of Texas Southwestern Medical Center at Dallas, 5323 Harry Hines Boulevard, Dallas, TX 75235-9040.** *An Affirmative Action/Equal Opportunity Employer.*

POSITIONS OPEN

UNIVERSITY OF PENNSYLVANIA MEDICAL SCHOOL DEPARTMENT OF PHARMACOLOGY

An **ASSISTANT** or **ASSOCIATE PROFESSOR** in the tenure track is being recruited. Candidates should be employing molecular biological techniques to study neurotransmitters and their receptors. Areas of interest might include: analysis of receptor structure/function by site-directed mutagenesis, control of receptor gene regulation, mechanism of receptor desensitization, and/or aspects of synaptic regulation and regulation by neurotrophic factors. Applicants should have postdoctoral research experience and the ability to develop a strong extramurally funded research program.

Renovated lab space and generous start-up funds are available. Applications from women and minorities are especially encouraged.

Applicants should submit a cover letter, a curriculum vitae, selected reprints or preprints, a statement of research interests, and three letters of recommendation to: **Search Committee, Department of Pharmacology, Medical School of the University of Pennsylvania, Philadelphia, PA 19104-6084.**

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

CELLULAR AND MOLECULAR NEUROBIOLOGIST Purdue University Department of Biological Sciences

Applications are invited for a tenure-track faculty position at the **ASSISTANT/ASSOCIATE PROFESSOR** level. Candidates must have a Ph.D. degree or equivalent and relevant postdoctoral experience, and are expected to develop a rigorous, extramurally funded research program and to participate in the teaching program of the department.

We seek a neurobiologist who utilizes molecular and cellular approaches to address questions in the areas of development, signal transduction, or receptor function in a vertebrate or invertebrate model system. The position includes competitive salary and start-up funds.

Applicants should send a curriculum vitae, bibliography, a short description of their research and teaching interests, and the names of at least three references to: **Chair, Neurobiology Search Committee, Department of Biological Sciences, Purdue University, West Lafayette, IN 47907-1392.** Applications will be accepted until November 1, 1995, or until the position is filled. *Equal Opportunity/Affirmative Action Employer.*

INDIANA UNIVERSITY BLOOMINGTON

The Department of Chemistry invites applications for a tenure-track faculty position in organic chemistry at the **ASSISTANT PROFESSOR** level beginning in the fall of 1996. This position requires the ability to organize and present courses at both the graduate and undergraduate levels. Potential applicants must show exceptional promise of establishing a vigorous, independent research program in an academic setting. To apply please submit a curriculum vitae, a publication list, and a short résumé of ideas for the development of research programs, and arrange to have three letters of recommendation forwarded. The deadline for applications is October 16, 1995. All application materials should be sent to: **Professor William R. Roush, Chairman, Organic Faculty Search Committee, Department of Chemistry, Indiana University, Bloomington, IN 47405.** *Indiana University is an Affirmative Action/Equal Employment Opportunity Employer and especially encourages applications from women and members of minority groups.*

ASSISTANT PROFESSOR NEUROSCIENCE

TENURE-TRACK POSITION, available January 1996. Ph.D./equivalent required, postdoctoral experience preferred. Research area preference: cellular/molecular/genetic approaches to such topics as neural development. Teaching: graduate and undergraduate neuroscience courses. Faculty are expected to develop courses and a vigorous, independent research program. Send curriculum vitae, publications, statements of teaching and research interests, and names of three potential referees to: **G. I. Hatton, Chairman, Neuroscience Department, University of California, Riverside, CA 92521.** Deadline: December 1, 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).

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Astra Hässle is situated in Göteborg, Sweden and is a research company with 1000 employees. Research is aimed at developing new pharmaceuticals for cardiovascular and gastrointestinal diseases. Seloken® (metoprolol), Plendil® (felodipine), Imdur® (isosorbide-5-mononitrate), Logimax® and Losec® (omeprazole) are drugs developed by Astra Hässle scientists.

Head of the Astra Structural Chemistry Laboratory

A central Structural Chemistry Laboratory is to be established for the Astra group, with the mission to provide the projects of the Astra product companies with structural information on macromolecular targets of therapeutic interest. The Laboratory is projected to be operational during 1997, with a staff of 14 scientists, and will be located at the Astra Hässle site in Göteborg, Sweden.

The scientific disciplines initially available at the Laboratory will be protein crystallography (state-of-the-art instrumentation), NMR spectroscopy (750, 600, 400 MHz), and protein biochemistry. Implementation of additional technologies is foreseen for the future.

We are now looking for a highly experienced and motivated scientist as Head of the Structural Chemistry Laboratory. The successful candidate will have a strong background in the physical organic, bioorganic, or biophysical sciences, and will have had experience with research management in an appropriate field. Documented experience in the field of macromolecular structure determination is highly desirable. Experience with structural chemistry in drug discovery in the pharmaceutical industry is an advantage.

The Head of the Laboratory will be expected to take an active part in the recruitment of key scientific personnel, and in the build up of the facilities. The position involves responsibility for operations and management, as well as for the maintenance of the Laboratory at state-of-the-art level. Strong interpersonal communications skills are important, as well as experience in managing people in a multidisciplinary team. The Head of the Laboratory will be expected to collaborate fully with project teams at the product companies.

For more information, please contact Bob Carter, Assoc. Dir. Medicinal Chemistry, tel: +46 31 776 16 21 or Bertil Samuelsson, Director Medicinal Chemistry, tel: +46 31 776 13 50.

Computational Chemist

At the departments of Medicinal Chemistry there is a staff of approximately 90 scientists. The research is project oriented the main goal is to design and synthesize biologically active compounds for the discovery and development of new and therapeutically improved drugs.

We are now looking for a Ph. D.-level chemist for our Computational Chemistry (CC) group. At present, the group consists of six scientists. You will be working independently in the CC group on structure-biological activity relationships, in close cooperation with synthetic organic chemists, biologists, pharmacologists and biochemists.

Your qualifications should include a Ph. D. (or its equivalent) in an area of physical bio-organic chemistry, with experience in computational chemistry. Experience with relating biological activity to molecular structure and/or with macromolecular modelling are advantages. It is essential that you are interested in project-related teamwork in a multidisciplinary environment.

For more information, please contact: Bo Nordén, Assoc. Dir. Computational Chemistry, tel: +46 31 776 15 76 or Bertil Samuelsson, Director Medicinal Chemistry, tel: +46 31 776 13 50.

Applications with full details should be marked "98/95 Head of the Astra Structural Chemistry Laboratory" or "99/95 Computational Chemist" and sent to the following address not later than September 8, 1995: Astra Hässle AB, Human Resources, Att. Paula Wallkvist, S-431 83 Mölndal, Sweden. Fax: +46 31 776 37 46.



POSITIONS OPEN

ASSISTANT PROFESSOR EXPERIMENTAL ORGANIC CHEMISTRY AMHERST COLLEGE

A full-time, tenure-track **FACULTY POSITION** is available for a Ph.D. organic chemist beginning in July 1996. The successful candidate will be expected to teach organic chemistry and to participate in the teaching of introductory and upper-level undergraduate chemistry courses. Participation in interdisciplinary courses also will be encouraged. She/he will be expected to establish a vigorous research program in which undergraduates can substantively participate. The research program can be drawn from any area of experimental organic chemistry, including fields that span the boundaries between organic and other chemical disciplines. Amherst College, a private coeducational liberal arts college of some 1,570 students and 165 faculty located in the Connecticut River Valley of western Massachusetts, participates with Hampshire, Mount Holyoke and Smith Colleges, and the University of Massachusetts, in the Five-College Consortium. Applicants should submit a detailed curriculum vitae and a description of their teaching and research plans, and should arrange for the forwarding of three letters of reference, all to: **Professor David E. Hansen, Chairman, Department of Chemistry, Amherst College, Amherst, MA 01002**, by November 1, 1995. *Amherst College is an Affirmative Action/Equal Opportunity Employer and encourages women, minorities and disabled persons to apply.*

FACULTY POSITION THE WEIZMANN INSTITUTE OF SCIENCE

The Department of Biochemistry at The Weizmann Institute of Science, Rehovot, Israel is seeking applicants for a tenure-track position at the Senior Scientist (**ASSISTANT PROFESSOR**) level starting in the spring of 1996 or later. The Department of Biochemistry provides an excellent and stimulating research environment with groups conducting research in Molecular genetics (gene expression, DNA replication and repair) and Bioenergetics (membrane transport systems and photosynthesis). Candidates are sought in these and other areas of biology, preferably with a background in protein-DNA interactions, molecular or developmental genetics, enzymology, or protein structure and biophysical methods. The successful candidate is expected to establish an independent and creative research group.

Applications should include research plans, curriculum vitae, list of publications and the names of three references, and should be sent to: **Prof. Zvi Livneh, Head, Department of Biochemistry, Weizmann Institute of Science, Rehovot 76100 Israel.**

CHAIRPERSON Biochemistry and Molecular Biology

New York Medical College is seeking an outstanding individual to head its Department of Biochemistry and Molecular Biology. The **CHAIR** is responsible for developing strong research activities as well as successful programs for training medical and graduate students. Significant resources including start-up funds, modern laboratory space and salary support for the recruitment of new faculty members will be available to the new Chair. New York Medical College is located on an attractive campus in suburban Westchester County within 30 minutes of the cultural and educational resources of New York City. Submit nominations and applications including curriculum vitae, current funding, and names of three references to:

Dr. Joseph D. Etlinger
Professor and Chairman
Department of Cell Biology and Anatomy
New York Medical College
Valhalla, NY 10595
An Equal Opportunity Employer

DIRECTOR, Cytogenetics Laboratory: The Division of Human Genetics of the Children's Hospital Research Foundation (CHRF) seeks a ABMG Clinical Cytogenetics certified or eligible M.D. or Ph.D. to direct its service and research activities. Responsibilities include amniotic cells, CVS, blood and tumor karyotype and FISH analyses, and development of research program. Academic rank determined by qualifications. Send curriculum vitae, bibliography and three letters of recommendation to: **Gregory A. Grabowski, M.D., Director, Division of Human Genetics, CHRF, 3333 Burnet Avenue, Cincinnati, OH 45229-3039. Children's Hospital Medical Center is an Affirmative Action/Equal Opportunity Institution. Women and minorities are encouraged to apply.**

POSITIONS OPEN

CALIFORNIA INSTITUTE OF TECHNOLOGY

The Biology Division of the California Institute of Technology is accepting applications for a tenure-track, **ASSISTANT PROFESSOR** position in the area of immunology. Exceptionally well qualified applicants may also be considered at the **ASSOCIATE** or **FULL PROFESSOR** level. Initial faculty appointments are normally for four years. The successful applicant is expected to participate in immunology teaching as well as to generate a creative and productive research program that will interface actively with the diverse scientific interests represented in the Biology Division.

Applicants must have a Ph.D. and should submit a curriculum vitae, list of publications and a brief statement of research interests and plans. In addition, the candidate should arrange to have three letters of reference sent to the search committee to coincide with receipt of the application. All materials should be sent to: **Professor P. H. Patterson, Division of Biology, Caltech, Pasadena, CA 91125. The California Institute of Technology is an Equal Opportunity/Affirmative Action Employer. Women, minorities, veterans, and disabled persons are encouraged to apply.**

FACULTY POSITION PHYSIOLOGY AND BIOPHYSICS UNIVERSITY OF WASHINGTON

A tenure-track position at the **ASSISTANT PROFESSOR** or junior associate professor level is available in the Department of Physiology and Biophysics at the University of Washington School of Medicine. The department intends to complement and strengthen existing programs in integrative physiology by recruiting an individual to use innovative approaches to study systems function. The successful candidate is expected to have a Ph.D. or M.D., to develop a vigorous independent research program, and to teach graduate and professional students. The position offers scholarly support from existing faculty, extensive scientific resources and an excellent academic environment. Send curriculum vitae, selected reprints, statement of research interest and three letters of reference to: **Dr. Peter B. Detwiler, Chair, Search Committee, Department of Physiology and Biophysics, Box 357290, G-424 HSB, University of Washington School of Medicine, Seattle, WA 98195. Send applications by November 1, 1995. Our WWW address is: <http://weber.u.washington.edu/~pbiopage/>**

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

DIRECTOR INSTITUTE OF NEUROBIOLOGY UNIVERSITY OF PUERTO RICO

The Institute of Neurobiology, a modern interdisciplinary research facility of the Medical Sciences Campus of the University of Puerto Rico, seeks a **DIRECTOR** to replace **Dr. Richard Orkand** who is leaving his position after ten years. The Institute, located in Old San Juan, currently houses 11 investigators, 20 undergraduate, graduate and postdoctoral students and a staff of 15. Candidates should have an active research program in contemporary neuroscience and be eligible for appointment at the level of professor. The Medical Sciences Campus is USA accredited. Both English and Spanish are official languages in Puerto Rico. Applications including curriculum vitae, reprints and three references should be sent prior to 1 December 1995, to: **Adolfo Firpo, M.D., Dean of Academic Affairs, Medical Sciences Campus, GPO Box 5067, San Juan, PR 00936 USA.**

An Equal Opportunity Employer.

CHAIRPERSON of Microbiology and Immunology: The School of Medicine of the University of North Dakota invites applications and nominations for the position of Chairperson of the Department of Microbiology and Immunology. We seek an outstanding medical scientist who will provide the leadership to ensure an excellent teaching program and productive research focus.

Those interested in the position should send a curriculum vitae to: **Dr. David W. Hein, Chairman of the Department of Pharmacology and Toxicology and Chair of the Search Committee, c/o Office of the Dean, School of Medicine, University of North Dakota, Box 9037, Grand Forks, ND 58202-9037. Nominations and suggestions should also be sent to Dr. Hein. Review of applications will begin as soon as they are received. Applications should be received prior to December 15, 1995, but the search will remain open until the position is filled.**

The University of North Dakota is an Equal Opportunity/Affirmative Action Institution.

POSITIONS OPEN

ASSISTANT AND ASSOCIATE PROFESSOR POSITIONS

The Program in Pharmacology and Toxicology at the University of Arizona Health Sciences Center invites applications for full time, tenure-track faculty positions at the **ASSISTANT/ASSOCIATE PROFESSOR** level. Applicants must have a Ph.D. or M.D. with appropriate post-doctoral training. We are seeking individuals with expertise in chemical modulation of the immune system, cardiovascular pharmacology and/or neuropharmacology/neurotoxicology. Candidates with strong backgrounds in other areas are also encouraged to apply. Duties for these positions include teaching in professional and graduate level courses and establishing an outstanding extramurally funded research program that uses modern molecular and cellular techniques. Applicants should send a curriculum vitae, the names and addresses of at least three references and a one-page description of research and teaching interests to: **I. Glenn Sipes, Ph.D., Head, Departments of Pharmacology and Pharmacology/Toxicology, Arizona Health Sciences Center, University of Arizona, Tucson, AZ 85724. Review of the applications will begin November 1, 1995, and will remain open until filled. Salary is commensurate with qualifications and experience. Equal Employment Opportunity/ADA/Affirmative Action Employer. Women and minorities are urged to apply.**

ASSISTANT PROFESSOR AND DIRECTOR Otolaryngology Laser Research Laboratory

The Department of Otolaryngology at Tufts University School of Medicine and New England Medical Center Hospital, Boston, Massachusetts, is seeking a candidate for a **FACULTY POSITION** in the Laser Research Laboratory. Research experience and a special interest in optics and computerized imaging is desirable. A Ph.D. is required, preferably in biomedical engineering, although candidates with varied experimental backgrounds will be considered. This facility is dedicated to the development of noninvasive surgical technology in the treatment of diseases of the head and neck. Current programs include research in advanced applications using lasers, fiberoptics, computerized imaging and virtual reality. The successful applicant will direct the research activities of an active and innovative otolaryngology faculty. Applicants should send a curriculum vitae, a brief description of current research and three letters of recommendation to: **Stanley M. Shapshay, M.D., Professor and Chairman, Department of Otolaryngology, New England Medical Center, 750 Washington Street, Box 850, Boston, MA 02111. Tufts University and New England Medical Center are Equal Opportunity/Affirmative Action Employers.**

BIOMATERIALS University of Connecticut Health Center

Candidates are sought for **FACULTY POSITIONS** in the newly formed Center for Biomaterials. The focus of the Biomaterials Center is the study of material-tissue interfacial behavior, which includes tissue response at the cellular and molecular level and fabrication, modification and characterization of materials and surfaces.

Successful candidates will have demonstrated outstanding research achievement. Academic rank commensurate with accomplishments. Excellent opportunities are available for collaboration and significant support is available for research start-up. Applicants should send a curriculum vitae, copies of recent significant publications and brief descriptions of current research, future plans and research funding experience to: **Dr. A. Jon Goldberg, Director, Center for Biomaterials, MC 1615, University of Connecticut Health Center, 263 Farmington Avenue, Farmington, CT 06030-1615. (Search Codes: 95-239, 95-240, 95-241.)**

An Affirmative Action/Equal Opportunity Employer/Minorities/Females/Persons with Disabilities/Veterans.

California Institute of Technology invites applications for a tenure-track position as **ASSISTANT PROFESSOR** of Biochemistry, with an emphasis on, but not restricted to, the biochemistry, structure and dynamics of macromolecular assemblies. The initial appointment will be for four years. Outstanding individuals with a Ph.D. and a strong commitment to research and teaching excellence are encouraged to apply. Submit curriculum vitae, publication list, a description of proposed research, and three letters of recommendation to: **Professor D. C. Rees, Biochemistry Search Committee, 147-75CH, California Institute of Technology, Pasadena, CA 91125. The California Institute of Technology is an Equal Opportunity/Affirmative Action Employer. Women, minorities, veterans, and disabled persons are encouraged to apply.**

The Research Centre Jülich (KFA) is a national research centre jointly funded by the Federal German and North Rhine-Westphalian state governments with a staff of about 4 500 and is a member of the Association of National Research Centres. Our five major interdisciplinary research priorities are materials science and structure of matter, information technology, energy technology, environmental research and life sciences.

At our department "Institute of Solid State Research" (IFF) there is a vacancy for a scientist (m/f) as the

Director (C 4)

of the newly created institute "Soft Matter Research".

The IFF consists of seven experimentally and three theoretically oriented institutes working on condensed matter research from the atomic and molecular basis up to applications. In the already existing research area of soft matter, at present polymers, membranes and complex fluids are being investigated experimentally and theoretically with neutron scattering as the primary experimental focus. It is planned to enlarge this scientific area by creating a new institute. The intention is to add to the spectrum of experimental methods with preference given to multidimensional NMR, but also optical, dielectrical or mechanical methods are envisaged. The new institute will aim at elucidating the structure and dynamics of soft matter on an atomic and molecular scale and their consequences for macroscopic properties.

Applications are invited from scientists who have a record of successful investigations of condensed matter by multidimensional NMR methods. Their scientific interest should be in the area of soft matter and should also emphasize preparative aspects. Scientific expertise in the microscopic origin of the mechanical properties of soft matter would be advantageous. Applicants should be capable of heading an institute operating on an interdisciplinary basis and should be prepared to cooperate with other institutes in the KFA, with research institutions, universities and industry.

The successful candidate will be appointed jointly to a chair in experimental physics at one of the universities within the state of Nordrhein-Westfalen and then seconded to take on the responsibilities at the KFA. The salary will conform to the C 4 scale of the German Civil Service. Candidates are required to have "Habilitation" or equivalent scientific qualifications. The KFA Jülich would like to increase the number of women in leading positions and therefore especially encourages qualified women to apply.

Applications including a curriculum vitae, list of publications and a short summary of scientific activities should be sent by **30 September 1995** to

POSITIONS OPEN

VIRGINIA COMMONWEALTH UNIVERSITY CHAIR Biomedical Engineering Program

An immediate opening exists for a tenure-eligible, **CHAIR** of the Biomedical Engineering Program within the newly created School of Engineering at Virginia Commonwealth University (VCU). The program is located on the Medical College of Virginia (MCV) campus. The successful candidate must have a Ph.D., Ph.D. and M.D., or equivalent degree(s) in a closely related discipline and a demonstrated record of excellence in engineering/medical teaching, research, scholarship, and service consistent with an appointment at the rank of Professor. Excellent oral and written communication skills in English are required. Candidates with a history of grant/contract funding and administrative experience are preferred. Clinical, industrial, consulting experience is a plus. Expertise in the area of biomaterials is desired to complement existing strengths of the program.

Please send a letter of application, a curriculum vitae and the names of three (3) references postmarked no later than October 15, 1995, to:

B. D. Melvin
School of Engineering
Virginia Commonwealth University
P.O. Box 843068
Richmond, VA 23284-3068

Telephone: 804-828-3576; FAX: 804-828-4269

VCU is an Equal Opportunity/Affirmative Action Institution.

DIRECTOR Fungal Diseases Research Program and the Mycology Reference Laboratory of the University Center for Medical Mycology

The Department of Dermatology, Case Western Reserve University and University Hospitals of Cleveland, invites applications from academic mycologists to direct the Fungal Diseases Research Program and Mycology Reference Laboratory of the University Center for Medical Mycology. Faculty rank is open and the appointment could be made at the **ASSISTANT/ASSOCIATE/PROFESSOR** level. Responsibilities include overall supervision, development and administration of the Reference Laboratory, as well as applied research and interdisciplinary basic research activities. The successful applicant should have a Ph.D. and/or M.D. with demonstrated expertise and experience in medical mycology or related fields, and the ability to direct the Research Program and Reference Laboratory by demonstrating proven expertise in administration and in identification of superficial and cutaneous fungal infections and opportunistic pathogens. Preferred applicants will have experience in host-pathogen interactions, microbial immunology, antifungal susceptibility testing, and molecular strain typing as well as in obtaining funds from NIH and other sources. Salary commensurate with experience. A generous start-up package and laboratory space is available.

Interested applicants should send curriculum vitae with a statement of career goals and three academic references to: **Keven D. Cooper, M.D., Chairman, Department of Dermatology, University Hospitals of Cleveland, 11100 Euclid Avenue, Cleveland, OH 44106-5028. FAX: 216-844-8993. Case Western Reserve University is an Equal Opportunity/Affirmative Action Employer.**

CHAIR, Department of Pharmacology: Applications and nominations are invited for the position of Chair of the Department of Pharmacology in the James H. Quillen College of Medicine at East Tennessee State University. Candidates must be eligible for appointment as full Professor, hold a Ph.D. or M.D. degree, or both, have an active research program and a distinguished record of research accomplishments including peer-reviewed funding, demonstrate a commitment to teaching medical students and graduate students, and possess the desire to build and lead a department of prominence. The Department provides a strong commitment to graduate and medical education in an expanding research environment. Applicants should provide a curriculum vitae and names, addresses, and telephone numbers of a minimum of four references. Screening of applications will begin October 1, 1995, and continue until the position is filled. Applications and nominations should be sent to: **Dr. Robert Acuff, Search Committee Chair, Office of Research, P.O. Box 70414, East Tennessee State University, Johnson City, TN 37614-0414. Telephone: 615-461-7019. East Tennessee State University is an Equal Opportunity Employer. Applications from women and minorities are encouraged.**

POSITIONS OPEN

DIRECTOR OF RESEARCH AND COLLECTIONS

The North Carolina State Museum of Natural Sciences invites applications for **DIRECTOR** of Research and Collections, a senior research/administration position. Primary requirements are 1) administration experience, 2) an active research background with systematics collections and museum experience, and 3) demonstrated abilities in good people skills. Applicants should also have demonstrated management abilities, experience in seeking grants and funding for research programs and collections management, a commitment to collection growth and curation, and will be expected to assist in exhibit interpretation planning, and other museum administrative responsibilities as required. This position will be integral to the growth and development of expanding the Research and Collections section as well as play a significant role in developing the overall programs of a new 200,000 square foot Museum. Master's degree (Ph.D. preferred) in biology, zoology, paleontology, or other natural science is required; ability to review and interpret scientific data; and five years of progressive museum-related research and administration experience in a university natural sciences department or natural history museum is preferred. Please submit letter of application and curriculum vitae with bibliography, and references to: **Dr. Betsy Bennett, Director, North Carolina State Museum of Natural Sciences, 102 North Salisbury Street, Raleigh, NC 27603/Department of Environment, Health and Natural Resources; Museum Division. An Equal Opportunity/Affirmative Action Employer.**

FACULTY POSITION INFLAMMATION RESEARCH

The Department of Physiology at the Louisiana State University Medical Center (LSUMC) in Shreveport invites applications for a **TENURE-TRACK FACULTY** appointment beginning January (spring) 1996. Although preference will be given to candidates at the rank of Assistant Professor, outstanding applicants at the Associate or full Professor levels will also be considered. Applicants must have a Ph.D. and/or M.D. degree and appropriate postdoctoral research experience. We are seeking individuals with demonstrated competence in the use of modern cell and/or molecular biological approaches and whose research interests complement existing areas of excellence in the biochemistry, molecular and cellular biology of inflammation. The appointee will be expected to establish a vigorous independent research program supported by extramural funding, and to participate in the teaching of graduate and medical students. Applicants must submit a curriculum vitae, a brief summary of current and future research plans, and the names of three references to: **Ms. Shari Boyett, Search Committee Coordinator, Department of Physiology, LSU Medical Center, 1501 Kings Highway, Shreveport, LA 71130. The closing date for applications is October 1, 1995, or until the position is filled. LSUMC is an Equal Opportunity/Affirmative Action Employer.**

Chemistry Department, University of Utah. Applications are invited for two **TENURE-TRACK FACULTY** positions at the junior level in the areas of biological chemistry and organic chemistry. Candidates should have the background, ability and motivation to establish vigorous, competitive research programs and to excel as teachers. For the biological chemistry position, preference will be given to candidates in the area of bioinorganic chemistry and those with the ability to teach undergraduate biochemistry as well as graduate and undergraduate courses in their area of specialty. For the organic chemistry position, candidates in all subdisciplines will be considered, but we have particular interest in the areas of physical organic or theoretical organic chemistry. A Ph.D. degree is required, and postdoctoral experience is desirable. Applicants should have three letters of recommendation sent directly to the appropriate search committee. Initial correspondence should include a detailed curriculum vitae and a statement of proposed research. Reply to: **Biological Search Committee or Organic Search Committee, Department of Chemistry, 2040 Henry Eyring Building, University of Utah, Salt Lake City, UT 84112. Deadline for receipt of applications is November 15, 1995, or until a suitable candidate is identified. The University of Utah is an Affirmative Action/Equal Opportunity Employer, encourages applications from women and minorities, and provides reasonable accommodation to the known disabilities of applicants and employees.**

POSITIONS OPEN

CHAIR, BIOLOGICAL SCIENCES

Tenure-track, 12-month position available June 18, 1996, at Emporia State University. The division offers bachelor's and Master's degrees and has a long tradition of strong academic programs in organismic and molecular/cellular biology and field- and laboratory-based areas. Ph.D. in a biological discipline with distinguished record of teaching and scholarship required along with experience in and commitment to teaching, and collaborative and collegial decision-making. Must demonstrate scholarly and professional achievement, and interpersonal and leadership skills. Salary and rank negotiable, includes some teaching. Screening will begin September 25, 1995, and continue until position is filled. Send curriculum vitae, names, addresses (Email if available), and telephone numbers of four references, and letter addressing 1) teaching and research philosophies and 2) skills, visions, and experiences you would bring to this position to: **Dr. Laurie Robbins, Chair Search Committee, Division of Biological Sciences, Box 4050, Emporia State University, Emporia, KS 66801-5087. Telephone: 316-341-5311; Email: <http://www.emporia.edu/>**

Affirmative Action/Equal Opportunity Employer.

CELL BIOLOGY DEVELOPMENTAL BIOLOGY MOLECULAR BIOLOGY/BIOCHEMISTRY

Three entry-level **TENURE-TRACK POSITIONS** are anticipated beginning August 1996. Positions are in (1) cell biology (with a structural focus), (2) developmental biology with preference given to applicants who use plants as model systems, and (3) molecular biology/biochemistry, the appointment being made jointly to an expanding Cell Biology/Biochemistry Program and the Department of Biology. Applicants should submit a cover letter describing teaching and scholarly interests, curriculum vitae, three letters of reference, and a summary of anticipated research to:

**Dr. Wayne McDiffett, Chair
Department of Biology
Bucknell University
Lewisburg, PA 17837
Email: mcdiffett@bucknell.edu**

Closing date for applications: October 20, 1995. Bucknell University encourages applications from women and members of minority groups. Equal Employment Opportunity/Affirmative Action.

The Chemistry Department at Michigan State University seeks to fill three **TENURE-TRACK POSITIONS** in Physical Chemistry at the junior or senior levels. Outstanding candidates in all areas of Physical Chemistry are encouraged to apply. We are particularly interested in biomacromolecular structure (e.g., protein crystallography, NMR, etc.) and solid state chemistry. A shared X-ray diffraction laboratory with three area detectors is available for crystallography. In addition to the 500 MHz NMR available in the Department's NMR facility, there are NSF funds for the purchase of a second high field instrument. Candidates are expected to establish a vigorous research program and to pursue excellence in research and teaching at both the graduate and undergraduate levels. Applicants should send a curriculum vitae, a list of publications, and a description of research plans to: **Gerald T. Babcock, Chair, Department of Chemistry, Michigan State University, East Lansing, MI 48824. Applicants should also arrange to have three letters of recommendation submitted on their behalf. Applications will be reviewed as received and will continue until the positions are filled. Michigan State University is an Affirmative Action/Equal Opportunity Institution. Applications from women and underrepresented minorities are particularly welcome.**

Penn State, Chemistry Department, **FACULTY POSITIONS.** Tenure-track faculty positions are available starting fall 1996 in any area of chemistry. The appointee is expected to establish an exceptionally strong and highly visible research program. Commitment to excellence in undergraduate and graduate teaching is also essential. Postdoctoral experience is preferred. A complete résumé, a synopsis of research plans and three letters of recommendation are required. Review of applications will begin October 4, 1995, and continue until the positions are filled. Send information to: **Chairman of the Search Committee, Box S, The Pennsylvania State University, Department of Chemistry, 152 Davey Laboratory, University Park, PA 16802. An Affirmative Action/Equal Opportunity Employer. Women and minorities are encouraged to apply.**

POSTDOCTORAL RESEARCH FELLOWS

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. Scientists at our East Hanover, New Jersey laboratories are making exciting discoveries in the fields of Metabolic Diseases and Oncology, and are seeking talented postdoctoral fellows to participate in these endeavors. Opportunities now exist in the following areas of our Preclinical Research Department:

MOLECULAR BIOLOGY/BIOCHEMISTRY

A postdoctoral research position is available in the Metabolic Diseases Department for an individual interested in applying site-directed mutagenesis, optical biosensor, and NMR technologies to the study of protein-protein interactions. The incumbent will support research efforts around a new therapeutic target for non-insulin-dependent diabetes mellitus. A Ph.D. in biochemistry or molecular biology and a motivation to contribute intellectually in a dynamic team environment are required. **(Position #PD034)**

MULTIDRUG RESISTANCE

The research will focus on the determination of the mechanism of action of multidrug resistance reversing agents. In addition, studies will be carried out on the cellular events mediating the expression of the MDRI gene. Experience in molecular biology and/or membrane protein biochemistry is required. **(Position #PD035)**

IN VIVO ANIMAL MODELING/ TUMOR BIOLOGY

The research will focus on the development of murine *in vivo* models of tumor angiogenesis and metastasis. The

successful candidate will have a Ph.D. in a related field with relevant experience in animal models and tumor biology and/or angiogenesis. Experience with endothelial cell biology, cell culture, and biochemistry would be an advantage. **(Position #PD036)**

BIOTECHNOLOGY/NMR

Our Central Technologies Department seeks a highly motivated individual with a doctoral degree in the Life Sciences. Efforts will focus on the adaptation and utilization of cell perfusion technology and nuclear magnetic resonance spectroscopy to drug discovery related studies. The desired candidate will have tissue culture and cell perfusion expertise, broad training in the life sciences, and the desire to exploit new technologies to address issues in drug discovery and development. A working knowledge of NMR or organ perfusion is desirable, but not essential. The successful candidate will work in a multidisciplinary environment, pursuing collaborative research with members of our Metabolic Diseases and Oncology Departments. **(Position #PD039)**

Postdoctoral appointments are for one year but are renewable for a second year by mutual agreement. Sandoz Research Institute provides 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 the address below. If you are applying for more than one position, please enclose separate applications/curriculum vitae with the position number indicated on each cover letter.

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POSITIONS OPEN

FACULTY POSITION UNIVERSITY OF MICHIGAN

Atomic force microscopy or solid-state NMR as probes of biological systems. The University of Michigan invites applications for a **TENURE-TRACK FACULTY** position in the Department of Chemistry and the Biophysics Research Division. We are particularly interested in identifying candidates with strong backgrounds in physics or chemical physics, who are interested in using and developing atomic force microscopy or solid-state NMR to probe structure and reactivity of biological complexes. Appointment is expected beginning September 1996. A Ph.D. is required and postdoctoral research experience is highly desirable. The appointee will be expected to develop a rigorous and imaginative research program and to become an excellent teacher at both the undergraduate and graduate levels. Appointment is expected to be at the assistant professor level but senior candidates will also be considered. Please submit a résumé, and a summary of previous research accomplishments, future research plans, and teaching experience and interests. Also arrange for three letters of reference to be submitted before November 15, 1995, to: **Professor Robert L. Kuczkowski, Chair, Department of Chemistry, The University of Michigan, Ann Arbor, MI 48109-1055.** *The University of Michigan is a non-discriminatory, Affirmative Action Employer.*

UNIVERSITY OF VIRGINIA SCHOOL OF MEDICINE

Tenure-Track Positions in Molecular Biology

The University of Virginia School of Medicine is undergoing a major expansion of its basic science faculty. As a part of this effort, the Department of Biochemistry will make several new **JUNIOR- and SENIOR-LEVEL TENURE-TRACK** appointments to outstanding individuals whose research efforts focus on mechanisms of transcription, RNA processing, DNA replication, or genome rearrangement. Candidates should hold a Ph.D. and/or M.D. in an appropriate discipline and should have demonstrated the capacity to develop and/or maintain a very high quality, independent research program. Support for these positions includes attractive laboratory space and start-up packages, as well as an interactive research community.

Interested individuals should have a curriculum vitae and three letters of recommendation forwarded no later than October 15, 1995, to: **Chairperson, Biochemistry Search, Box 440 Jordan Hall, University of Virginia HSC, Charlottesville, VA 22908.** *The University of Virginia is an Equal Opportunity/Affirmative Action Employer.*

TENURE-TRACK, ASSISTANT PROFESSOR Department of Microbiology and Immunology Virginia Commonwealth University

Tenure-track **ASSISTANT PROFESSORSHIP** in the Department of Microbiology and Immunology at Virginia Commonwealth University. An individual with expertise in one or more areas of molecular microbiology including molecular pathogenesis, lower eukaryotic or prokaryotic gene expression, molecular virology, signal transduction, or microbial developmental systems. Applicants must hold a Ph.D. or equivalent degree and have at least two years of productive postdoctoral experience. Successful applicants expected to develop and maintain strong, grant-supported independent research program including training of graduate students and postdoctorals. Participation in graduate and professional level teaching and service activities is required. Candidates should submit a statement of research interests, a curriculum vitae, and the names and addresses of three references by 17 November 1995 to: **Dr. J. G. Tew, Box 980678 MCV, Richmond, VA 23298-0678.** *Virginia Commonwealth University is a culturally diverse, Equal Opportunity/Affirmative Action Employer. Women, minorities, and persons with disabilities are encouraged to apply.*

VISION RESEARCH

Applications are invited for a tenure-track **ASSISTANT PROFESSORSHIP** in the Department of Ophthalmology, Columbia University. Applicants should have a strong background in molecular and cell biology, particularly in gene regulation and apoptosis, as well as experience investigating the lens or other eye tissues. Send curriculum vitae with three references to: **Abraham Spector, Ph.D., Ophthalmology Research, Columbia University, 630 West 168th Street, New York, NY 10032.** *Columbia University takes Affirmative Action to ensure Equal Opportunity.*

POSITIONS OPEN

DIRECTOR OF MOLECULAR CARDIOLOGY

The Department of Medicine of Case Western Reserve University is recruiting an outstanding individual for a leadership position at the institution in the area of molecular aspects of hypertension and cardiovascular disease. The department wishes to expand in the area of genetics and/or vascular biology with emphasis on channels, receptors or signal transduction. Applicants should have a M.D. or Ph.D., an established research career and the potential of building a strong research group comprising several junior faculty. In addition to the title of Director of Molecular Cardiology and academic appointment commensurate with his/her qualifications, very competitive space, start-up funds and salaries are available.

Submit curriculum vitae, brief statement of research interests, and names of five references to:

**Molecular Cardiovascular Medicine Search Committee
c/o Dr. Janice G. Douglas, Chief
Division of Hypertension, Room W165
Case Western Reserve University School of Medicine
10900 Euclid Avenue
Cleveland, OH 44106-4982**

Case Western Reserve University is an Equal Opportunity/Affirmative Action Employer. Women and underrepresented minorities are especially encouraged to apply.

TWO FACULTY POSITIONS DEPARTMENT OF NEUROSCIENCE Tufts University School of Medicine Boston, Massachusetts

Two intermediate to senior level **TENURE-TRACK POSITIONS** for faculty with currently funded, independent research programs are available, with interviews beginning in the fall of 1995. One position is for an individual with extensive and broad molecular biology training applied to a research program in neuroscience. The second position is open to individuals with research interests including, but not limited to, signal transduction, immunology/virology/neurobiology, development, and systems neurobiology. Tufts Neuroscience grants a Ph.D. in neuroscience, including students on an M.D./Ph.D. track. The department is interactive and has ties with clinical research programs as well. Teaching responsibilities are directed to both graduate and medical students. Please send a current curriculum vitae and a statement of research interests to: **Neuroscience Search Committee, Neuroscience Department, Tufts University Medical School, 136 Harrison Avenue, Boston, MA 02111. FAX: 617-636-7413; Email: bdangelo@infonet.tufts.edu.** For more information about Tufts Neuroscience, go to: <http://www.neurosci.tufts.edu/homepage.html>. *Tufts is an Equal Opportunity/Affirmative Action Employer.*

BIOCHEMISTRY Indiana University, Bloomington

The Department of Chemistry invites applications for an open **TENURE-TRACK** position in biochemistry to commence in fall of 1996. Candidates with significant postdoctoral experience and a strong record of research accomplishment in any area of biochemistry and molecular biology will be considered. Examples of research programs of interest include membrane biochemistry, signal transduction, nucleic acid or protein structure and biosynthesis, RNA processing, enzymology, environmental biochemistry, combinatorial biochemistry, and X-ray crystallography of biological macromolecules. Successful candidates will be expected to develop a vigorous, independent research program and contribute to teaching. While we anticipate filling this position at the level of assistant professor, outstanding candidates with recently established research programs also will be considered.

Applications should include a curriculum vitae and a summary of future research plans. Candidates at the Assistant Professor level should arrange to have three letters of recommendation forwarded to the Department. Applications received by November 1, 1995, will be assured of consideration. Send applications to: **John P. Richardson, Chair, Biochemistry Search Committee, Department of Chemistry, Indiana University, Bloomington, IN 47405.** *Indiana University is an Affirmative Action/Equal Employment Opportunity Employer and especially encourages applications from women and members of minority groups.*

POSITIONS OPEN

STRUCTURAL BIOLOGY University of Connecticut Health Center

A **TENURE-TRACK POSITION** at the junior or senior level is available for the continued expansion of the Biomolecular Structure Analysis Center.

The successful candidate will be expected to develop a strong research program in a forefront area utilizing macromolecular X-ray diffraction. Funds are available for the purchase of state-of-the-art equipment and for laboratory start-up.

Primary academic appointments can be made in any of the basic science departments according to the interests of the candidate.

Applicants should submit curriculum vitae, summary of research interests, and names of references to:

**Chair, Structural Biology Search Committee
Medical Dean's Office
University of Connecticut School of Medicine
263 Farmington Avenue
Farmington, CT 06030-1920**

An Affirmative Action/Equal Opportunity Employer. Minorities/Female/Persons with Disabilities/Veterans.

CHEMISTRY FACULTY POSITIONS

As part of an aggressive expansion program, the School of Chemistry and Biochemistry of the Georgia Institute of Technology seeks to fill **TENURE-TRACK FACULTY** positions in all areas of chemistry and biochemistry.

Preference will be given to applicants at the junior level, but applications from outstanding individuals with established research programs will be considered. The proposed areas will augment existing strengths in the School. Georgia Tech is committed to diversity in its faculty and students and encourages applications from women and minority candidates.

Candidates at the entry level should send an application letter indicating research areas and teaching interests, curriculum vitae, and a summary of research plans. They should also request graduate transcripts, and three letters of reference. All materials and requests for information should be directed to: **Chairman, Faculty Search Committee, School of Chemistry and Biochemistry, Georgia Institute of Technology, Atlanta, GA 30332-0400.**

We will begin evaluating applications October 1, 1995. Additional applications will be considered until the positions are filled. *Georgia Tech is an Equal Education/Employment Opportunity Institution.*

BAYLOR COLLEGE OF MEDICINE DEPARTMENT OF CELL BIOLOGY

Two Tenure-Track Positions Molecular Biology of Reproduction and Hormone Action

The Department of Cell Biology announces the availability of two tenure-track positions at either the **SENIOR or JUNIOR-FACULTY LEVEL**. We seek individuals holding the Ph.D. or M.D. degree with a strong interest in research and graduate Ph.D. training. One position is targeted at Reproductive Biology, with a research emphasis on the molecular biology of cellular processes controlling these pathways including (but not limited to) areas such as sex determination and reversal, embryonic differentiation and cellular commitment, cell migration and organogenesis, particularly as these processes impact upon sexual dimorphism. A second position targets steroid hormone action, with a research emphasis on receptors, including (but not limited to) their biology and biochemistry, and their role in gene transcription and cellular control processes. The Department offers a robust and well-established research environment in many areas of modern biology, with excellent animal and instrumentation capabilities, including a Center for Reproductive Biology Research. Applicants should send a curriculum vitae, a summary of their proposed research activities, and the names of three scientists who can evaluate their accomplishments and future potential as independent scientists and teachers at the graduate level. Successful senior applicants will have already established a successful record of productivity and leadership in publications and funding.

Applications should be sent by November 1, 1995 to:

**Chairperson, Reproductive Biology
Faculty Search Committee
Department of Cell Biology, Room M-603
Baylor College of Medicine
Houston, TX 77030**

Baylor College of Medicine is an Equal Opportunity/Affirmative Action Employer. Women and minority candidates are encouraged to apply.

BUILD ON OUR
RESEARCH
EXCELLENCE



RESEARCH OPPORTUNITY

A professional position is available in the Bioinformatics Program. A project funded through the Genome Initiative, is developing and expanding the mouse Genome Database, a comprehensive database including genetic and physical mapping data for mouse, probes, clones and PCR primer information, mammalian comparative mapping data, and phenotypic data covering mouse gene descriptions and inbred strain characteristics. The position entails literature searching, acquiring and analyzing data to be incorporated into the database, interacting with labs that contribute data, and helping database users. The successful applicants will be primarily responsible for data acquisition and database maintenance, but will also participate in determining database contents and display methods with other members of the Mouse Genome Informatics project. Applicants must be versed in genetics/molecular biology. Other desirable attributes include writing/communication skills and experience using computers.

MS degree in Life Sciences required.



**The
Jackson
Laboratory**

The Jackson Laboratory, located on the coast of Maine adjacent to Acadia National Park, is a world-renowned center and resource for mammalian biology and genetics.

Qualified candidates should send resume to:

The Jackson Laboratory,
Human Resources, 600 Main Street,
Bar Harbor, ME 04609,
FAX: 207/288-6106, email: hrw@jax.org

An Affirmative Action/
Equal Opportunity Employer



CHAIRMAN DEPARTMENT OF NEUROLOGY UNIVERSITY OF CHICAGO

The Division of Biological Sciences, which includes the Pritzker School of Medicine at the University of Chicago, is seeking a Chairman of the Department of Neurology. This is a multi-disciplinary department with 21 faculty members. The Chairman reports to the Dean of the Division and is responsible for providing academic and administrative leadership in research and teaching of undergraduate, graduate, post-graduate and medical students. The successful applicant will be an outstanding and nationally recognized clinical neurologist with a significant research background, an outstanding record of scientific accomplishment and demonstrated teaching and administrative abilities that will qualify him/her for the rank of Professor. Please send curriculum vitae and the names of three individuals familiar with your work to: Dr. Eugene Chang, Chair, Search Committee for Neurology, The University of Chicago, 5841 South Maryland Avenue, MC 1000, Chicago, IL 60637. The University of Chicago is an Equal Opportunity, Affirmative Action Employer.



**THE UNIVERSITY
OF CHICAGO**

The University of Minnesota

RESEARCH ASSOCIATE OPPORTUNITIES are periodically available with the COLLEGE OF BIOLOGICAL SCIENCES at the UNIVERSITY OF MINNESOTA. Positions may be available in the Departments of Biochemistry; Ecology, Evolution and Behavior; Plant Biology; and Genetics & Cell Biology. Positions may also be available in the Biological Process Technology Institute, Lake Itasca Forestry and Biological Station, and the Plant Molecular Genetics Institute.

These Positions are for independent research. To be considered, applicants must hold a Ph.D. degree or foreign equivalent and at least two years of postdoctoral experience. Applicants are encouraged to secure salary support from an external granting agency. Multiple positions may be available, depending upon space and facilities, availability of funding, as well as faculty research interests.

Applicants from interested persons must include a personal vitae, a statement of research interests and experience, and names, addresses and telephone numbers of three references.

Closing date for applications to be received is June 30, 1996.

Direct application material to: Administrator, {Department name}, College of Biological Sciences, 123 Snyder Hall, 1475 Gortner Avenue, St. Paul, MN 55108.

POSTDOCTORAL TRAINING OPPORTUNITIES are regularly available with the COLLEGE OF BIOLOGICAL SCIENCES at the UNIVERSITY OF MINNESOTA. Positions may be available in the Departments of Biochemistry; Ecology, Evolution and Behavior; Plant Biology; and Genetics & Cell Biology. Positions may also be available in the following research programs: the Biological Process Technology Institute, the Lake Itasca Forestry and Biological Station, and the Plant Molecular Genetics Institute.

A Ph.D. degree or foreign equivalent is required. Appointment is limited to three years.

Applications from interested persons must include a personal vitae, a brief statement of research interests and experience, and names, addresses and telephone numbers of three references.

Direct application material to: Administer, {Department name}, College of Biological Sciences, 123 Snyder Hall, 1475 Gortner Ave., St. Paul, MN 55108.

The University of Minnesota is an equal opportunity educator and employer.



Wayne State University

DEVELOPMENTAL BIOLOGY/EVOLUTION

The Department of Biological Sciences invites applications for tenure-track positions at the full, associate and assistant professor level. We are seeking faculty members with their primary research interest in molecular genetic analysis of development and evolution. We are particularly interested in individuals using molecular genetic analysis of development to address evolutionary questions, although other areas will be considered. The department is undergoing a significant expansion and plans to make evolutionary development an area of emphasis. We will be recruiting in complementary areas in the immediate future.

Substantial space and start-up funds will be made available to the successful candidates. The department occupies a new seven-story research building with animal rooms, greenhouses, microscopy facilities, Drosophila support facilities, and a molecular biology core facility.

Applicants must have demonstrated excellence in research and the potential for the highest quality teaching. Candidates will be expected to establish and maintain an extramurally funded research program and participate in both undergraduate and graduate teaching programs.

Women and minority candidates are encouraged to apply. Review of candidates will begin immediately and continue until all positions are filled.

Send curriculum vitae, a description of current and long-range research plans, three representative papers and the names of four references to:

Jack Lillien

**Chair, Department of Biological Sciences
Wayne State University
Detroit, MI 48202**

*Wayne State University is an
equal opportunity/affirmative action employer.*

*Wayne State University- People working together
to provide quality service.*

All buildings, structures and vehicles at WSU are smoke-free.

POSITIONS OPEN

Coulston Foundation (CF) is seeking applications for a **DIRECTOR** of Clinical Laboratory who will be responsible for the overall direction of a state-of-the-art, CLIA certified, clinical laboratory associated with a biomedical research facility. CF participates in research and support of government and privately sponsored programs in virology (emphasis on retrovirology), immunopharmacology, toxicology, reproductive biology, vaccine development and other research areas. CF, a not-for-profit foundation located in southern New Mexico, has colonies of nonhuman primates (primarily chimpanzees and macaques) and other laboratory animals. Candidates should have an advanced degree (M.S., D.V.M., Ph.D. or equivalent) in clinical pathology or related biomedical science, must be a certified MT (ASCP), plus six to eight years of experience in a clinical laboratory setting with progressively more responsible managerial duties, plus be eligible to work in the United States. Salary commensurate with education and experience. CF has an excellent benefits plan. Send curriculum vitae, references and salary history to: **Director of Human Resources, Coulston Foundation, 1300 LaVelle Road, Alamogordo, NM 88310 USA.** *Equal Employment Opportunity/Affirmative Action.*

FACULTY POSITIONS

The Graduate Institute of Bio-Pharmaceutical Science in National Yang-Ming University is seeking highly qualified applicants for the position at the level of **ASSISTANT/ASSOCIATE** or **FULL PROFESSOR**. Preference will be given to investigators specializing in molecular/cellular biology and protein chemistry as well as a strong interest in developing research project in the field of cancer, angiogenic disease, immunological disease, or aging for the screening of bio-active components in Chinese Herbal Medicine. Candidate should have a Ph.D. degree, at least three years of postdoctoral training till 1996 summer. The anticipated start date is August 1, 1996. Applicants should provide a brief statement of research interests and plans, curriculum vitae, bibliography and at least two letters of recommendation by December 1, 1995, to:

Dr. R.-T. Wu, Director
Graduate Institute of Bio-Pharmaceutical Science
National Yang-Ming University
Sih-Pei, 11221, Taipei, R.O.C.
FAX: 886-2-822-0084

TEL AVIV UNIVERSITY SACKLER FACULTY OF MEDICINE

Seeking candidates for a **TENURE-TRACK** teaching and research position in Biochemistry, available beginning October 1996.

Candidates should have a Ph.D. degree and at least three years of postdoctoral research experience. Also, they should have a good publication record and will be expected to coordinate and teach Biochemistry courses in both Hebrew and English.

A curriculum vitae with a statement of research interest and at least three letters of recommendation should be sent by October 29, 1995, to: **Dean, Sackler Faculty of Medicine, Tel Aviv University, Ramat Aviv, Tel Aviv 69978 Israel.**

POSTDOCTORAL RESEARCH TRAINING Cell & Molecular Biology of Aging

Positions are available for **POSTDOCTORAL TRAINEES** in cell and molecular biology of aging at Baylor College of Medicine. This interdisciplinary program offers trainee appointments in the laboratories of Drs. Julius Allen, Stanley Appel, Eugene Barnes, Ronald Davis, Stephen Elledge, Peter Hornsby, Russell Lebovitz, Victoria Lundblad, Bert O'Malley, Gregory May, Estela Medrano, Olivia Pereira-Smith, Joanne Richards, Shelley Sazer, Robert Schwartz and James Smith. Research emphasis is on the regulation of gene transcription and expression in normal and aged cells; the role of the sodium pump in aging cells; molecular and genetic approaches to understanding cell cycle control genes involved in yeast and human cells, including fibroblasts, hepatocytes, adrenal cortical cells, melanocytes and myoblasts; hormonal control of gene expression in the ovary; and the study of genes involved in the genetic program of mortality. Applicants must be citizens or permanent residents of the United States. Send a curriculum vitae and three reference letters to: **Dr. Gretchen Darlington, Huffington Center on Aging, Room M-320, Baylor College of Medicine, Houston, TX 77030.** *Baylor College of Medicine is an Equal Opportunity/Affirmative Action/Equal Access Employer.*

SCIENCE Special Advertising Supplement

Minorities in Science

Place your full page recruitment advertisement in the 10 November issue of **SCIENCE** and reach minority scientists. All full page ads and the article from this advertising supplement will be distributed in a special reprint to minority organizations and universities.

Distribution to Minority Organizations:

- **Minority Research Development Program**
 - Bennett College
 - Central State University
 - Florida A&M University
 - Howard University
 - Lehman College/CUNY
 - Meharry Medical College
 - Morehouse College
 - Morris Brown College
 - SUNY, College at Old Westbury
 - University of Hawaii
 - Wayne State University
- **Minority Access to Research Careers**
- **Minority Biomedical Research Support Program**
- **National Hispanic Leadership Conference**
- **National Network of Minority Women in Science**
- **National Puerto Rican Coalition**
- **National Organization for the Advancement of Black Chemists and Chemical Engineers**
- **National Technical Association**
- **University of Puerto Rico - Recinto de Ciencias**

Don't miss this once-a-year opportunity to send your recruitment message to minority scientists.

Advertising Deadline: 24 October 1995

To advertise call Janis Crowley in the U.S.
at (212) 496-7704 or fax to (202) 682-0816.
In Europe, call Gordon Clark
(44) 01223 302067 or fax to (44) 01223 302068.

SCIENCE
COVERS THE WORLD

FACULTY POSITION IN STRUCTURAL BIOLOGY

WHITEHEAD INSTITUTE FOR
BIOMEDICAL RESEARCH AND
DEPARTMENT OF BIOLOGY
MASSACHUSETTS INSTITUTE
OF TECHNOLOGY



Candidates are sought for a faculty position in the field of Structural Biology at the Whitehead Institute. Although candidates at all levels will be considered, preference will be given to candidates at the level of Assistant Professor (tenure track). The successful candidate will be expected to conduct an active research program and to participate in the Department's teaching program.

Applicants should have significant research accomplishments in the use of X-ray crystallographic approaches to study problems in structural biology.

Send a curriculum vitae, a summary of your proposed research program, and arrange to have three to five letters of recommendation with an evaluation of accomplishments and future potential to: Dr. Peter S. Kim, Chair, Structural Biology Search Committee, Whitehead Institute for Biomedical Research, Department of Biology, Massachusetts Institute of Technology, Nine Cambridge Center, Cambridge, MA 02142. An Equal Opportunity/ Affirmative Action Employer.

RESEARCH UPDATE

World-class research leads to extraordinary success.

Extraordinary growth at the Agricultural Research Center of American Cyanamid Company has created a broad range of opportunities for talented research scientists. At our 640-acre campus-like Princeton headquarters, you'll find a deep commitment to employing advanced biotechnology and the highest quality science in an atmosphere where ideas are encouraged and talent is recognized and rewarded.

Regulatory Toxicology Postdoctoral Assignment

You will design, monitor and review the full range of toxicology studies and research performed in-house and on contract, and respond to regulatory questions involving EPA, FDA and international registrations of pesticides and animal drugs. The position requires a PhD in toxicology or a related medical field.

American Cyanamid offers a competitive compensation and benefits package, including relocation. For prompt and confidential consideration, please forward your resume to: Department JK/JH, American Cyanamid Company, Agricultural Research Center, P.O. Box 400, Princeton, NJ 08543-0400. We are an equal opportunity employer.



WHITEHEAD INSTITUTE FOR BIOMEDICAL RESEARCH MIT CENTER FOR GENOME RESEARCH POSTDOCTORAL POSITION

Applications are invited for the following position within the sequencing facility, headed by Dr. Trevor Hawkins at the Whitehead Institute for Biomedical Research, MIT Center for Genome Research. **Post-Doctoral Scientists** are encouraged to make contact immediately enclosing CV and covering letter.

We are seeking a genome scientist, with experience in the construction of M13 sub-clone libraries for large-scale genome sequencing. We assume that the successful candidate will be fully skilled in many other standard techniques such as PCR, and DNA sequencing. Familiarity with laboratory automation will be an advantage.

For further information, please contact Dr. Trevor Hawkins at 617-252-1910 and send curriculum vitae to: Dr. Trevor Hawkins, Whitehead Institute for Biomedical Research, MIT Center for Genome Research, One Kendall Square, Building 300, Cambridge, MA 02139.

UNIVERSITY OF COLORADO HEALTH SCIENCES CENTER SCHOOL OF MEDICINE DEPARTMENT OF PHYSIOLOGY

ASSISTANT PROFESSOR TENURE TRACK

The Department of Physiology at the University of Colorado School of Medicine has available two tenure track positions at the Assistant professor level. Applications may be submitted at any time; appointments will begin in 1996.

The Department Faculty have active research programs in developmental neurobiology, ion channel expression, synaptic transmission, sensory transduction, epithelial transport and secretion, and reproductive physiology. The School of Medicine is strongly research-based, with active interdepartmental programs in Cell and Developmental Biology, Immunology, Molecular Biology, and Neuroscience.

Applicants will be considered who have research interests in cellular, molecular or developmental physiology or functional organization of the central nervous system. Successful candidates will be expected to conduct vigorous independent research programs and to participate in professional and graduate teaching. Applicants should send *Curriculum vitae* and the names of at least three referees to:

Dr. S.R. Levinson
Chair, Faculty Search Committee
Department of Physiology, C240
University of Colorado
Health Sciences Center
DENVER, CO 80262
EEO/AA

ASSISTANT PROFESSOR PHARMACOLOGY/TOXICOLOGY

The Purdue University Departments of Pharmacology and Toxicology and Medicinal Chemistry and Pharmacognosy invite applications for a tenure-track Assistant Professor position.

Candidate should hold a Ph.D. in pharmacology, toxicology, neuroscience or a related area and should have at least two years of postdoctoral training or equivalent. Individuals with research experience in neuropharmacology, neuroscience, or neurotoxicology are especially encouraged to apply, although all qualified applicants will be considered. The successful candidate will be expected to establish a strong research program with extramural funding, and have a commitment to excellence in teaching both at the undergraduate and graduate levels. Review of applications will begin September 15, 1995 and will continue until the position is filled. The position is available beginning January 1, 1996. Applicants should submit a curriculum vitae, a detailed description of research plans, and names and addresses of three references to: Gary E. Isom, Ph.D., Department of Pharmacology and Toxicology, Purdue University, West Lafayette, IN 47907. *Purdue University is an Equal Opportunity/Equal Access University.*

POSITIONS OPEN

POSTDOCTORAL POSITION CELL BIOLOGY

A position is currently available to investigate biogenesis of multispanning membrane proteins with emphasis on mechanisms of translocation and integration at the ER membrane. Studies will focus on folding and processing pathways of ABC transporters, CFTR and/or MDRL, and molecular pathogenesis of disease related mutations. Experience in molecular biology and protein analysis is required; prior experience with protein trafficking or cell free/oocyte expression systems would be desirable. Send résumé, and names of three references to: **Dr. William R. Skach, University of Pennsylvania, Institute for Human Gene Therapy, 422 Curie Boulevard, S-CL Room 305, Philadelphia, PA 19104-6069. An Equal Opportunity/Affirmative Action Employer.**

POSTDOCTORAL POSITION available immediately to study gene expression in the central nervous system. The current focus is on the photoreceptor cGMP phosphodiesterase α -subunit gene. We are using novel methods of transgenesis as well as studying DNA:protein interactions to define the tissue-specific promoter. Experience using histologic, molecular and biochemical techniques is preferred. Please send curriculum vitae, statement of research interests, and names of three references to: **Dr. Steven J. Pittler, Director, Center for Research in Ophthalmology and Vision Sciences, Department of Biochemistry and Molecular Biology, College of Medicine, University of South Alabama, Mobile, AL 36688-0002. Applications from qualified women and minorities are encouraged. University of South Alabama is an Equal Opportunity Employer.**

RESEARCH ASSOCIATE IN PHYSIOLOGY AND BIOPHYSICS

RESEARCH ASSOCIATE position available immediately for research on the relationship between structure-function of gap junctional channels. The applicant must be experienced in patch clamping and/or molecular biological techniques and have an interest in ion channels. Please send curriculum vitae, names of three references and a summary of research experience to: **Dr. Lisa Ebihara, Department of Physiology and Biophysics, Finch University of Health Sciences/The Chicago Medical School, 3333 Green Bay Road, North Chicago, IL 60064. Affirmative Action/Equal Opportunity Employer. Women and minorities are encouraged to apply.**

POSTDOCTORAL FELLOW Molecular and Cellular Biology

Applications are invited for a **POSTDOCTORAL FELLOWSHIP** to study the function of a novel zinc finger protein in epidermis and testis. Candidates with experience in molecular biology, cell culture and immunocytochemistry are encouraged to apply. Opportunities for interactions with a variety of basic science disciplines in the university are available and encouraged. Please send curriculum vitae, including description of research interest and experience to: **Hung Tseng, Ph.D., Department of Dermatology, University of Pennsylvania, Room M8c, Stellar-Chance Laboratories, 422 Curie Boulevard, Philadelphia, PA 19104. U.S. citizenship or permanent residency required.**

University of Pennsylvania is an Affirmative Action/Equal Opportunity Employer.

POSTDOCTORAL POSITION—To participate in studies of DNA replication in yeast. The research involves the use of molecular genetics and biochemistry to study the mechanism of initiation and regulation of DNA replication in *S. cerevisiae*. Send curriculum vitae, brief description of prior research experience, and the names of several references to: **Dr. S. Eisenberg, University of Connecticut Health Center, Farmington, CT 06032.**

An Affirmative Action/Equal Opportunity Employer. Minorities/Female/Persons with Disabilities/Veterans.

POSTDOCTORAL POSITIONS: 1) molecular basis of signal transduction in retina. RT-PCR on single neurons in identified circuits, experience in molecular techniques is required; work in collaboration with **Dr. J. Eberwine**. 2) physiological studies on mammalian retina *in vitro* (to complement structural, computational and molecular studies of retinal circuitry). Send curriculum vitae and three references to: **Peter Sterling/Noga Vardi, Neuroscience, University of Pennsylvania, Philadelphia, PA 19104-6058. Email: peter@retina.anatomy.upenn.edu; FAX: 215-898-9871.**

POSITIONS OPEN

FACULTY POSITION in Chemistry. The Department of Chemistry at Washington University in St. Louis invites applications for a tenure-track faculty position to begin in September 1996. We are particularly eager to identify candidates having research interests in materials chemistry, but the area of interdisciplinary specialization is not otherwise specified. Participation in the teaching of core chemistry courses at both the undergraduate and graduate levels will be expected. Primary consideration will be given to applicants at the assistant professor level, but more senior candidates with distinguished records of scholarship and teaching will be considered. Candidates should submit, by 1 November 1995, a curriculum vitae and a concise, specific statement of research plans, and arrange to have three letters of reference sent to: **Professor Peter P. Gaspar, Faculty Search Committee, Department of Chemistry, Campus Box 1134, Washington University, St. Louis, MO 63130-4899. Washington University is an Equal Opportunity/Affirmative Action Employer. Individuals from underrepresented groups are especially encouraged to apply.**

POSTDOCTORAL POSITION

A **POSTDOCTORAL POSITION** in cellular neurobiology is immediately available for an NIH-funded study of protein delivery systems and neuronal protection from oxidative injury. Background in molecular neurobiology preferred. This project involves expression of hybrid proteins, assessment of neuronal internalization and transport *in vitro* and *in vivo*, and models of cell injury and death. Send curriculum vitae to: **Paul S. Fishman, M.D., Ph.D., Department of Neurology, University of Maryland School of Medicine, 22 South Greene Street, Baltimore, MD 21201. FAX: 410-605-7937.**

POSTDOCTORAL FELLOW

The University of Wisconsin Department of Surgery has a position for a cardiac physiologist in an NIH-sponsored laboratory. You will be performing studies related to the actions of adenosine in normal and ischemic myocardium. Position requires demonstrated experience in cardiac myocyte isolation and recording of intracellular calcium currents and concentration. Qualified individuals must have a Ph.D. with one to two years of laboratory experience. Send curriculum vitae and the names, addresses and telephone numbers of three references to: **Dr. Robert Mentzer, Professor and Chairman, Division of Cardiothoracic Surgery, Clinical Science Center H4/358, 600 Highland Avenue, Madison, WI 53792-7375. The University of Wisconsin is an Affirmative Action/Equal Opportunity Employer.**

POSTDOCTORAL POSITION available immediately at Analytical Biological Services Inc., a rapidly growing entrepreneurial company that supplies pharmaceutical and biotechnology companies in the United States and Europe with biochemical preparations. Candidate must have Ph.D. in biological sciences. Experience with receptor binding and ELISA's is desirable. Competitive salary and benefits, plus the possibility of rapid advancement for the right individual. Send curriculum vitae to: **Dr. Charles Saller, ABS Inc., P.O. Box 273, Rockland, DE 19732.**

Dental SCIENTISTS: New York University College of Dentistry is seeking to recruit dentists to tenure-track positions who have both research and clinical training. Specifically, we are interested in appointing dentists who have acquired a Ph.D. in one of the biomedical sciences including, but not limited to, Biochemistry, Cell Biology, Experimental Pathology, Immunology, Microbiology, Molecular Biology, Oral Biology, Pharmacology, Physiology, etc. A Ph.D. in one of the Material Sciences is also acceptable. Furthermore, the ideal candidate will have acquired additional research training as a postdoctoral fellow. In addition, applicants should have advanced training in one of the following dental disciplines: Endodontics, General Dentistry, Geriatric Dentistry, Oral Medicine/Oral Pathology, Oral Surgery, Orthodontics, Pediatric Dentistry, Periodontics, Prosthodontics, or Public Health Dentistry. New York University College of Dentistry expects to appoint up to ten D.D.S.-Ph.D.'s to these newly created positions. Successful applicants are expected to establish an extramural funded productive research program and support the teaching programs of the College. Please send a letter of interest and curriculum vitae to: **Barry R. Rifkin, D.D.S., Ph.D., David B. Kriser Dental Center, New York University College of Dentistry, 345 East 24th Street, New York, NY 10010. NYU encourages applications from women and members of minority groups.**

POSITIONS OPEN

HARVARD UNIVERSITY Postdoctoral Positions in Genetics and Molecular Biology

Available to study the genetic control and inducibility of recombination in human cells and *in vivo* in transgenic mice (*Science*, 266:1573, 1994). Molecular biology experience required; cell culture and/or mouse breeding experience preferred. Please send curriculum vitae to: **Dr. Robert H. Schiestl, Department of Molecular and Cellular Toxicology, Harvard School of Public Health, 665 Huntington Avenue, Boston, MA 02115.**

ASSOCIATE RESEARCH SCIENTIST

The School of Public Health seeks candidates for the position of **ASSOCIATE RESEARCH SCIENTIST** in Epidemiology/Psychiatry. This position is a non-tenure-track annual research appointment. We seek a candidate who will be responsible for overall management and analysis of Esophageal and Gastric Adenocarcinoma. Included is the capacity to analyze family data of schizophrenia pedigrees for genetic linkage, linkage disequilibrium and segregation analysis.

Qualifications for this position include knowledge of cancers and genetic epidemiology, along with an M.D. or Ph.D. and at least two years of professional experience. Send curriculum vitae and names of three references to: **Dr. Marilee Gammon, Columbia University, School of Public Health, Division of Epidemiology, 600 West 168th Street, PH 18-107, New York, NY 10032.**

Columbia University is an Equal Opportunity/Affirmative Action Employer.

POSTDOCTORAL FELLOW/ RESEARCH ASSISTANT

Applications are invited for a **POSTDOCTORAL FELLOW/RESEARCH ASSISTANT** position in the Department of Pathology, Section of Molecular Pathobiology at Baylor College of Medicine. The successful applicant will characterize the role of molecular chaperones of the endoplasmic reticulum in causing plasma alpha₁-antitrypsin deficiency which is an etiologic agent of chronic obstructive lung disease and liver cirrhosis. Applicants must have earned a Ph.D. and have limited experience with techniques involving nucleic acids and proteins. Experience with oligosaccharide analysis and mammalian tissue culture would be useful, but is not required. The position will open prior to November 1, 1995, and is funded for one year. Applications, including a full curriculum vitae and names of two references, should be sent to: **Richard N. Sifers, Ph.D., Department of Pathology, Baylor College of Medicine, One Baylor Plaza, Houston, TX 77030. Telephone: 713-798-3169. Baylor College of Medicine is an Equal Opportunity/Affirmative Action/Equal Access College.**

POSTDOCTORAL POSITION Albert Einstein College of Medicine

A **POSTDOCTORAL POSITION** is immediately available in a NIH-supported research project utilizing novel SCID mouse models chimeric for the human immune and hematopoietic system to study the immunopathogenesis of HIV infection and the efficacy of therapeutic interventions including gene therapy (*JEM*, 179: 513, 1994; *PNAS*, 91:8032, 1994; *JL*, 154:907, 1995). Candidates should have significant expertise in molecular biology especially with retroviral vectors, cellular immunology, and a serious interest in HIV research. Please send curriculum vitae and names of three references to: **Dr. Harris Goldstein, Albert Einstein College of Medicine, Channing 601, Jack and Pearl Resnick Campus, 1300 Morris Park Avenue, Bronx, NY 10461. Equal Opportunity Employer.**

POSTDOCTORAL POSITIONS are available on an NIH Institutional Training Grant in the area of diabetes and hormone action. Topics include: regulation of insulin action and secretion; signal transduction pathways activated by growth factors and G-protein-linked receptors; calcium signaling and microinjection techniques. Send curriculum vitae and names of three references to: **Dr. John R. Williamson, Department of Biochemistry and Biophysics, University of Pennsylvania, Philadelphia, PA 19104. FAX: 215-898-9918. Equal Opportunity Employer. Minorities are encouraged to apply.**

Biology Faculty Positions

Northeast Missouri State University invites applications for three anticipated tenure-track positions at the Assistant Professor level, starting August 1996. Teaching and research are mutually supportive activities at Northeast; candidates should be strongly committed to both teaching and developing an active research program involving undergraduates and M.S. students. Laboratory space and start-up funds will be provided. In addition to the responsibilities listed below, all positions include rotation through a majors or non-majors General Biology course.

- (1) **Geneticist** to teach introductory Genetics and possibly an upper-level course in Evolutionary Biology. We are especially interested in candidates whose research addresses questions in population genetics, evolutionary biology, and/or conservation biology. Search Chair: Dr. Peter Goldman.
- (2) **Plant Cell Biologist/Physiologist** to teach a sophomore-level Cell Biology course as well as an upper-level Plant Physiology course. Search Chair: Dr. Gary Sells.
- (3) **General Microbiologist** to teach Introductory Microbiology and possibly one or more upper-level courses. Preference given to candidates whose research interests represent minimal overlap with existing strengths in microbial genetics and molecular biology. Search Chair: Dr. Michael Lockhart.

Ranked fifth in the nation by *Money Guide*, Northeast is Missouri's only statewide, highly selective, public undergraduate liberal arts and sciences university. The institution's name will change in July 1996 to Truman State University. We are nationally recognized for our innovative assessment program and total commitment to a broad-based liberal arts and sciences education. Students benefit from a university-wide 16:1 student/faculty ratio and the opportunity to work closely with faculty conducting research.

Candidates must possess a Ph.D., or have a targeted completion date, by August 1996. Complete applications include a curriculum vita, *statements of teaching philosophy and research goals*, all undergraduate and graduate transcripts, and three recent letters of reference. All application materials should be sent directly to the respective Search Chair at: **Division of Science, Northeast Missouri State University, Kirksville, MO 63501 (816-785-4597)**. Completed applications will be reviewed starting 6 October 1995.

NMSU is an AA/EEO institution committed to cultural diversity and compliance with the Americans with Disabilities Act.



THE UNIVERSITY OF TEXAS SOUTHWESTERN MEDICAL CENTER

FACULTY AND POSTDOCTORAL POSITIONS: NEUROBIOLOGY OF PAIN AND NEURONAL REGENERATION

The Pain Research Program at the University of Texas Southwestern Medical Center is committed to a period of expansion, focusing on the molecular and cellular mechanisms of pain, neuronal injury and nerve regeneration. We are seeking applications for **Associate or Assistant Professor positions**. A candidate must be an accomplished scientist and leader in the neurophysiology and neuropharmacology of the spinal cord and peripheral nervous system. A Ph.D. and/or M.D. degree with at least 5 years of research experience, a record of publications in peer-reviewed journals and expertise in procuring research support is required.

Postdoctoral positions (4) are available in the fields of somatosensory transduction, peripheral nerve regeneration, molecular biology of neuronal regeneration, biochemistry and pharmacology of spinal nociception and analgesia, molecular biology of anesthetic mechanisms, and behavioral analgesic research. A Ph.D. in neurobiology, molecular biology or a related field is required.

Interested applicants should send a copy of their curriculum vitae and names of three references to:

Darrell L. Tanelian, Ph.D., M.D.

Director, Pain Research Program

**Department of Anesthesiology and Pain Management
The University of Texas Southwestern Medical Center
5323 Harry Hines Blvd.
Dallas, TX 75235-9068**

An Equal Opportunity/Affirmative Action Employer

Program Announcement to Host Scientists & Engineers From the Former Soviet Union

The National Research Council's Cooperation in Applied Science and Technology (CAST) program invites applications from American scientists and engineers who wish to host colleagues from the Newly Independent States (NIS) of the former Soviet Union for joint research in applied scientific fields. This program is intended to support collaborative projects with a strong potential for commercial applications and/or potential to improve the quality of life in the U.S. and NIS. Of particular interest are projects that will enable NIS scientists and engineers who have worked in defense-related research to apply their skills to civilian activities.

Incentive grants of up to \$3,000 for travel and \$1,500 per month for six to twelve months for living expenses will be provided. Of particular interest to the program are applications that demonstrate a strong commitment to the collaboration on the part of the U.S. host and/or host institution (e.g., matching funds, supplementary in-kind support). Proposals are invited in all branches of applied science and engineering. Special consideration will be given to American hosts who wish to collaborate with young NIS specialists.

Application Deadlines are as follows:
(1) **October 1, 1995: For visits beginning by June 30, 1996**

(2) **March 1, 1996: For visits beginning by September 30, 1996**

For more information and/or to receive an application packet, please contact the NRC Office for Central Europe and Eurasia. Address inquiries to: National Research Council; Office for Central Europe and Eurasia (FO2014); 2101 Constitution Avenue, NW; Washington, DC 20418; Telephone: 202/334-3680; Fax 202/334-2614; Internet: OCEE@NAS.EDU

Columbia University College of Physicians and Surgeons

Department of Biochemistry and Molecular Biophysics

We seek outstanding candidates for faculty positions in developmental biology, with an emphasis on molecular or genetic approaches. Both tenure-track and tenured positions are available.

We are especially interested in researchers addressing questions of intercellular communication during early development and neurogenesis, including definition of molecules influencing axonal guidance and targeting during synaptogenesis. We also seek scientists analyzing programs of gene expression involved in the control of cell determination and differentiation.

Candidates should submit a curriculum vitae, bibliography, summary of current and future research goals, and three letters of recommendation. Applications should be addressed to: Thomas Jessell, Search Committee, Department of Biochemistry and Molecular Biophysics, Columbia University, 630 West 168th Street, New York, NY 10032.

Columbia University is an equal opportunity/affirmative action employer.

3-Dimensional Pharmaceuticals, Inc., a company integrating cutting edge technologies in Structure-based Drug Design, Combinatorial Chemistry and Chem-Informatics to discover breakthrough pharmaceuticals, seeks individuals with outstanding qualifications in the following areas:

■ **MOLECULAR BIOLOGY** – Several positions are available for BS/MS candidates with one or more years of experience to clone and express novel engineered proteins. Particular consideration will be given to individuals with backgrounds in heterologous expression in *E. coli*, yeast or insect cells or with broad experience in PCR mutagenesis.

■ **PROTEIN PURIFICATION AND ASSAY DEVELOPMENT** – BS/MS positions available for highly motivated individuals having experience with membrane protein purification, protein refolding, and ligand binding assays.

3DP is located in Exton, Pennsylvania, and offers a comprehensive compensation and benefits package. Qualified individuals are invited to send a resume with contact data for three references to: **3-Dimensional Pharmaceuticals, Inc., Z-83, P.O. Box 2066, Philadelphia, PA 19103.**



**3-Dimensional
Pharmaceuticals, Inc.**

AN EQUAL OPPORTUNITY EMPLOYER

POSITIONS OPEN



ALBERT EINSTEIN COLLEGE OF MEDICINE
OF YESHIVA UNIVERSITY

A **POSTDOCTORAL POSITION** is available to study the radiation sensitivity in view of checkpoint control in yeast and humans. Priority may be given to a recent Ph.D. or Ph.D./M.D. with experience in molecular biology and genetic analysis in humans. Send curriculum vitae to: **Dr. Tomohiro Matsumoto, Department of Radiation Oncology, Albert Einstein College of Medicine, Jack and Pearl Resnick Campus, 1300 Morris Park Avenue, Bronx, NY 10461. An Equal Opportunity Employer.**

POSTDOCTORAL POSITION Retinal Neurobiology and Circadian Rhythms

Available immediately to study the following: photoreceptor circadian clock function; signal transduction cascades regulating gene expression and melatonin biosynthesis in photoreceptor cells; neurotransmitter release, receptors, second messengers, and ion channel modulation. Candidates should have a recent Ph.D. or M.D., experience in cell/molecular biology and/or patch clamp electrophysiology, and a record of productive research. Please send a curriculum vitae, a brief statement of research experience and interests, and names of three references to: **P. M. Iuvone, Department of Pharmacology, Emory University School of Medicine, Atlanta, GA 30322-3090. Email: miuvone@pharm.emory.edu.**

POSTDOCTORAL POSITION available immediately to study the mechanisms of major histocompatibility complex class I antigen processing and presentation. Experience in recombinant DNA methodology and gene transfection/expression is preferred. Salary is \$25,000 per year plus benefits. Send curriculum vitae, a brief statement of research interest, and the names and telephone numbers of three references to: **Matthew J. Androlewicz, Ph.D., Office of Faculty Recruitment, 12902 Magnolia Drive, Tampa, FL 33612** by the deadline date of September 21, 1995. *The University of South Florida is an Equal Opportunity/Equal Access/Affirmative Action Employer.* For disability accommodations please contact **Jody Swanson at 813-975-7894**, a minimum of five working days in advance.

PLANT MOLECULAR GENETICS

POSTDOCTORAL ASSOCIATE POSITION in the Plant Molecular Genetics Institute (PMGI) of the University of Minnesota available immediately for a person with a doctorate degree and appropriate training and experience. This temporary (two year) research position will be supervised by one of the 22 PMGI faculty members. Possible areas of research include: gene expression, plant development, chromosome function and structure, nitrogen fixation, plant-microbe interactions, molecular evolution, cytoskeleton structure and function, organelle biogenesis, molecular cytogenetics, genome mapping, transformation, biochemical genetics, and signal transduction.

The deadline for application is October 16, 1995. Application must include a personal curriculum vitae, a brief statement of research interests and experience, and three letters of recommendation. Please submit applications to: **Dr. Neil Olszewski, Director PMGI, 220 Biological Sciences Center, 1445 Gortner Avenue, University of Minnesota, St. Paul, MN 55108. Telephone: 612-625-3129; FAX: 612-625-1738.** *The University of Minnesota is an Equal Opportunity Educator and Employer and specifically encourages applications from women and minorities.*

RESEARCH ONCOLOGIST

Research faculty position at the **INSTRUCTOR** level available in the Department of Medicine at Memorial Sloan-Kettering Cancer Center. Must be American Board of Internal Medicine certified/eligible in both Internal Medicine and Medical Oncology. Conduct and supervise research in the field of prostatic cancer; act as assistant director of urologic oncology research lab; teach/train fellows and technicians at postgraduate level in molecular uro-oncology. Applicant should have excellent molecular biology and protein chemistry research skills, experience in management of patients with prostate cancer. Salary commensurate with academic level. Send curriculum vitae to: **David Nanus, M.D., Box 132, 1275 York Avenue, New York, NY 10021.**

POSITIONS OPEN

A **POSTDOCTORAL POSITION** is available for studies elucidating novel gene functions involved in epithelial cell differentiation in the lung. The emphasis of research is to provide the foundation for the rational development of *in utero* gene therapeutic strategies for cystic fibrosis (CF) through a better understanding of airway epithelial and submucosal gland development and differentiation (*Development*, 121:2031-2046, 1995). Applicants must have experience in Molecular Biology and cDNA cloning. The Institute for Human Gene Therapy offers an exceptional environment and resources for postdoctoral studies. Interested candidates should send curriculum vitae and three letters of reference to: **John F. Engelhardt, Ph.D., Department of Molecular and Cellular Engineering, University of Pennsylvania, 422 Curie Boulevard, Room 305 BRB1, Philadelphia, PA 19104-6069. FAX: 215-573-8590.**

POSTDOCTORAL POSITION—available now to study antibiotic-resistant enteric bacteria in beef cattle populations in a three-year funded project. Applicants must have background in microbiology and bacterial population genetics. Applicants must demonstrate expertise in PCR, plasmid profiling, or other techniques of bacterial genetic fingerprinting. Review of applications will begin September 15, 1995, and continue until the position is filled. Send or FAX a curriculum vitae, summary of research interests, and three reference letters to: **Dr. John C. Galland, Food Animal Health and Management Center, VCS-106, College of Veterinary Medicine, Kansas State University, Manhattan, KS 66506. FAX: 913-532-4288.**

POSTDOCTORAL POSITION: Available at the Weis Center for Research in the laboratory of **Dr. William Maltse**. Studies focus on structure-function analysis of Rab GTP-binding proteins and the roles of specific Rab proteins in intracellular trafficking of Alzheimer's amyloid precursor protein. The Weis Center is a basic research institute located in an attractive rural environment. Starting date is flexible and salary depends on experience. Ph.D. in protein biochemistry, cell biology, or molecular biology is preferred. If interested please provide curriculum vitae, statement of interests and names of three references to: **Geisinger Human Resources (WM), 100 North Academy Avenue, Danville, PA 17222-1529.** *Equal Opportunity Employer. Minority/Female/Disabled/Veteran.*

POSTDOCTORAL POSITION available immediately to study recombination in maize. The objective of the study is to define features of the meiotic recombination process in higher plants. The individual will analyze molecular products of intragenic recombination at the *bronze* locus, an excellent model system because of its high rate of recombination. Experience in molecular biology (particularly with techniques of DNA analysis) essential. Knowledge of genetics preferable. Send a cover letter and curriculum vitae, and have three reference letters sent to: **Dr. Hugo K. Dooner, Waksman Institute, Rutgers University, P.O. Box 759, Piscataway, NJ 08855.** *An Equal Opportunity/Affirmative Action Employer.*

A **POSTDOCTORAL POSITION** is available to study covalent modifications of G proteins in relation to biosynthetic processing and cell replication. Projects will employ immunological and molecular biological techniques, including microinjection, cloning, site-directed mutagenesis, and DNA and protein expression analysis. A recent Ph.D. with training in basic molecular biological techniques is highly desirable. Please submit a curriculum vitae, including names and addresses of three references, to: **Dr. David R. Manning, Department of Pharmacology, University of Pennsylvania School of Medicine, 3620 Hamilton Walk, Philadelphia, PA 19104-6084.**

POSTDOCTORAL POSITION IMMUNOLOGY

Position available immediately to study the maternal reproductive tract T lymphocyte biology in normal and abnormal pregnancy in a murine model. Position suited to a recently graduated postdoctoral fellow with a strong interest in cellular and molecular immunology. Animal work involved. Unique setting in a private research setting with NIH funding. Please send a curriculum vitae, a brief letter of research interests, and three reference letters to: **Kent D. Heyborne, M.D., Swedish Medical Center, 501 East Hampden Avenue, Englewood, CO 80110.**

POSITIONS OPEN

POSTDOCTORAL POSITIONS MOUSE GENETICS

Position 1: A position is available to conduct studies on the genetic control of recombination in mice. Using a transgenic system for the efficient detection of meiotic gene conversion (*Genetics*, 137:837, 1994 and *MCB*, 12: 2545, 1992), genes will be identified that can modulate this process, and other factors governing recombination are being evaluated. Applicants should have molecular biology experience. Position 2: Using ES cells, we are creating deletion complexes to systematically characterize genetic functions in the t complex. This region contains several genes involved in gametogenesis, development, and meiotic drive. The genetic resource of defined chromosomal deficiencies will be used to identify new developmentally important genes and assist in the analysis of the known mutations that cause segregation distortion and infertility. Applicants should have molecular biology experience. Contact: **John Schimenti, Ph.D., The Jackson Laboratory, Bar Harbor, ME 04609. Email: jcs@aretha.jax.org; Telephone: 207-288-6402; Internet: http://lena.jax.org:80/~jcs/**

POSTDOCTORAL POSITION Alzheimer's Disease Research

Scios Nova is a biopharmaceutical company engaged in the discovery, development, and commercialization of novel human therapeutics. Our R&D efforts focus on the treatment of acute illnesses, primarily in the areas of cardio-renal disease and inflammation.

POSTDOCTORAL POSITION is available to study the molecular and cellular biology of genes involved in the pathology of Alzheimer's Disease. This research would add to an on-going research program in this area.

The candidate should have significant experience in molecular and mammalian cell biology. Background in neurobiology is desirable but not essential.

Please send curriculum vitae, including contact information for three references, to:

**Dr. Barbara Cordell
Scios Nova Inc.
2450 Bayshore Parkway
Mountain View, CA 94043
Equal Opportunity Employer**

ALGAL BIOLOGIST THE PROCTER & GAMBLE COMPANY

POSTDOCTORAL—Immediate opening for a Ph.D. Algal Biologist/Environmental Toxicologist in our Environmental Science Department in Cincinnati, Ohio. This position offers a unique combination of environmental research, project management and risk assessment opportunities. The successful applicant will conduct research to evaluate the effects of consumer product chemicals on aquatic plants, algae and macrophytes and investigate the mode and mechanisms of toxic action. He/she will also work on a team with other environmental toxicologists, chemists, microbiologists and engineers to address risk assessment issues. Send curriculum vitae to: **The Procter & Gamble Company, Doctoral Recruiting, Department LJS, P.O. Box 538707, Cincinnati, OH 45253-8707.** *An Equal Opportunity Employer.*

POSTDOCTORAL POSITION IN MOLECULAR BIOLOGY

Study of mammalian cellular and HIV DNA replication proteins with respect to mechanism of action, response to antiviral agents and cellular regulation. Viral proteins are generated by expression in bacteria. Procedures involve preparation of model DNA and RNA substrates, monoclonal antibody production, PCR amplification and molecular cloning, protein expression and mechanism analysis of multiprotein systems. Submit a complete curriculum vitae and three references to: **Dr. Robert A. Bambara, Department of Biochemistry, Box 607, University of Rochester Medical Center, Rochester, NY 14642.**

POSTDOCTORAL ASSOCIATE: Pharmacology/Biochemistry, University of Florida. We are seeking a Ph.D. Pharmacologist to conduct preclinical biochemical and pharmacokinetic studies on polyamine analogues. Experience in pharmacokinetic and enzyme assays is preferred. Send or FAX a résumé to: **Dr. R. J. Bergeron, Graduate Research Professor, University of Florida, Department of Medicinal Chemistry, Box 100485, Gainesville, FL 32610-0485. FAX: 904-392-8406** (no telephone calls please). *Equal Opportunity Employer.*

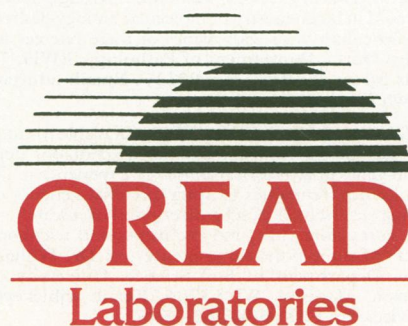
Scientific Positions Available

Oread Laboratories, a leader in pre-clinical drug development, is expanding its services. This expansion has created openings for sharp, technically qualified, entrepreneurial minded scientists to fill the positions of this growing pharmaceutical development company. We are seeking individuals possessing B.A./B.S., M.S., and/or Ph.D.s in the following technical fields:

- ▲ Project Managers
- ▲ Analytical Chemistry
- ▲ Bioanalytical Chemistry
- ▲ Pharmaceutical Chemistry
- ▲ Synthetic Chemistry
- ▲ Formulation Development
- ▲ Microbiology

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.

Send resumes and letter of intent to:
Human Resources, Oread Laboratories
1501 Wakarusa Dr.
Lawrence, Kansas, 66047.
e-mail: employment@oreadlabs.com
No phone calls please.
EOE



POSITIONS OPEN

POSTDOCTORAL POSITIONS Mayo Clinic and Graduate School

Applications are invited for study of structure and function of molecules related to mechanisms of neurodegeneration. Three positions available immediately: 1) NMR/molecular modeling of trinucleotide repeat DNA (Gacy et al., *Cell*, 81:533, 1995); 2) Nitric Oxide biochemist/molecular biologist; and 3) Molecular biologist interested in either DNA replication, expansion or neurodegeneration.

The focus of the research is understanding the mechanism of neurodegeneration in disease related to trinucleotide expansion and/or oxidative damage. We are using a variety of biochemical, biophysical, cellular and molecular approaches to identify mechanism. General interest in neurobiology is essential. Mayo Foundation is a world-class research institute with medical school and graduate school. Excellent basic research and facilities. Excellent salaries and benefits for qualified individuals. Interested parties should send curriculum vitae and three letters of recommendation to: **Dr. Cynthia T. McMurray, Department of Pharmacology, Mayo Foundation, Rochester, MN 55905. Email: mcmurray@mayo.edu.**

Mayo Foundation is an Affirmative Action and Equal Opportunity Educator and Employer.

POSTDOCTORAL POSITION in molecular and cell biology is available immediately to investigate the cell cycle regulation of membrane phospholipid metabolism. The research involves the application of contemporary techniques of molecular biology to dissect the mechanistic details of the interaction between the rate controlling enzyme in the pathway (CTP: phosphocholine cytidyltransferase) and the kinases, phosphatases and lipid regulators that influence its activity. Current research focuses on the expression of cytidyltransferase mutants in target cells to define the functional domains of the protein and examine the effects of de-regulated protein expression on phospholipid synthesis and cell growth. Candidates with a recent Ph.D. degree should apply by submitting a curriculum vitae, a short statement of research interests, reprints and the names of three references to: **Dr. Suzanne Jackowski, Department of Biochemistry, St. Jude Children's Research Hospital, Danny Thomas, Founder, 332 North Lauderdale, Memphis, TN 38105. An Affirmative Action/Equal Opportunity Employer.**

POSTDOCTORAL POSITION available immediately to investigate the molecular physiology of normal and disease-causing mutant cystic fibrosis transmembrane conductance regulator (CFTR) chloride channels in intracellular membranes. Studies will utilize digital imaging of single living cells and single-channel patch clamp electrophysiology of native endoplasmic reticulum using novel approaches. Requires Ph.D. or M.D. and electrophysiology, imaging or molecular biology experience. Ability to work independently within group with strengths in ion transport and molecular biology. Send or FAX curriculum vitae, a short statement of research interests and names of three references to: **Dr. J. Kevin Foskett, Director, Ion Transport Core, Institute for Human Gene Therapy and Department of Physiology, University of Pennsylvania School of Medicine, BRB-1, 422 Curie Boulevard, Room 313, Philadelphia, PA 19104-6069. FAX: 215-573-8590. The University of Pennsylvania is an Equal Opportunity/Affirmative Action Employer. Women and minorities are encouraged to apply.**

CELL-CYCLE/DNA REPLICATION Brigham and Women's Hospital Harvard Medical School

A **POSTDOCTORAL POSITION** is available to study the regulation of G1-S transition in normal and cancer cells: *EMBO J.*, 11:2189; *Nature*, 365:79 and 374:386; *MCB*, 15:3119; *PNAS*, 92:5386. A strong publication record in biochemistry or molecular biology desired. Send curriculum vitae with names of three referees to: **Anindya Dutta, Department of Pathology, BWH, 75 Francis Street, Boston, MA 02115. Email: adutta@bics.bwh.harvard.edu.**

POSTDOCTORAL POSITION is available to study mobile genetic elements and associated xenobiotic degradation genes in *Pseudomonas aeruginosa*. Experience in using molecular techniques to study bacterial genetics or physiology is essential. Send a description of research interests, curriculum vitae, and the names and telephone numbers of three potential references to: **Dr. William Hickey, Department of Soil Science, University of Wisconsin, Madison, WI 53706. Email: wjhickey@mac.wisc.edu; FAX: 608-265-2595.**

POSITIONS OPEN

TULANE UNIVERSITY MEDICAL CENTER Tulane Regional Primate Research Center Department of Parasitology

POSTDOCTORAL ASSOCIATE is sought to join a multidisciplinary group working on the development of vaccines against Lyme disease. The task is to investigate the mechanism that regulates the expression of surface antigens of *Borrelia burgdorferi*. A background in molecular biology/microbiology would be advantageous. Please send curriculum vitae and names of three references by September 15, 1995, to: **Dr. Mario T. Philipp, Head, Department of Parasitology, Tulane Regional Primate Research Center, Covington, LA 70433. Email: philipp@tpc.tulane.edu. Tulane University is an Equal Opportunity/Affirmative Action Employer.**

POSTDOCTORAL POSITION: Available immediately to study lectin-glycoprotein interactions and prepare neoglycoproteins for development of a unique bioseparations approach to purify protein glycoforms. Research spans biochemical engineering and medicinal chemistry on an NIH-funded project. Ph.D. in protein chemistry/biochemistry or analytical chemistry. Experience desirable in glycoproteins, lectins, molecular modeling and knowledge in analytical chemistry and bioseparations. Demonstrated capability of cross-disciplinary research. Send curriculum vitae and three letters of reference to: **Professor Jonathan Dordick, Department of Chemical and Biochemical Engineering, 125 Chemistry Building, University of Iowa, Iowa City, IA 52242. The University of Iowa is an Affirmative Action/Equal Opportunity Employer. Women and minorities are encouraged to apply.**

POSTDOCTORAL POSITION

Immediate opening for a three year NIH-funded position to study the efficacy of gene therapy approaches for inhibition of tumor angiogenesis. Expertise in the molecular and cellular biology of angiogenic growth factors and/or experience with animal models of human disease is desirable. Direct inquiries to:

**Dr. Kevin G. Peters
Duke University Medical Center
Box 3623
Durham, NC 27710
FAX: 919-684-8591
Email: kgp@hodgkin.mc.duke.edu**

POSTDOCTORAL POSITION LACTOCOCCAL GENETICS

A position is available immediately to work on molecular aspects of bacteriophage resistance in lactococci with **D. J. O'Sullivan** and **L. L. McKay** at the University of Minnesota. A Ph.D. in microbiology, molecular biology, biochemistry, or related field is required. Experience in cloning, sequencing and transcription studies preferred. Send detailed résumé and three references to: **Dr. Daniel J. O'Sullivan, Department of Food Science and Nutrition, 1334 Eckles Avenue, University of Minnesota, St. Paul, MN 55108. The University of Minnesota is an Equal Opportunity Educator and Employer.**

POSTDOCTORAL RESEARCH POSITION UNIVERSITY OF ILLINOIS Biomedical Magnetic Resonance Laboratory

POSTDOCTORAL POSITION available in synthetic organic chemistry. Experience in cascade polymer and/or macrocyclic chelate synthesis preferred. Operational experience of NMR spectrometers required. Project develops biomedical applications of cascade polymers. Contact: **Dr. Erik Wiener, University of Illinois, Biomedical Magnetic Resonance Laboratory, 1307 West Park Street, Urbana, IL 61801. The University of Illinois is an Affirmative Action/Equal Opportunity Employer.**

POSTDOCTORAL POSITION is available immediately in Immunology to study cellular immune responses to HIV infection in humans and nonhuman primates. Studies will address issues in cellular immunology, immunogenetics and molecular virology. Send curriculum vitae and three letters of reference to: **Dr. Norman L. Letvin, Harvard Medical School, Beth Israel Hospital, RE-113, 330 Brookline Avenue, Boston, MA 02215. Equal Opportunity Employer.**

POSITIONS OPEN

POSTDOCTORAL FELLOWSHIPS CANCER BIOLOGY

The Cancer Biology Training Program at the University of Chicago is seeking applications from qualified applicants. Application deadline is December 31, 1995. Applicants must have no more than three years of postdoctoral experience prior to application. We offer postdoctoral training in preparation for research and teaching in the field of cancer biology. Fellowships are for one year, renewable for two. Applicants should apply directly to Cancer Biology faculty. For more information, including faculty research descriptions and addresses, please contact: **Mr. Larry Hill, Ben May Institute MC 6027, University of Chicago, 5841 South Maryland Avenue, Chicago, IL 60637. The University of Chicago is an Affirmative Action/Equal Opportunity Employer.**

POSTDOCTORAL FELLOWSHIP in Exercise Endocrinology. A grant-funded position is available November 1, 1995, to assess the effects of energy availability, controlled through diet and exercise treatments, on metabolic hormones, on the mobilization and utilization of stored metabolic fuels, and on LH pulsatility in men and women. Minimum requirements include a Ph.D. in exercise physiology, nutrition, or endocrinology. Minimum salary is \$24,000. Send curriculum vitae, graduate transcript, statement of interests, and three letters of reference to: **Anne Loucks, Ph.D., Department of Biological Sciences, Ohio University, Athens, OH 45701. Review of applications begins October 1, 1995. Ohio University is an Equal Opportunity/Affirmative Action Employer.**

POSTDOCTORAL FELLOWSHIP position available immediately to investigate the expression and function of S100 proteins as tumor suppressors in epithelial cancers. Applicants should have Ph.D. and or M.D. degree with experience in molecular and/or cell biology. Send curriculum vitae and references to: **James T. Elder, M.D., Ph.D., Department of Dermatology and Comprehensive Cancer Center, C560A MSRBII, University of Michigan, Ann Arbor, MI 48109-0672. Email: jelder@umich.edu. The University of Michigan is an Equal Opportunity Employer.**

Muscle Physiologist/Molecular Biologist. Deborah Research Institute, a private non-profit research institute, is searching for a junior level scientist (**POSTDOCTORAL FELLOW/RESEARCH ASSOCIATE**) to work on muscle damage, repair and regeneration. The person will be required to develop an independent research program and encouraged to collaborate with clinical scientists at the Deborah Heart and Lung Center. Position available immediately. Send letter of application, curriculum vitae, recent publications, and names, addresses and telephone numbers of three references to:

**C. David Ianzuzzo, Ph.D., Director
Deborah Research Institute
20 Trenton-Pine Mill Road
Browns Mills, NJ 08015-1799**

Equal Opportunity Employer

PROJECT SCIENTIST and POSTDOCTORAL FELLOW. Positions available beginning October 1, 1995, for Ph.D.'s with training and experience in molecular biology. Endogenous growth factor/receptor expression and function in corneal and breast cells, including the role of apoptosis in wound healing. Published experience with recombinant DNA techniques, nucleic acid sequencing, Northern blotting, Western blotting, and PCR required. Send curriculum vitae, cover letter of interests, and three references to: **Steven E. Wilson, M.D., Eye Institute and Department of Cell Biology/A31, Cleveland Clinic Foundation, 9500 Euclid Avenue, Cleveland, OH 44195. Cleveland Clinic Foundation is an Equal Opportunity/Affirmative Action Employer.**

POSTDOCTORAL and/or RESEARCH ASSOCIATE POSITIONS available immediately. Investigations of PKC isoforms and K-ras signaling events in normal and malignant rat colonocytes and cultured cells. Molecular biology experience required. Mail/FAX curriculum vitae, and names of three references to: **Dr. Thomas A. Brasitus, Department of Medicine, University of Chicago, MC4076, 5841 South Maryland Avenue, Chicago, IL 60637. FAX: 312-702-2182. Affirmative Action/Equal Opportunity Employer.**

The Molecular Biology Conference San Diego, California Sept. 17-20, 1995

Abstract Deadline: Sept. 7, 1995

Exhibits & Workshops

The Basic Structural Biology of Calcium Signaling: Walter Chazin, The Scripps Research Institute, La Jolla
Molecular Immunology of Self-Reactive Autoantibodies and Autoimmune Disease: Azad Kaushik, University of Guelph

Gene Synthesis, High-Level expression and mutagenesis of Thiobacillus ferrooxidase, Rosticyanin HIS 85 is a ligand to Blue Copper Center: Danilo Casimiro, The Scripps Institute, La Jolla

The Structure of a DNA-protein binding domain: Nuria Assa-Mut, La Jolla Cancer Research Foundation

Structural basis for DNA recognition by the architectural transcription factor LEF-1: Lee Xiang, The Scripps Research Institute, La Jolla

The use of pseudocontact shifts in macromolecular structure determination by NMR spectroscopy: Miriam Gochin, Univ of the Pacific, San Francisco

Analysis with x-ray crystallography and yeast genetics: C. Brenner, Brandeis Univ

The 1995 outbreak of Ebola virus disease in Zaire: clinical observations and comparison to previous outbreaks: Dr. Phillippe Calain, CDC, Atlanta

The Organization of the Ebola virus genome and expression of gene products: Dr. Anthony Sanchez, Atlanta, Georgia

Genomic evidence for selenobiology or viruses: Ebola Zaire as the ultimate example, Will Taylor, Computational Center for Molecular Structure and Design, Univ of Georgia, Athens

Dr. Ali S. Khan- Epidemiologist . Kikwit team member, has data on the epidemiology of Ebola Reports on the number of cases and risk factors.

Mary Elizabeth Miranda , Res. Inst. Tropical Med., Manilla, Philipines.

Peptide aptimers: Genetic Selection and Molecular Recognition: Barak Cohen, Dept. of Molecular Biology, Harvard Medical School, Boston

Calibration and Application of the Interaction Trap: Erica Golemis, Fox Chase Cancer Center, Philadelphia

Gene Regulation, Structural Biology, Molecular Immunology, Gene Therapy: S. Forsberg, La Jolla; S. Chang, San Diego; W. Chazin, La Jolla; A. Kaushik, Guelph; D. Casimiro, La Jolla

Yeast Expression and Two-Hybrid System: E. Golemis, Philadelphia; P. Colas, B. Cohen Cambridge; Li Zhu, Palo Alto; A. Ghosh, Lincoln; S. Gangloff, New York; M. Pilgrim, Stanford, E. Komives, La Jolla

Symposium on the Molecular Biology of Ebola and Outbreaking Viruses: W. Taylor, Athens; A. Sanchez, Atlanta; Representation by USAMRIID is expected, according to Peter Jahrling, Headquarters, USAMRIID

Plant Extinction /A New DNA Bank: H. Koopowitz, Irvine; I. Rubenstein, R. Dana, San Diego

Sequencing, DNA and Germplasm Preservation, Advances in Technology: M. Morimyo, Tokyo; A. Chmeris, Russian Academy of Sciences; M.A. Northrup, Livermore; J. Miller, Carlsbad; O. Ryder, San Diego; F. Molina, Rockville; E. Roos, Ft. Collins; C. Simon, Pullman

DNA Collections, Databases, World-Wide-Web: S. Beckstrom-Sternberg, Beltsville; B. Sherman, D. Davy, Berkeley; M. Polacco, Columbia; E. Reardon, R. Jain, La Jolla

Agricultural Biotech: M. Helm, La Jolla; T. Dunahay, Denver; J. Sherman and J. Frank, San Marcos; J. Chambers, Washington, D.C.; R. Lilley and M. Shariati, Wollongong

Computer Facilities: e-mail, Usenet news, telnet, gopher, wais, WWW Organizers: H. Koopowitz, U C Irvine, W. Taylor, U of GA; A. Sanchez, Centers for Disease Control, Atlanta; D. Ornstein, PROMED; H. Shands, J. Miksche, S. Heller, E. Roos, C. Simon USDA/ARS

The meeting is being sponsored by PGG/Ambiocom, San Diego, CA.

Contact: 619-945-2321

rcdana@greengene.com

<http://www.bocklabs.wisc.edu/ebola/ebola-conf-sep-95.html>

AAAS MEMBERS SPECIAL FEE: Students, Post-Docs, \$245; Academic, Government, Non-Profit \$345, Commercial \$595. Non-AAAS Members add \$150. Accommodations extra. Location of meeting Lake San Marcos Resort, 1025 La Bonita Dr., Lake San Marcos, San Diego, CA 1-800-447-6556. MasterCharge, Visa, or check payable to MBC'95. Mail to MBC Registration, Box 927461, San Diego, CA 92192 FAX: 619-724-8171

POST-DOCTORAL FELLOWSHIPS

INTERDISCIPLINARY PROGRAM IN DEVELOPMENTAL AND MOLECULAR NEUROBIOLOGY

A new interdepartmental program in Developmental and Molecular Neurobiology is being developed at the University of Louisville. This program includes an NSF-sponsored initiative to provide post-doctoral research opportunities. Postdoctoral Fellows will apply molecular approaches to the study of the developing nervous system.

The Program: Fellows will conduct their research with core-faculty in one of the participating departments and will also be expected to participate in the seminars, symposia and other activities sponsored by the program in Developmental and Molecular Neurobiology. Research programs of core-faculty include diverse topics in neurobiology such as neurite outgrowth, trophic factors, plasticity, synaptogenesis, neuron-glia interactions, and the developmentally regulated expression of receptors and other molecules important to neuronal function.

The Faculty: The core-faculty consists of eight investigators associated with several departments at the University of Louisville:

ANATOMICAL SCIENCES AND NEUROBIOLOGY
BIOCHEMISTRY
OPHTHALMOLOGY AND VISUAL SCIENCES
PATHOLOGY
PSYCHOLOGY

Nigel G.F. Cooper -visual and somatosensory systems
Madi Gupta-basal ganglia
Barbara J. McLaughlin-retina and pigment epithelium
George D. Mower-visual system
Heywood M. Petry-visual system
Fred J. Roisen-neuritogenesis
Laura F. Schweitzer-auditory system
Roland Valdes, Jr.-membrane channels

Stipends: consistent with NSF guidelines.

Applications: Applicants with demonstrable experience in molecular biology should submit their curriculum vitae, statement of research area and interests, and three letters of recommendation to the following address by October 15, 1995.

The Program Administrator
Program in Developmental and Molecular Neurobiology
Room 207
Department of Ophthalmology and Visual Sciences
University of Louisville School of Medicine
Louisville, Kentucky 40292
TEL: (502) 852-5148

The University of Louisville is an Equal Opportunity Employer and applications from women and minorities are strongly encouraged.



Simon Fraser University

Assistant Professor -- Health Scientist

The School of Kinesiology at Simon Fraser University seeks an outstanding junior scientist to fill a tenure-track position at the level of Assistant Professor. Appropriate areas of research focus and teaching expertise are: prevention and/or rehabilitation of disorders of major societal concern such as cardiovascular disease, diabetes, or musculoskeletal disorders.

Simon Fraser University, located on top of Burnaby Mountain in Greater Vancouver, is renowned for the high quality of its programs. The School of Kinesiology has the mission to study human structure and function and their relation to health and movement. About 400 students are enrolled in the B.Sc. program in Kinesiology and about 60 graduate students are enrolled in the M.Sc. or Ph.D. programs.

A successful candidate for this position will be expected to have postdoctoral experience, establish an independent research program, and teach at the graduate and undergraduate level. Evidence of excellence in both research and teaching at university level are essential prerequisites.

To apply, please submit by **15 November 1995** your curriculum vitae, 3 publications that you consider most important, and the name, address and telephone of 3 references, to:

J.A. Hoffer, Ph.D., Director, School of Kinesiology, Faculty of Applied Sciences, Simon Fraser University, Burnaby, British Columbia V5A 1S6, Canada.

In accordance with Canadian Immigration requirements, priority will be given to Canadian citizens and permanent residents of Canada. *Simon Fraser University is committed to the principle of equity in employment and offers equal employment opportunities to qualified applicants. All appointments are subject to budgetary authorization.*

Research

CONGRESSIONAL RESEARCH SERVICE

Chief, Science Policy Research Division
Congressional Research Service (CRS)
\$81,529-\$110,363*

**There will be a locality pay adjustment made upon selection.*

CRS is the department of the Library of Congress that provides objective, nonpartisan policy analysis, research and information to Congress. The individual selected for this position will lead the research division that is responsible for public policy issues related to biomedical research, civilian and military space, defense research and technology, energy and transportation, global geosciences and environmental technology, public and environmental health, research and development budget policy, and telecommunications and information policy.

Minimum qualifications include one year of specialized experience at the GS-15 level in the Federal Service or at a comparable level of difficulty outside the Federal Service, which demonstrates a **knowledge of science and technology policies and related programs**. Other requirements include addressing six knowledge, skills and abilities (KSAs) factors.

For a complete description of all requirements for this position, applicants should request a copy of **Vacancy Announcement No. 50852** by calling (202) 707-5627 or the Employment Hotline at (202) 707-4315.

To be considered for this vacancy, applicants must submit either an SF171, Application for Federal Employment or the Optional Form OF612, and any other required attachments, no later than **September 29, 1995** to: **The Library of Congress, Human Resources Operations Office, 101 Independence Avenue, SE, LM-107, Washington, DC 20540-2295.**



THE LIBRARY OF CONGRESS

The Library of Congress is an EOE.

CHEMISTRY

MANAGER BIOCHEMICAL RESEARCH AND DEVELOPMENT

Grain Processing Corporation, a leading manufacturer of specialty carbohydrates from corn, is seeking a Manager, Biochemical Research and Development. An advanced degree in Organic, Physical, Polymer or Biochemistry, Ph.D. preferred. A minimum of five years experience in biochemical or carbohydrate related research emphasizing derivatization, synthesis and/or development of carbohydrate materials. Strong oral and written communication skills required.

Company paid relocation to Muscatine, Iowa and satisfactory passing of a pre-employment drug screen is required. Grain Processing Corporation offers a competitive salary along with company paid profit sharing, pension, health, dental and prescription insurance plans. If you would like to work in a stable environment with a growing company conducive to your personal growth, please send your resume to:



Bruce LeVasseur
Grain
Processing
Corporation
P.O. Box 349
Muscatine, IA
52761-0349

An Equal Opportunity Employer

As an innovative leader in the field of intracellular receptor and STATs technology, Ligand Pharmaceuticals is successfully developing receptor-based, small molecule drugs for the treatment of human disease. Come join us as we continue to explore exciting new areas.

ASSOCIATE SCIENTISTS CARDIOVASCULAR RESEARCH

As a key member on our team, you will design and implement *in vivo* studies of the regulation of target genes, focusing on cardiovascular and metabolic diseases. You'll also interact with other research groups to develop and implement *in vivo* models of gene function. A BS/MS degree in Life Sciences and 3-5 years of experience with *in vivo* biochemical and molecular techniques are required. Familiarity with cardiovascular disease and lipoprotein metabolism is helpful. (Dept. MB)

DNA, RNA & PROTEIN MANIPULATION

You will study mechanisms of cytokine-regulated gene expression, employing a variety of biochemical and cellular/molecular biological techniques, including DNA cloning and sequencing, RNA manipulation, PCR, immunochemistry, mammalian cell culture and transfection, and reporter gene assays. Current available positions require a BS/MS degree in Molecular Biology, Cell Biology, or Biochemistry with at least 4 years' experience in a laboratory setting. (Dept. MS)

GLUCOCORTICOID RECEPTORS

You will be involved in the research of glucocorticoid receptor structure and functions with particular emphasis on the mechanism of glucocorticoid hormone action. Responsibilities will include conducting secondary assays to define the mechanisms associated with particular glucocorticoid agonists and antagonists and the analysis of receptor-ligand interactions. You will also provide general lab upkeep and order lab supplies. You will need a BS degree plus 4-8 years' experience or an MS degree with 3-6 years' laboratory experience. You must also possess experience in Molecular Biology techniques, such as cloning, sequencing and PCR, as well as a working knowledge of cell culture-transfection and sterile techniques. Protein Biology, radioisotope and computer skills a plus. (Dept. JM)

SENIOR RESEARCH ASSOCIATES CARDIOVASCULAR RESEARCH

You will support studies on *in vivo* regulation of target genes, concentrating on the areas of cardiovascular and metabolic diseases. You will also support other areas in the development of *in vivo* models of gene function. A

BS degree in Life Sciences with at least 1 year of experience in animal studies, including rodent handling, dosing, tissue harvesting and preparation, plus basic biochemical and molecular biology techniques are required. (Dept. MB)

MAMMALIAN CELL/YEAST ASSAYS

Positions are available for individuals to be involved in the design and implementation of mammalian cell/yeast-based assay methods through automated high throughput robotic systems. A BS/MS in Biology, Molecular Biology or Life Sciences is required for all openings. Prior industrial experience highly desired. The first position requires 2+ years' laboratory experience in applied recombinant DNA techniques; yeast methods preferred. The second position requires 2+ years' experience in mammalian transfection, ELISA or enzyme assays; drug screening experience would be a plus. (Dept. NLD)

ENDOCRINE CHEMISTRY

This position involves laboratory synthesis, purification and characterization of organic compounds under the direction of a PhD scientist. You must possess a BS/MS degree with 1-2 years' research experience. (Dept. JM)

We are pleased to offer a vigorous scientific environment in one of California's most desirable locations. As a member of our team, you will also enjoy a highly competitive compensation package, comprehensive benefits and stock options. For consideration, please send your c.v. and a letter detailing your expertise and the position of your interest, to: **Ligand Pharmaceuticals Inc., Attn: (Dept. ____), 9393 Towne Centre Drive, San Diego, CA 92121, fax (619) 535-3906.** As an equal opportunity employer, we proudly encourage workforce diversity.



LIGAND
PHARMACEUTICALS

Biological Sciences at the University of California, Berkeley

Six Tenure-Track Assistant Professor Faculty Positions

As part of continuing efforts to expand a dynamic program in modern biology at Berkeley, we seek six tenure-track appointments in the Departments of Molecular and Cell Biology, Integrative Biology and Nutritional Sciences. The appointees are expected to join the faculty by July 1, 1996.

Ph.D. and/or M.D. scientists should have demonstrated excellence, originality, and productivity in research, as well as a strong interest in undergraduate and graduate teaching.

Multiple faculty search committees have been formed and applications should be directed to the Chair of the appropriate committee (s) at the addresses listed below. Applications should include a curriculum vitae, bibliography, a brief description of research accomplishments; a two-page statement of research objectives and teaching interest, reprints of the three most significant publications, and names of three referees (do not submit letters at this time). Candidates applying to multiple positions must send a separate and complete application to each desired search committee. Applications must be received by the closing dates listed below. The University of California is an Affirmative Action/Equal Opportunity employer. We especially invite women and under-represented minorities to apply.

<p style="text-align: center;">Biochemistry and Molecular Biology</p> <p>Research emphasis in the biochemistry, genetics or molecular biology of microorganisms (especially bacteria and viruses) including, but not limited to, molecular mechanisms of pathogenesis, morphogenesis and metabolism, and macromolecular structure and function.</p> <p>Dept. of Molecular & Cell Biology Chair, Biochemistry & Molecular Biology Search University of California 401 Barker Hall #3202 Berkeley, CA 94720-3202 Closing date: November 15, 1995</p>	<p style="text-align: center;">Cell Biology</p> <p>Research emphasis in cell-cell interactions including signaling, molecular endocrinology, receptor biology, cell junctions, cell-ECM interactions, cell polarity and tissue differentiation, and tumor biology.</p> <p>Dept. of Molecular & Cell Biology Chair, Cell Biology Search University of California 142 LSA #3200 Berkeley, CA 94720-3200 Closing date: November 15, 1995</p>
<p style="text-align: center;">Immunology</p> <p>Research emphasis in molecular or cellular immunology including, but not limited to, B cell development, gene rearrangement, signal transduction in lymphocytes, cell-cell communication and antigen processing.</p> <p>Dept. of Molecular & Cell Biology Chair, Immunology Search University of California 142 LSA #3200 Berkeley, CA 94720-3200 Closing date: November 15, 1995</p>	<p style="text-align: center;">Neurobiology</p> <p>Research emphasis in one of several broad areas of neurobiology, including synaptic plasticity and memory mechanisms; neural development; cell-cell signaling and communications; and dynamic properties of neural circuits, networks and systems.</p> <p>Dept. of Molecular & Cell Biology Chair, Neurobiology Search University of California 142 LSA #3200 Berkeley, CA 94720-3200 Closing date: November 30, 1995</p>
<p style="text-align: center;">Nutritional Sciences</p> <p>Research interests including, but not limited to, mechanisms underlying nutrient and/or dietary component effects on gene expression, DNA repair or cell growth/differentiation, and genetic influences on metabolism.</p> <p>Dept. of Nutritional Sciences Chair, Nutritional Biochemistry Search Committee University of California 119 Morgan Hall #3104 Berkeley, CA 94720-3104 Closing Date: November 15, 1995</p>	<p style="text-align: center;">Vertebrate Population Biologist</p> <p>Research interests should include genetic and evolutionary approaches to populations, life history, evolution, behavior, or physiological ecology with an emphasis on mammals and/or birds. This position is an 11 month joint appointment between the Department of Integrative Biology and the Museum of Vertebrate Zoology and includes curatorial functions.</p> <p>Dept. of Integrative Biology Chair, Search Committee University of California 3060 Valley Life Sciences Building #3140 Berkeley, CA 94720-3140 Closing date: November 1, 1995</p>



The Division of Life Sciences in the College of Letters and Science at UCLA announces a search for a distinguished scholar and educator to assume the position of Chair of the new Department of Molecular, Cell and Developmental Biology. We are looking for a mid-career or senior-level scientist with a distinguished record of productivity, a strong desire to maintain an active and productive research program, and a commitment to undergraduate education. The faculty presently consists of 17 members, with strengths in all of the areas indicated in the name of the department, in both plant and animal systems. The new Chair will be expected to define and participate in expansion of this faculty over the next several years, coordinating with existing strengths in the Molecular Biology Institute, the Energy Department's Laboratory of Structural Biology and Molecular Medicine, and the basic sciences departments of the School of Medicine. The Division already has in place a strong administrative structure to assist the Chair in day-to-day operation of the new department, freeing him or her to maintain a strong research program and attend to academic matters. Individuals interested in this position should send their curriculum vita and the names of three potential references to: Chair, MCDB Search Committee, 2203 Life Sciences Building, University of California, Los Angeles, CA 90095-1606.

The University of California, Los Angeles, is an Affirmative Action/Equal Opportunity Employer. Women, minorities, and persons with disabilities are encouraged to apply.

LOUISE BROWN CHAIR IN NEUROSCIENCE

Division of Neurological Sciences
Department of Psychiatry
The University of British Columbia

The University of British Columbia invites applications for an endowed chair in Neuroscience in the Division of Neurological Sciences, Department of Psychiatry. The department is seeking to recruit an individual with an outstanding record of achievement in Neuroscience research. While candidates from all areas of Neuroscience are invited to apply, we are particularly interested in recruiting an individual with expertise in the cellular or molecular bases of neurodegenerative disorders and whose research complements that of current members. Candidates must hold a Ph.D. and/or an M.D. degree and show clear evidence of a capacity for independent, original research. The Division of Neurological Sciences offers excellent research facilities. This is a full-time tenure track position which is subject to final budgetary approval. Salary and rank will be commensurate with qualifications and experience.

Anticipated start date is **July 1, 1996**. Applicants should send curriculum vitae, list of publications, a statement of research interests, and the names and addresses of three referees **by October 1, 1995**. UBC welcomes all qualified applicants, especially women, aboriginal people, visible minorities and persons with disabilities. In accordance with Canadian immigration requirements, priority will be given to Canadian citizens and permanent residents.



Dr. W. J. Livesley, Head
Department of Psychiatry
University of British Columbia
2255 Wesbrook Mall
Vancouver, B.C. CANADA V6T 2A1

BioGenex, a world leader in medical diagnostics and DNA synthesis products, was recently voted one of the fastest growing companies in the San Francisco Bay Area. We currently have opportunities for:

• Scientists

The successful candidates will possess a Ph.D. or equivalent in immunology, microbiology or biochemistry, 2-3 years of laboratory post-doctoral experience in monoclonal antibody development, recombinant protein expression, protein purification, molecular cloning, molecular probe design or protein/enzyme chemistry is required. Experience in immunohistochemistry or histopathology a plus.

• Scientist

The successful candidate will possess a Ph.D. or equivalent in biochemistry or related area, strong knowledge of molecular biology and biochemistry as well as immunology and/or protein chemistry. This position requires 2-3 years post-doctoral experience and experience in nucleic acid assay development, design, synthesis and use of oligonucleotide probes. Industry experience in DNA probe-based diagnostic tests a strong plus.

Other position openings include:

• Technical Support Manager

The successful candidate will possess a Life Science degree as well as an advanced degree in Cell Biology (PhD preferred). This position requires exceptional interpersonal skills and the ability to work with product development teams, customers and technical representatives. Industry experience highly desirable.

• Marketing manager

The successful candidate will possess a Life Science degree (Advanced degree preferred) and demonstrated experience in new product marketing within the clinical and/or life science research marketplace. Industry experience required.

We seek highly motivated, results-oriented individuals for this small, team-oriented environment. BioGenex offers a competitive salary, stock option plan, 401K, and excellent benefits. Send, fax or E-mail resume to:

BioGenex

4500 Norris Canyon Road
San Ramon, CA 94583

Fax 510-275-0580; Email: biogenex@ix.netcom.com

DowElanco, a leading company in the development of innovative products for crop production, has two immediate openings at our new, state-of-the-art research center in Indianapolis, IN. Both positions will help support DowElanco's Discovery Research efforts.

PROTEIN BIOCHEMIST... As part of an interdisciplinary team in the Biotechnology and Plant Genetics Department, this individual will be responsible for the isolation and characterization of proteins from diverse sources for use in programs focused on the control of insect pests by transgenic plants and microbial products. The successful candidate will have an MS degree in Biochemistry, Chemistry, or Biology with 2-3 years of experience in protein biochemistry and enzymology or a BS with more than five years of directly relevant experience. Relevant skills include experience with purification of proteins from diverse sources, enzyme assay development, and enzyme kinetic analysis. An understanding of plant physiology is desirable. Excellent communication skills and a high level of self-motivation are essential. **AD CODE DBB-3.**

Ph.D. ENZYMOLOGIST... The successful individual will join an interdisciplinary team of biochemists, molecular biologists, and organic and computational chemists working in the Weed Management Department to identify and exploit molecular targets for weed control. This person will be responsible for isolating and characterizing target enzymes from plant and recombinant sources, and will use knowledge of enzyme-ligand interactions to actively contribute to the design and optimization of herbicidal inhibitors. The successful applicant will have a Ph.D. in biochemistry, a firm background in organic and/or physical chemistry, and hands-on experience in enzyme purification and characterization, assay design, and enzyme-ligand interactions. Post-doctoral or industrial research experience will be advantageous, as will familiarity with up-to-date tools of molecular biology. Outstanding problem-solving and communication skills with a high degree of self-motivation are essential. **AD CODE DWMB1-1.**

To learn how to advance your career while enhancing the Agricultural environment, send a resume, INDICATING AD CODE, by October 1, 1995 to: **Kathy McIntyre, DowElanco, 9330 Zionsville Road, Indianapolis, IN 46268-1054.** An Equal Opportunity Employer.



DowElanco

Clinical Research Associates/Managers

Southern California

If you would like to have a hand in some of today's most innovative healthcare solutions, join the team at Allergan Pharmaceuticals. As a global leader in the development, manufacture and marketing of specialty therapeutic products for eye and skin care as well as neuromuscular disorders, we can offer you the chance to make a difference in the lives of others.

Our goal is to enhance the quality of life for people around the world while expanding our market presence. To achieve that goal, we have Clinical Research openings ranging from Associates to Managers in the areas of: glaucoma, cataracts, neuromuscular disorders, contact lens care and receptor-selective retinoids.

Our Clinical Research positions require a B.S./M.S./Ph.D., 2+ years related experience depending on grade level, solid background in clinical research, substantial experience in coordinating/monitoring clinical trials and familiarity with writing study protocols and on-site monitoring. Must have thorough knowledge of clinical research methodology and related FDA regulations on investigational drugs. Must be computer literate and willing to travel.

We reward our employees with a competitive salary, an excellent benefits package and a great working environment. Please send resume to: **Allergan, Human Resources Dept., Attn: JS/S,** 2525 Dupont Dr., T2-1B, Irvine, CA 92715. EOE.

Advancing the Science of Health Care.



Research

PHARMACOKINETICS DRUG METABOLISM

Agouron Pharmaceuticals, Inc., a pioneer and leader in the field of structure-based drug design is seeking a Ph.D. level scientist in Pharmacokinetics or Pharmacology with 2 years of industrial/postdoctoral experience to join its pharmacokinetics and drug metabolism group.

Responsibilities include the design, conduct, analysis and interpretation of preclinical pharmacokinetic, pharmacodynamic and drug metabolism studies. Candidates should have prior experience in developing bioanalytical methods, pharmacokinetic-pharmacodynamic data analysis and report writing for IND/NDA submissions. This position involves interaction with a multi-disciplinary team of scientists where pharmacokinetics and drug metabolism input is essential for the discovery and development of new drugs.

Located in the intellectually stimulating environment of La Jolla, California, Agouron offers an excellent compensation and benefits package. Please send resume to: **Human Resources, Dept. PK,** Agouron Pharmaceuticals, Inc., 10350 N. Torrey Pines Rd., La Jolla, CA 92037. EOE.



Agouron
Pharmaceuticals, Inc.

NEW ENGLAND CAREER OPPORTUNITIES

UNIVERSITY OF CONNECTICUT

Professor & Head Department of Physiology and Neurobiology

The University of Connecticut seeks an outstanding **NEUROSCIENTIST** to fill the position of **PROFESSOR AND HEAD** of the Department of Physiology and Neurobiology. Candidates should have and maintain a vigorous research program in any area of neuroscience. Applicants should also have demonstrated abilities in education and administration.

The successful candidate will lead an active, well funded department committed to excellence in both research and teaching. The current research interests of the faculty include neurobiology, endocrinology, muscle physiology and epithelial membrane transport. The new head will be expected to encourage the growth and development of these research areas and provide leadership and support for the department's undergraduate and graduate teaching mission.

The position includes an attractive package of laboratory space, in a newly constructed building with modern facilities, and setup support. Salary is negotiable. We anticipate this position to begin September of 1996. Applicants should send a letter of interest, curriculum vita and names of three references to: **Associate Dean Timothy Killeen, College of Liberal Arts and Sciences, U-98, University of Connecticut, Storrs, CT 06269-2098.** Contact the Department for a complete job description at (203) 486-3290. The University of Connecticut especially encourages minorities, women and people with disabilities to apply for this position. (Search #5A304)



NEW ENGLAND BIOLABS

New England Biolabs, Inc., a pioneer and world leader in the production of restriction enzymes and other related products for the recombinant DNA field, located 20 miles north of Boston on the ocean, is looking for qualified applicants.

Molecular Biologist: Candidates should have at least two years experience in molecular biology, particularly cloning, protein purification and enzymology.

The scientists at New England Biolabs have the freedom to do basic research, manage their own time and experiments, and publish immediately. Compensation and benefits have few peers.

Candidates should submit curriculum vitae with three references to:

New England Biolabs, Inc.
Human Resources
32 Tozer Road
Beverly, MA 01915-5510
An Equal Opportunity Employer



NEW ENGLAND

STAFF SCIENTIST

Affymetrix is developing innovative DNA probe array-based systems for the research instrumentation, clinical diagnostic and emerging genetic analysis markets.

The successful candidate will have responsibility for developing new applications for DNA probe arrays in areas such as medical diagnostics and cancer cell biology. We are seeking a scientist to direct development of methods of DNA sequencing using high-density oligonucleotide probe arrays, including methods for sample preparation, probe design, optimized hybridization and data analysis. The position requires a Ph.D. in biophysics, biochemistry, genetics, molecular biology or related field, with a minimum of two years post-doctoral experience. Prior supervisory experience in diagnostics product development desired, and experience with oncogenes, tumor suppressor and/or mutator genes preferred.

We provide an excellent compensation package including a stock option program. Please send your resume to: **Affymetrix, Human Resources Department-Job Code TR, 3380 Central Expressway, Santa Clara, CA 95051.** EOE.



Research Scientist Bacterial Protein Expression

Wyeth-Ayerst Research, a division of Fortune 100 American Home Products Corporation, has an opportunity in our Core Biotechnology Division based in Radnor, Pennsylvania. We seek a Research Scientist to work within a multi-disciplinary group which emphasizes teamwork and communication.

This position requires a Ph.D. in Biotechnology or Biochemistry for scale-up (up to 50 liters) of protein expression in bacteria and for purification of proteins from these systems. The successful candidate will have at least two years of hands-on experience in the use of fermentors for propagation of bacteria and/or yeast, and will be responsible for optimizing expression of recombinant proteins produced by these microorganisms. Expertise in a broad range of protein purification techniques is essential. Additional skills in protein refolding, scale-up of yeast mammalian or insect cell cultures, and other biotechnological techniques would be useful.

Wyeth-Ayerst offers an excellent compensation and benefits package in a highly professional environment. Please respond by sending your resume with salary history/requirements to: **WYETH-AYERST RESEARCH, Human Resources, Position R1374, P.O. Box 8299, Philadelphia, PA 19101-0082.** Or you may fax your resume directly into our centralized Research resume database at (610) 989-4854. Equal Opportunity Employer, M/F/D/V responses encouraged.



Leading The Way for a Healthier World

NEW ENGLAND CAREER OPPORTUNITIES

Mitotix is a biotechnology company developing cell-cycle based biotherapeutics for cancer, cardiovascular and infectious diseases.

SCIENTIST, ENZYMOLOGIST

This position requires a Ph.D. level scientist with hands-on expertise in enzyme and inhibition kinetics. Industrial experience and knowledge of structure-activity relationships (QSAR) and other computation methods for drug-design would be desirable. **Code: EN95**

POST-DOCTORAL FELLOWS, CELLULAR AND MOLECULAR BIOLOGY

We are seeking post-doctoral individuals with a strong record of achievement in either the academic or industrial environment. Two-year fellowships will be awarded with the possibility of a third year, based on performance. **Code: PD95**

Mitotix offers competitive salaries, benefits and a chance to work in an exciting scientific environment. Please send resume, indicating job code, and names and addresses of three references to: **Human Resources, Mitotix, Inc., One Kendall Sq. Bldg. 600, Cambridge, MA 02139.** No telephone calls, please.



Mitotix
INCORPORATED

Postdoctoral Fellowship in Molecular Biology Research Without Boundaries

That's what you'll find at Unilever Research. As one of the world's largest consumer products companies, we offer hundreds of brands and thousands of products that are sold in more than 100 countries. And the driving force behind them all is scientific research.

Since we introduced our first product in 1902, Unilever scientists have developed a constant flow of highly innovative products and technologies. Our international commitment to scientific breakthroughs in skin research has resulted in the development of our world-class Skin Care Research Center in Edgewater, NJ, where a Postdoctoral position is now available for a highly-motivated and talented scientist with a strong interest in Skin Biology.

As part of our team, you will participate in a state-of-the-art research program using transgenic technology to study the role of cytokines and growth factors in the skin. We require a Ph.D. in molecular genetics or related science with up to

a year of postdoctoral experience. Extensive training in Molecular Biology and mammalian cell culture as well as a background creating knock-out mammalian models are also required.

In return for your expertise, we offer an excellent salary, a comprehensive flexible benefits package, retirement and savings plans, tuition reimbursement, and a progressive work environment that's conducive to challenge. Funding for this position is expected to last two years. For consideration, send your resume to: **Ms. Jane Goodwin, Human Resources, Unilever Research U.S., 45 River Road, Edgewater, NJ 07020.** Equal Opportunity Employer.



Unilever
Research U.S.

**LEADING INNOVATION THROUGH
WORLD CLASS RESEARCH**



PHARMACOPEIA

Through combinatorial chemical technology and high-throughput biological screens, we're leading the drug discovery revolution into the 21st century.

PHARMACOPEIA has exciting research opportunities in our expanding company:

BIOLOGISTS

Seeking PhD level molecular Biologists, Biochemists, Enzymologists, and Cell Biologists. Candidates should have at least 3 years of post-doctoral experience and a strong commitment to independent research. Experience in implementation of high-throughput screens, cloning and expression of biochemically active proteins, or the functional analysis of primary cells and cell lines desired.

CHEMISTS

Seeking talented PhD and MS/BS Synthetic Organic and Medicinal Chemists at all experience levels. Must have a strong background in organic synthesis, be interested in combinatorial chemistry and have a deep commitment to research.

ENGINEERS

Seeking MS/BS level in Mechanical, Chemical, Systems, and Software Engineering as well as PhD level Scientists and Bioengineers. Must have biotechnology or related experience. Projects will include feasibility, prototypes and manufacturing designs in fluidics, microfabrication, optics, and image processing.

PHARMACOPEIA is a dynamic biopharmaceutical company that applies novel encoding technology to chemical combinatorial synthesis enabling production of large and diverse libraries of low molecular weight chemical compounds for use in drug screening programs. Our research staff is also advancing high-throughput primary screening methods and sophisticated functional screens specifically designed for these unique chemical libraries.

PHARMACOPEIA is uniquely positioned to become a leading drug discovery company pioneering this new paradigm for pharmaceutical lead identification and optimization.

PHARMACOPEIA is located in Princeton, New Jersey, an area known for its excellent educational and cultural environment. We offer a highly competitive salary and benefits package including a stock option plan. Qualified individuals should send a cover letter and resume to:

PHARMACOPEIA, INC.

Attn: Human Resources
101 College Road East
Princeton, NJ 08540
FAX: (609) 452-2434

Equal Opportunity Employer



CABM SYMPOSIUM

October 26-27, 1995 Piscataway, NJ

Macromolecular Complexes in Biology and Medicine

W. Baumeister	B. Brodsky
M. Driscoll	A. Goldberg
K. Holmes	A. Horwich
R. Kelley	R. Klevit
P. Lansbury	G. Montelione
B. Nilsson	R. Vale
D. Winkelmann	

Sponsored by the Center for Advanced Biotechnology and Medicine

Registration: Linda Van Derveer, CABM Symposium, 679 Hoes Lane, Piscataway, New Jersey 08854; 908-235-5309. \$90 Fee; No charge for Students or Post-Docs (with certification); \$10 Box Lunch for October 26. (**Register by October 18**)



DEAN, FACULTY OF MEDICINE

The University of British Columbia

The University of British Columbia invites applications for the position of Dean of the Faculty of Medicine. The preferred starting date is **July 1, 1996**.

The successful candidate will be a recognized scholar with proven administrative/financial ability and will have demonstrated a dedication to excellence in teaching and research. He or she will provide a dynamic leadership.

The Faculty of Medicine comprises five basic science departments, twelve clinical departments and two schools offering professional and graduate programs as well as a fully accredited spectrum of Residency Training Programs. Its major activities are conducted at affiliated Teaching Hospitals and at the Point Grey Campus of the University. The appointment is for a term of six years and is renewable.

In accordance with Canadian immigration requirements priority will be given to Canadian citizens and permanent residents of Canada. The University of British Columbia welcomes all qualified applicants, especially women, aboriginal people, visible minorities and persons with disabilities.

Applications should be sent by **October 31, 1995** to:



Dr. Daniel R. Birch
Academic Vice President and Provost
University of British Columbia
6328 Memorial Road
Vancouver, B.C. CANADA V6T 1Z2

Roche

Drug Metabolism

ASSOCIATE SCIENTISTS

Hoffmann-La Roche, a world leader in the pharmaceutical industry, is a research-intensive company with a firm commitment to developing the highest quality products. Opportunities are currently available for Associate Scientists with an interest in Drug Metabolism to join us in our Nutley, New Jersey campus.

ANIMAL PHARMACOKINETICS/ PHARMACODYNAMICS

Responsibilities include utilizing animal surgical and sampling procedures to obtain both preclinical pharmacokinetic and pharmacokinetic/pharmacodynamic information to support both preclinical research and development decisions. To qualify, you will need a BS/MS in Pharmaceutical Sciences or a related field with 3+ years experience with animal surgery and bioanalytical techniques. Expertise in the use of computers for data acquisition, analysis and reporting is desired. The ability to plan, conduct and report studies independently and efficiently with minimal supervision is a must, as is the ability to work in a team environment. (Respond to Dept. LH235EC)

BIOPHARMACEUTICAL ANALYSIS

Responsibilities include assay development and sample analysis for biopharmaceuticals and pharmacodynamic markers using bioassay ELISA and binding techniques for proteins. To qualify, you should possess a BS/MS in Biology, Chemistry or related discipline with 3+ years relevant experience. Expertise in the use of computers for data acquisition and analysis, cell culture techniques, handling potentially infectious specimens and GLPs is essential. Experience with animal surgical and/or sampling techniques would be a plus. (Respond to Dept. LH245RN)

We offer competitive salaries, a progressive benefits package and opportunities to have an impact in the pharmaceutical industry. For consideration, please send your resume with position of interest and present salary, indicating appropriate Dept. code in the address, to: **Ms. Lynn Harac, Staffing Dept.**, Hoffmann-La Roche Inc., Nutley, New Jersey 07110-1199. PRINCIPALS ONLY. No phone calls, please. We are an equal opportunity employer.

Roche**Hoffmann-La Roche**

A Member of the Roche Group

PROGRAM IN STRUCTURAL BIOLOGY CHAIRPERSON

St. Jude Children's Research Hospital, a premier center for biomedical investigation, is accepting applications for faculty positions in a new program in structural biology. A structural biology program is being established that will include X-ray crystallography and high resolution nuclear magnetic resonance together with general research laboratories and computing facilities. The program will occupy approximately 7,000 square feet on adjacent floors of the new Danny Thomas Research Facility. Our center has well-established research programs in biochemistry, genetics, gene therapy, hematology-oncology, immunology, infectious diseases, molecular pharmacology, pharmaceutical sciences, tumor cell biology, virology and molecular biology, experimental oncology, bone marrow transplantation and experimental hematology. Applicants for this position should have a strong record of achievement in structural biology relating structure to function. Founded by Danny Thomas, the Hospital continues to receive substantial support through the fund raising efforts of the American Lebanese Syrian Associated Charities.

Applicants should submit a curriculum vitae and the names and addresses of four references to:



Robert G. Webster, Ph.D.
Chairman, Department of
Virology and Molecular Biology
St. Jude Children's Research Hospital
332 N. Lauderdale • Memphis, TN 38105
Telephone: 901-495-3400
Fax: 901-523-2622

St. Jude Children's Research Hospital is an
equal opportunity employer/affirmative action employer.

**McGill**

Dean of the Faculty of Agricultural and Environmental Sciences

McGill University invites nominations and applications for the position of Dean of the Faculty of Agricultural and Environmental Sciences. The Dean is responsible to the Vice-Principal (Academic) for the supervision and administration of the academic programs, budgets, and all activities of the Faculty. The appointment will be for a renewable five-year term commencing as soon as possible following selection. Candidates should have appropriate scholarly and administrative experience; facility in French, or a willingness to learn, will be an asset.

The Faculty consists of the Departments of Agricultural Economics, Agricultural Engineering, Animal Science, Food Science and Agricultural Chemistry, Natural Resource Sciences, Plant Science, the School of Dietetics and Human Nutrition, and the Institute of Parasitology. It offers programs at the B.Sc., M.Sc. and Ph.D. level and has active international development projects. Located on the western tip of the Montreal island on the Macdonald Campus in Ste-Anne-de-Bellevue, Quebec, the Faculty boasts a modern experimental farm complex and a Plant Research Facility with a soon to be completed state-of-the-art greenhouse. Also located on campus is the Lyman Entomological Museum and Research Laboratory, the largest University collection of insects in Canada, the Morgan Arboretum, 245 hectares of natural woodlands and plantations, as well as the St. Lawrence Valley Ecomuseum, a wildlife observation centre.

Nominations or applications, accompanied by a curriculum vitae and the names and addresses of three referees, should be submitted in confidence to **Bernard J. Shapiro, Principal and Vice-Chancellor, McGill University, James Administration Building, 845 Sherbrooke Street West, Montreal, Quebec, H3A 2T5** no later than October 30, 1995.

In accordance with Canadian immigration requirements, this advertisement is directed in the first instance to Canadian citizens and permanent residents.

McGill University is committed to equity in employment.

THE AGA KHAN UNIVERSITY
Faculty of Health Sciences
Medical College

The Aga Khan University was chartered in 1983, as Pakistan's first private University, committed to high international standards of community oriented medical and nursing education, research and high quality of health services. The University is in search of outstanding candidates to fill the following positions:

PROFESSOR AND CHAIR, DEPARTMENT OF MICROBIOLOGY

The Department of Microbiology consists of 2 professors and 4 junior staff, additional faculty are present in the clinical microbiology laboratory of the department of Pathology and the departments of Paediatrics and Medicine. The University is building a modern research building for the purpose of infectious disease, immunology and molecular biology to be completed in 1998. Special research interest have related to virology, bacterial disease including leprosy, tuberculosis and intestinal parasites.

PROFESSOR AND CHAIR, DEPARTMENT OF PHARMACOLOGY/PHYSIOLOGY

The Department of Pharmacology/Physiology has recently been merged and consists of 10 faculty members including 3 professors. Research is currently carried out in various disciplines of physiology and pharmacology particularly, in neuroscience, cardiopulmonary and signal transduction.

The candidate must have a Ph.D. degree, preferably with a medical background, or an equivalent, with outstanding clinical and teaching experience and will be required to provide dynamic academic leadership in the administration and development of the department. He/she should be able to carry on a research program and should be able to fulfill the criteria of a Full Professorship. Compensation and benefits package are competitive and negotiable. Please send your detailed resume, bibliography and names of at least three referees familiar with your work experience to the **Dean, Faculty of Health Sciences, Aga Khan University, P.O. Box 3500, Stadium Road, Karachi 74800. Pakistan.**



Group leader position at the Biotechnology Centre of Oslo

The Biotechnology Centre of Oslo (BiO) is an institution under the University of Oslo devoted to basic research, teaching and promotion of biotechnology. BiO is located in The Oslo Research Park adjacent to the University campus. BiO normally houses five research groups and core facilities for protein and DNA sequencing as well as oligonucleotide and peptide synthesis, and the Norwegian EMBnet node for bioinformatics. A total population of 80-95 consists of about 30 M.Sc. students, 20-30 Ph.D. students, 5-10 postdoctoral fellows, 5 group leaders and about 10 technical staff.

The University of Oslo now invites applications for a group leader position at BiO for an initial period of 5 years. The salary is in the professorial scale and an adjunct professorship is available pending evaluation by a University committee. Along with the group leader position are available salaries for a post-doctoral fellow, a Ph.D. student and a technician and an allowance for consumables and minor equipment.

The successful candidate will be about 35-40 years old and have an extensive postgraduate research experience in molecular biology/molecular genetics. A preference will be given to candidates with experience/interest in protein chemistry and whose project proposal involves such aspects. Quality of research is the most important concern. An international committee (The Scientific Advisory Group of BiO) will assist in the selection process.

Applications should be submitted in two copies, including a complete curriculum vitae, a list of publications and a project proposal, to Professor Hans Prydz, The Biotechnology Centre of Oslo, Gaustadalléen 21, 0371 Oslo, Norway, before October 16, 1995. Further information is available from Professor Prydz (e-mail: hans.prydz@biotek.uio.no., fax: 47 22694130, phone: 47 22958754)

**A pharmaceutical research centre
based in the Paris area seeks an**

Assistant Director in Diabetes and metabolic diseases research

Motivated by the discovery of new drugs for the treatment of diabetes and its complications, you will be implicated in :

- the direction of this research group
- the conception and realization of research projects and the pharmacological development of new drugs in direct relationship with our medicinal chemists.

You will be 35-40 years old minimum, MD, pharmacist or Ph.D., with post-doctoral experience.

you will have several years of industrial research in the area and a sound knowledge of metabolic biochemistry (and/or neuroendocrinology) and you will have proved your abilities in team leadership.

If you are interested by this proposition, please send your hand written letter, CV, photo and salary requirements to **PUBLIVAL/9010**
 27 Route des Gardes - 92190 MEUDON (FRANCE).

The Austrian Research Centre Seibersdorf with about 500 employees is Austria's largest non-university, commercial scientific research organisation and is based approx. 30 km south east of Vienna. Its main function is the transfer of technology and cooperation between the fields of science, industry and management. The Research Centre achieves about 55% of its income through interdisciplinary commissioned research and development work and through expertise in the following five sectors:

- Instrumentation and Information Technology,
- Process and Environmental Technologies,
- Engineering,
- Life Sciences,
- Systems Research Technology-Economy-Environment

The Management is made up of one Manager for Science and Technology and one for Business and Marketing. The appointment of a new

Manager for Science and Technology

will be made effective April 1st, 1996.

The position offered requires a natural scientist or industrial scientist, if possible qualified as a university lecturer, with extensive practical experience in managing a large industrial science team. Good theoretical knowledge, international experience and management expertise are essential. The applicant should be distinguished by his/her result-oriented attitude and approach, be willing to apply himself/herself and have an excellent command of foreign languages.

In the application the applicant should state the reasons why he/she feels suited to taking up the position offered. Applications are to be submitted together with the usual accompanying documents by September 30th, 1995 to our chairman of the Supervisory Board, Dipl. Ing. Albert Hochleitner, General Manager, Siemensstraße 88-92, A-1211 Vienna.

**Österreichisches Forschungszentrum Seibersdorf
Gesellschaft m.b.H.**



SEIBERSDORF



WORLD HEALTH ORGANIZATION (WHO) International Agency for Research on Cancer (IARC)

IARC has an opening in its headquarters in Lyons, France, for the post of

Chief of the Unit of Carcinogen Identification and Evaluation.

The main activity of this Unit is the production of the publication series *IARC Monographs on the Identification and Evaluation of Carcinogenic Risks to Humans*. The Monographs programme has provided reviews and evaluations of the evidence of carcinogenicity of about 800 chemicals mixtures, exposure circumstances and biological agents. Three volumes of Monographs are published annually; each volume includes documents prepared by a Working Group of scientific experts.

Applicants should have an MD, PhD or equivalent in a field relevant to the Programme, a strong theoretical background and significant experience in one or preferably several of the areas of cancer epidemiology, cancer bioassays, toxicology and mechanisms of carcinogenesis, a solid understanding of all these areas and of their integration in the processes of cancer hazard identification and risks assessment. Good communication skills, ability to supervise staff and to coordinate working group meetings are essential. Training in epidemiology, biostatistics, scientific publishing and experience in a national or international programme on carcinogenic hazards would be desirable.

The incumbent is expected to plan, lead and coordinate the execution of the Unit's programmes which includes selecting topics for monographs, providing authoritative advice to the Director, IARC, on the selection and assignments of experts, serving as secretary to the monographs meetings and being responsible for the production of high-quality monographs. He/she is also expected to stimulate development and to initiate intramural and extramural research activities.

The initial appointment will be for two years, the first being probationary.

The annual salary level is US\$ 53 611 tax free at single rate and US\$ 57 806 for a staff member with dependents plus a cost of living element which is currently 61% of the above figures.

Those interested should write, enclosing a curriculum vitae to:

**Personnel Office
IARC
150, Cours Albert Thomas
F-69372 Lyons Cédex 08 France
Fax no: (33) 72 73 83 35**

Applications from women are encouraged.

Roche

The Structural Analysis unit of our Preclinical Pharma Research in Basel has an opening for a

Small-Molecule X-ray Crystallographer

to run the laboratory for small-molecule crystal structure analysis and supervise powder diffraction analysis.

The primary responsibility of the successful candidate will be to guarantee a professional and efficient service in small-molecule structure determination and to take an active role in the chemical and structural interpretation of the results in close collaboration with molecular modelling specialists and medicinal chemists.

The laboratory is equipped with 2 modern 4-circle diffractometers, a rotating anode generator, crystal cooling systems and excellent computational facilities.

Applicants should have:

- A PhD in chemistry or physics
- Several years experience in x-ray crystallographic structure analysis of small molecules and the ability to carry out such structure determinations independently
- Ability to maintain hard- and software at state-of-the art level
- Interest in the interpretation and analysis of molecular structure and molecular interactions
- Good communications skills in a highly interdisciplinary research environment

If you are interested in this challenging position, please send your handwritten letter of application, references, publication list and curriculum vitae to Mrs. M. Waespe of our Personnel Department, quoting reference Science 3/95/ Wä.

**F. Hoffmann-La Roche Ltd.,
P.O. Box, Ch-4002 Basel**

For over 100 years, the name Mallinckrodt has stood for excellence. Today, Mallinckrodt Veterinary is among the top five animal health and nutrition companies in the world. And we're just getting started. Right now, we have aggressive plans that will take us to the top in the next century. And we're looking for professionals like you to join us in the following position.

PROJECT MANAGER

You will establish and manage multi-discipline project teams, prepare and implement development plans, allocate resources, and monitor progress to complete development plans on time and within budget. You will also monitor technical developments in the marketplace and continually evaluate the merits of current and potential projects.

We require a DVM or Ph.D in a biological science, or an MS in a biological science with an MPM or MBA. We also require 3-5 years of experience managing multi-disciplinary teams, as well as 7+ years in the Animal Health industry. A proven record of success in managing biological projects from development to launch is a must. Proficiency with Microsoft Project (V4), Excel and Word is essential, as are strong communication and presentation skills.

If you want to be part of a company that's built on service to the world and offers a high career growth potential, we want to hear from you. We offer an excellent compensation and benefits package, including medical and health benefits, 401(K) and stock options. For consideration, please send a resume with cover letter and salary history to: **Mallinckrodt Veterinary, Attn: Human Resources Dept. PM, 421 E. Hawley St., Mundelein, IL 60060.** Equal Opportunity Employer.

**MALLINCKRODT
VETERINARY**

ETH ZÜRICH

**ETH Zurich
Dept. of Environmental Sciences
Experimental Ecology**

(Full) Assistant Position

Applications are invited for this post (comparable to assistant professor). The successful candidate is expected to develop an independent, strong research programme in field of expertise. The group is well funded and has modern facilities, including a molecular lab. Participation in teaching and general duties is expected. Post initially for two years; renewable for up to six years; begin April 96, negotiable. Competitive salary commensurate with experience. General areas of interest are: Evolutionary, behavioural, population ecology, host-parasite (pathogen) interactions, coevolution, epidemiology, population genetics, evolution. Post-doctoral experience is an advantage. Applications, including names of referees to: Prof. P. Schmid-Hempel, ETH Zurich, Experimental Ecology, ETH-Zentrum NW, CH-8092 Zurich Switzerland. Fax +41-1-632 1271; email: psh@wawona.vmsmail.ethz.ch-also for further information. Evaluation of candidacies will start 25 October 1995.

INFLAMMATION BIOSCIENTIST

ZENECA Pharmaceuticals, dedicated to the challenge of discovering and developing important new therapeutic agents, has a key position available in the Biomedical Research Department at our suburban Wilmington, DE location.

The ideal candidate should have at least two years of post-doctoral experience and a track record in immunology demonstrating innovative approaches to scientific problems. The successful candidate will work in the area of *in vivo* inflammation and should be able to apply molecular techniques with an interest in drug discovery. Excellent communication skills and effective supervisory skills are required.

We offer an excellent compensation and flexible benefits program, and opportunities for growth with one of the world's leading pharmaceutical research organizations.

For consideration, please send resume/c.v. to:

Human Resources, Code #95-4015,
Zeneca Pharmaceuticals Group, 1800 Concord Pike,
P.O. Box 15437, Wilmington, DE 19850-5437.

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CALIFORNIA CAREER OPPORTUNITIES

Faculty Position in Epidemiology
School of Public Health
University of California, Berkeley

TITLE

Assistant Professor of Epidemiology

DESCRIPTION

The School of Public Health seeks to hire a tenure-track faculty member with experience and documented expertise in conducting epidemiologic investigations and teaching in epidemiology, particularly epidemiologic methods. The candidate is expected to develop and maintain an active and ongoing research program, supervise doctoral-level students, participate in the teaching of epidemiologic methods, and teach a specialty course in the area of the individual's expertise.

QUALIFICATIONS

- Academic preparation: a doctoral, medical or equivalent degree
- At least two years of post-doctoral research and/or professional experience in epidemiology
- Evidence of original scholarly research in epidemiology
- Experience teaching epidemiologic methods at the graduate level

DESCRIPTION OF DUTIES

The individual holding this position will be expected to perform the following:

Carry out an active research program in an area of epidemiology that involves sponsoring of doctoral dissertation research, scholarly achievements, and participation in professional organizations

Participate in the teaching of courses and seminars required of masters and doctoral students in epidemiology, including courses on epidemiologic methods

Offer an advanced level specialty course related to his/her area of expertise for masters and doctoral students

Assist in curriculum planning and student advising

Perform minor administrative duties such as service on committees

SALARY

Assistant Professor, 9 months; level of appointment and salary commensurate with qualifications, effective July 1, 1996, or soon thereafter.

AFFIRMATIVE ACTION

The University of California is an equal opportunity, affirmative action employer

TO APPLY

Send a letter with a statement of interest and qualifications, as well as a detailed curriculum vitae, and arrange to have at least three letters of reference sent directly to: Chair, Search Committee for Assistant Professor of Epidemiology, School of Public Health, Division of Public Health Biology and Epidemiology, 140 Warren Hall, Berkeley, California 94720-7360

DEADLINE FOR APPLYING IS NOVEMBER 3, 1995

THE SIXTH PRINCETON LIPOSOME CONFERENCE Cellular Signals, Clinical Trials & Gene Therapy

November 28-29, 1995

Scanticon Conference Center
Princeton, New Jersey

Co-Chairmen: Andrew S. Janoff, Ph.D. (The Liposome Co., Inc.)
Gerald Weissmann, M.D. (New York University)
Marc J. Ostro, Ph.D. (USB Securities)

SESSION 1: GENE THERAPY

Session Chairman: D. Papahadjopoulos, Ph.D. (UCSF)

C. Thomas Caskey, Ph.D. (Merck Res. Labs)
Phil Felgner, Ph.D. (Vical, Inc.)
Pieter Cullis, Ph.D. (Univ. of British Columbia)
Leaf Huang, Ph.D. (Univ. of Pittsburgh)
Inder Verma, Ph.D. (Salk Institute)

SESSION 2: CLINICAL TRIALS I

Session Chairman: Gregory Gregoriadis, Ph.D. (U. of London)

John Hiemenz, M.D. (H. Lee Moffitt Cancer Center)
David Denning, M.D. (N. Manchester Gen. Hosp.)
Gerald Eestermans, M.D. (NexStar Pharm.)
Evan Hersh, M.D. (Arizona Cancer Center.)
Jeffrey Freitag, M.D. (The Liposome Co., Inc.)

SESSION 3: LIPID SIGNALING & CELL ADHESION

Session Chairman: R. Nachman, M.D. (Cornell Univ. Med. College.)

Gerald Weissmann, M.D. (New York Univ.)
Michael Bevilacqua, M.D., Ph.D. (Amgen, Inc.)
James Willerson, M.D. (Univ. of Texas School of Med.)
Yusef Hannun, M.D. (Duke Univ. Medical Ctr.)
Andrew Janoff, Ph.D. (The Liposome Co., Inc.)

SESSION 4: CLINICAL TRIALS II

Session Chairman: Alan Sartorelli, Ph.D. (Yale Univ. School of Med.)

Alan Sartorelli, Ph.D. (Yale Univ. School of Med.)
David Gordon, M.D. (The Liposome Co., Inc.)
Franco Muggia, M.D. (Univ. of Southern California)
Parkesh Gill, M.D. (Univ. of Southern California)
John P. Longenecker, Ph.D. (DepoTech Corp.)
Christine A. White, M.D. (San Diego Reg. Cancer Ctr.)

THE SIXTH PRINCETON LIPOSOME CONFERENCE

November 28-29, 1995

Scanticon Conference Center, Princeton, New Jersey

REGISTRATION FORM

2-Day Conference (includes meals & conference fees) **Non Profit** ☐ \$500 **All Others** ☐ \$740

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TITLE _____ DEPARTMENT _____

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STREET _____

CITY _____ STATE _____ COUNTRY _____ ZIP _____

TELEPHONE _____ FAX _____

Posters: Scientists interested in presenting posters should submit a brief abstract (250 words or less) prior to October 1, 1995.

Payment: Registration fee must accompany this registration form in order for a place to be reserved in your name. Please make check payable to: The Liposome Conference, Inc.

Hotel Reservations: A limited number of rooms have been reserved at the Scanticon Conference Center. To guarantee a room, please call the Scanticon direct at (609) 452-7800. Additional hotels in the area are the Hyatt (609) 987-1234, Marriott (609) 452-7900, Novotel (609) 520-1200, and Holiday Inn (609) 452-2400. We recommend that you make reservations prior to October 1, 1995.

Return to: Lisa Sutton, c/o The Liposome Co., Inc., One Research Way, Princeton, NJ 08540. Telephone: (609) 452-7061, Fax: (609) 520-8250



BIOTECHNICAL / PHARMACEUTICAL JOB FAIRS

La Jolla, California
Embassy Suites Hotel
September 22-23, 1995

Cambridge, Massachusetts
M.I.T. Stratton Center
September 29-30, 1995

San Francisco, California
Crown Sterling Suite Hotel
October 27-28, 1995

Interviewing Companies to date—

- ◆ *Ares* ◆ *Gen-Probe* ◆ *Serono Laboratories* ◆ *Amgen*
- ◆ *Chiron* ◆ *Allergan* ◆ *Smith-Kline, Beecham* ◆ *Baxter Healthcare*
- ◆ *Hewlett-Packard* ◆ *Sugen* ◆ *BASF Bioresearch* ◆ *Nexium*
- ◆ *FDA—Center For Drug Evaluation & Research*
- ◆ *FDA—Center For Biologics Evaluation & Research*

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We currently have several vacancies for accomplished scientists, engineers and operators to support our efforts in the manufacture of protein therapeutics in our state-of-the-art, multi-product facility.

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- **Senior Scientist-Fermentation**
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BASF Bioresearch Corporation offers a complete benefits package, including 3 weeks' paid vacation; matching 401(K) plan, pension plan, tuition reimbursement, medical, dental and life insurance benefits; health and dependent care reimbursement accounts. To apply for the positions above, or to inquire about other upcoming opportunities in the area of Biopharmaceuticals Production. Please forward your resume indicating position of choice to: Human Resources Department, BASF Bioresearch Corporation, 100 Research Drive, Worcester, MA 01605. An Equal Opportunity Employer.

BASF

Molecular Biologist

Enzymologist

Microbiologist

Protein Chemist

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POSTDOCTORAL TRAINING POSITIONS NEUROBIOLOGY OF AGING

UNIVERSITY OF CALIFORNIA, IRVINE

The University of California, Irvine invites applications for postdoctoral research positions within the Institute for Brain Aging and Dementia to specialize in studies focusing on brain aging and Alzheimer's disease. Those with an interest in studying neurodegenerative disease in the aging brain are encouraged to apply. Projects include apoptosis, amyloid precursor protein processing, protease nexin 1/thrombin function in the brain, vascular amyloidosis and neurotrophic factors. Faculty participating in the program include Drs. Carl Cotman, Dennis Cunningham, Gary Lynch, and William Van Nostrand. Salaries commensurate with education and experience. Applicants must possess a Ph.D. (proof of final degree required) and must be U.S. citizens or permanent residents. Please submit current curriculum vitae; statement of research interests; and the names, addresses and phone numbers of three potential referees to: Carl W. Cotman, Ph.D., Institute for Brain Aging and Dementia, 1305 Biological Sciences II, University of California, Irvine, CA, 92717-4550. *UCI is an Equal Opportunity Employer committed to excellence through diversity.*

Discover A Unique Approach

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 fifteen years. We currently have positions available in DNA Sequencing and Molecular Structure and Design at our Southern California headquarters.

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Associate Scientist / Research Scientist

This individual will manage the EST sequencing group which is responsible for first pass and full length cDNA sequencing, RT-PCR assays, and the isolation of full length cDNA clones. Duties also include managing the technical staff, troubleshooting experimental results, and coordinating the workload. Qualified candidates will have a BS in Biology or related field and typically 10 years' laboratory experience, including 4 years in automated DNA sequencing and sequence analysis. Extensive experience with PCR, RT-PCR, probe hybridization, and molecular cloning is required. Excellent interpersonal skills and the ability to work in a team environment are essential. The preferred candidate will have a Ph.D. in Molecular Biology or related field, 4 years' experience, and excellent management skills. (Job Code: OXP-SC-2882)

MOLECULAR STRUCTURE AND DESIGN

We currently seek qualified scientists to join an expanding team which uses state-of-the-art structural techniques and computational methods to produce protein and small molecule therapeutics.

Computational Chemist

Candidates must have a Ph.D. or equivalent and typically 2-5 years' experience in an industrial or academic environment. Requirements also include expertise in the development of molecular modeling methods for protein and protein small molecule interactions in drug development; the ability to work with structural data from macromolecular crystallography and high field NMR; a strong background in the molecular mechanics and dynamics of proteins and small molecule interactions; and familiarity with semiempirical and ab initio quantum mechanics methods. (Job Code: OXP-SC-COMP)

Research Associate, Crystallography

Working in a x-ray crystallography laboratory, this individual will be responsible for protein crystallization, data collection, and data processing. Qualified candidates will have a BS/MS in Biochemistry or related field, and typically 2-3 years of experience. The ideal candidate will have experience with protein purification and characterization, site directed mutagenesis, and/or molecular biology. (Job Code: OXP-SC-CRYS)

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

At Amgen, you'll find our approach to scientific research as rewarding as it is effective. We offer a highly competitive compensation and benefits package that includes a retirement and savings plan, an on-site fitness center, and three weeks' vacation. Please mail or fax your resume/c.v. to: Amgen, Staffing, Job Code: (see above), Amgen Center, Thousand Oaks, CA 91320-1789. Fax: (805) 499-9981. Please consult our on-line Job Bulletin Board at <http://www.bio.com> for information on other career opportunities available at Amgen. Principals only, please.

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Phone: (212) 496-7704 Fax: (212) 682-0816

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SCIENCE JOBNET address: <http://www.aaas.org>

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Research Fellow

The Lindsley F. Kimball Research Institute, a division of the New York Blood Center, has created an excellent opportunity for a Research Fellow to analyze the expression of two new erythroid specific genes in very early hematopoietic cells. The incumbent will perform the purification of human and murine hematopoietic cells, semisolid and liquid culture of progenitor cells, and RT-PCR and Northern analysis of gene expression.

Applicants must have a Ph.D. in an appropriate discipline with at least 3 years of experience in hematopoietic cell culture.

This position commands a competitive salary and a comprehensive benefits package including full health coverage and liberal vacations. For immediate consideration, please send your CV to: Department JF, Human Resources, New York Blood Center, 310 East 67th Street, New York, NY 10021. An Equal Opportunity Employer M/F/D/V

Job Opportunity Hotline
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▲ Lindsley F. Kimball
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A Division of the New York Blood Center

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Specific areas of research are:*

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Molecular basis of alcohol and anesthetic action on neuronal ion channels. Regulation of potassium channel gating by phosphorylation and auxiliary proteins. Experience in cellular electrophysiology desirable.

Jan Hoek, Ph.D.

Alcohol effects on signal transduction pathways in liver regeneration. Requires experience with basic cell and molecular biology techniques, single cell imaging or protein phosphorylation.

Yedy Israel, Ph.D.

Prevention or reversal of alcoholic liver disease by antigene therapy. Identification of diagnostic markers of alcohol abuse.

David Strayer, M.D., Ph.D.

Design and study of novel viral vectors to be used for gene transfer to cultured cells and experimental animals. Strong experimental background in molecular biology required. Experience in molecular virology and viral pathogenesis desirable.

Theodore F. Taraschi, Ph.D.

Investigation of the antigenicity of phospholipid metabolites in animals and humans exposed to alcohol. Requires experience in antibody characterization and production. Experience with phospholipid biochemistry or designing diagnostics is desirable.

Andrew Thomas, Ph.D.

Drug effects on excitation-contraction coupling in cardiac muscle cells. Requires experience in cardiac cell function and/or electrophysiology.

Positions are limited to U.S. citizens and permanent residents (excluding Dr. Strayer's positions). Applicants should send curriculum vitae and professional references to: Mr. Howard Schurr, Jefferson Medical College, Department of Pathology, Anatomy and Cell Biology, 1020 Locust St., Philadelphia, PA 19107. (215) 955-5110, FAX (215) 923-2218. Equal Opportunity Employer.

Research

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POST DOCTORAL FELLOW

The successful candidate will have a Ph.D. in Immunology with Cellular Immunology experience. Duties will include the development of novel immunological assays to be used in clinical trials. Responsible for the design, development, execution and implementation of scientific research in collaboration with a research team. Qualified applicants must have a high level of attention to detail, be able to work independently and interact well with scientific staff at all levels.

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Ex Vivo Therapies, a joint venture between Applied Immune Sciences (AIS) and Rhone-Poulenc Rorer (RPR), is recruiting for our new Torrance facility, located in the Los Angeles area.

ExVT is focused on providing unique services in advanced biotechnology and ex vivo cell processing protocols. AIS is a pioneer in cell and gene therapy, developing, manufacturing, and delivering innovative cell and gene therapy products designed to enhance and restore the immune system in immune-related conditions such as bone marrow transplantation and autoimmune, infectious and malignant diseases. RPR is a global company focused on innovative human pharmaceuticals.

The successful candidates for the following positions must be enthusiastic, high-energy and have the flexibility to work a variety of different shifts.

Quality Control Analyst

This position will be responsible for the performance of QC tests and environmental monitoring programs at our facility in Torrance/L.A. The successful candidate will have a BS/MS in Microbiology or related field, with at least 2-4 years' experience in QC in a biomedical or pharmaceutical company. Must have demonstrated knowledge of QC testing and environmental monitoring procedures and GMPs.

Cell Processing Specialists

We are growing our Cell Processing staff, whose responsibilities include processing human tumors and peripheral blood for lymphocyte, stem cell and other immune cells to capture specific cell populations for cell expansion and subsequent harvest of cultured cells for reinfusion into patients. Processing is performed according to cGMP guidelines in a cleanroom environment. We are looking for candidates at all levels who have a BS in Microbiology, Immunology, Biochemistry or a related field, and extensive experience in aseptic tissue or cell culture. All positions require basic computer skills and flexibility in working hours.

ExVT offers opportunities for professional development and career growth. For immediate consideration, please forward your resume to: Ex Vivo Therapies, Professional Staffing, 5301 Patrick Henry Drive, Santa Clara, CA 95054-1114. FAX (408) 980-5888. Equal opportunity employer.

ExVT
Ex Vivo Therapies

**Emerging Infectious Diseases (EID)
Laboratory Training and Research Fellowships
CDC - ASTPHLD**

Administered by the National Centers for Infectious Disease, NCID/CDC, and the Association of State and Territorial Public Health Laboratory Directors, ASTPHLD. This two-track program (Training and Research) will train qualified candidates to support public health initiatives, and provide opportunities for doctoral level scientists to conduct high priority infectious disease research in local, state or federal (CDC) public health laboratories. Applicants must be U.S. citizens and able to start appointments by January 5, 1996.

Training Fellowship: A one-year program designed for bachelors or masters level scientists, with emphasis on the practical application of technologies, methodologies and practices related to emerging infectious diseases. The training will be customized for each Fellow based upon infectious disease areas of interest, high priority laboratory personnel needs, and host laboratory capabilities. Training will focus on one/two areas such as: vaccine preventable diseases, drug-resistant pathogens, molecular methods, vector-borne or zoonotic diseases, foodborne/waterborne illnesses, sexually transmitted diseases, computer and systems support, and diagnostic testing methods. The annual stipend is \$10,008 (plus health benefits) which may be augmented by the host public health laboratory. **Post-Doctoral Research Fellowship:** A two-year program designed for doctoral level (Ph.D., M.D., D.V.M.) scientists with an emphasis on research or development in infectious diseases. Fellowships will be awarded to conduct applied research or development in areas relevant to public health including: development and evaluation of diagnostic techniques, antimicrobial sensitivity and assessment of mechanisms of resistance, principles and practices of vector or animal control, improved methodologies for environment sampling, testing and evaluation. The annual stipend is \$19,608 to \$32,000 (plus health benefits). Application Deadline: October 5, 1995.

For further information and application materials contact: EID Laboratory Fellowship Program, ASTPHLD, 1211 Connecticut Avenue, N.W., Suite 608, Washington, D.C. 20036, Phone: 202-822-5227, Fax: 202-887-5098



**Faculty Positions in Neuroscience
University of North Carolina at Chapel Hill**

The University of North Carolina School of Medicine is embarking on an expansion of its strong interdisciplinary research programs in neuroscience. In conjunction with the establishment of the new UNC Neuroscience Center, we announce a search to fill four new tenure-track faculty positions in neuroscience. Applications are invited from individuals holding the Ph.D. and/or M.D. degree with at least 2 years of postdoctoral experience. While applicants with research interests in any area of neuroscience will be considered, those in molecular, cellular, systems, or developmental neuroscience are particularly welcome. Appointments will be made in appropriate departments at a rank commensurate with experience.

In addition to the UNC Neuroscience Center, resources available through the new Animal Models Center, the Gene Therapy Center, and the Program in Molecular Biology and Biotechnology provide enhanced opportunities for collaboration and support. Successful candidates may participate in the graduate training activities of two strong interdisciplinary curricula (Neurobiology and Genetics & Molecular Biology) as well as the Ph.D. training programs of individual departments as appropriate.

Submit a curriculum vitae, a summary of research interests and plans, and the names of 3 references to: Neuroscience Search Committee, Campus Box 7545, School of Medicine, University of North Carolina, Chapel Hill NC 27599-7545.

UNC is an equal opportunity/affirmative action employer. Qualified women and minorities are especially encouraged to apply.

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Qualified candidates must possess a related degree (BSc/MSc) and experience in a related field. A solid working knowledge/familiarity with molecular biological techniques strongly preferred. Must have excellent organizational and interpersonal skills and work well with minimal supervision.

We offer competitive salaries and outstanding benefits programs. Send cover letter and resume to **Susan J. Thompson, HMS, Office of Human Resources, 25 Shattuck Street, Bldg. A/Rm. 010, Boston, MA 02115. Harvard upholds a commitment to affirmative action and equal opportunity.**

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in the Pharmaceutical and Biomedical Industries"***
26 - 27 October 1995

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Sponsored By: The American Association for the Advancement of Science
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Cost*: • \$395 registration fee.
• \$340 per person for 2 or more from the same company.

Price includes full conference, opening cocktail reception, continental breakfast and lunch. (*Does not include hotel accommodations).

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POSITIONS OPEN

MAGNETIC RESONANCE IMAGING/ SPECTROSCOPY RESEARCH SCIENTIST

The Pittsburgh NMR Center for Biomedical Research is searching for an outstanding individual with experience in MRI/MRS to participate in on-going projects in the NMR Center. In addition, there is some opportunity to pursue independent research interests within the context of on-going projects. We are particularly interested in someone with expertise in one or more of the following areas: spectroscopic imaging/spectral editing, novel rf coil design, computational approaches to aid MRI/MRS, post-data processing, or micro-imaging. A Ph.D. in a MRI/MRS related area is required and some postdoctoral experience is preferred. The Center presently has active projects in imaging cell migration to help diagnosis of rejection of transplanted organs, development of functional imaging techniques for use on transgenic mice, and development of ultra-fast imaging techniques. There are a number of active collaborations with groups from the University of Pittsburgh Medical Center. Interested candidates should send a curriculum vitae, representative publications, and three references to: **Chien Ho, Pittsburgh NMR Center for Biomedical Research, Carnegie Mellon University, 4400 Fifth Avenue, Pittsburgh, PA 15213.**

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RESEARCH ETHICS OFFICER

The American Psychological Association (APA) is anticipating the need for a Research Ethics Officer as early as October 1995. Qualified applicants will have a degree (Master's preferred) in psychology or other science with demonstrated research experience. Candidates must have experience with an association, federal agency, research or applied ethics environment and be familiar with the federal legislative and regulatory process and agencies and organizations directly involved in research. Candidates must also be knowledgeable in federal law regulations and policies governing the protection of human participants and use of animals in research.

This position is responsible for preparing policy statements and other documents representing APA positions on various scientific, legislative and regulatory issues affecting the conduct of research. It will require close work with APA boards/committees and members, as well as federal agencies, congressional staff, other scientific associations and the academic community on issues affecting researchers and academicians. To apply, send a résumé and cover letter to: **APA, Human Resources-REO, 750 First Street, NE, Washington, DC 20002.**

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PROGRAM MANAGER International Society for Infectious Diseases

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Applicants possessing an advanced (graduate) degree and experience in public health, infectious diseases, microbiology, or medicine are encouraged to apply in writing to: **ISID Search, 180 Longwood Avenue, Boston, MA 02115 USA. FAX: 617-731-1541.**

POSITIONS OPEN

EXPERIMENTAL HEMATOLOGIST

The University of Wisconsin-Madison Department of Medicine seeks a Ph.D. Experimental Hematologist to join the laboratory for experimental bone marrow transplantation and hematopoietic gene therapy. Applicants should have an active research program, preferably in the area of stem cell biology. Please send curriculum vitae, bibliography and description of research interests to: **Friedrich G. Schuening, M.D., Department of Medicine, UW-Madison, J5/219 CSC 600 Highland Avenue, Madison, WI 53792-2454. The University of Wisconsin-Madison is an Equal Employment Opportunity/Affirmative Action Employer.**

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ANNOUNCEMENT

CONTAMINATED SOILS CONFERENCE October 23 to 26, 1995

The University of Massachusetts at Amherst will host the 10th Annual Conference on Contaminated Soils. This year's conference sessions include: federal issues, radionuclide contamination, railroad/diesel, analysis, site assessment, environmental fate, remediation, risk-based corrective action, risk-based cleanup standards, state regulatory issues, site closure, human health risk assessment and effects, and ecological risk assessment. For more information please contact **Linda Rosen at 413-545-2934.**

SYMPOSIUM

SUSCEPTIBILITY AND RISK ASSESSMENT The Third Annual Symposium of the Health Effects Research Laboratory

The Health Effects Research Laboratory of the U.S. Environmental Protection Agency is pleased to announce that its Third Annual Symposium will be held November 6-9, 1995, at the North Raleigh Hilton in Raleigh, North Carolina. This third in the Annual HERL Symposium Series on Research Advances in Health Risk Assessment will focus on known factors affecting the susceptibility of humans, experimental animal models, or cell tests systems to environmental toxicants with the goal of refining risk assessment strategies which must consider variable population response. Protection of the "susceptible individual" is a fundamental goal of environmental regulation. Indeed, it is generally accepted that if the susceptible individual is protected, then the entire population will be protected. The format of the HERL Symposium will include invited platform presentations and contributed poster presentations. For more information, please contact:

**RSD Conference Coordinator
MD-70, Health Effects Research Laboratory
U.S. EPA, Research Triangle Park, NC 27711
Telephone: 919-541-5193; FAX: 919-541-4002
Internet: MEETING\$MAIL@HERL45.
HERL.EPA.GOV**

SYMPOSIUM: Translation & Stability of mRNA. October 8 to 10, 1995, Cathedral Hill Hotel, San Francisco, California. Speakers: **E. Baker, H. Blau, R. Braun, A. Geballe, P. Green, J. Harford, J. Hershey, A. Hinnebusch, M. Katze, R. Lehmann, M. Mathews, D. Morris, R. Parker, S. Peltz, G. Read, T. Rouault, A. Sachs, P. Sarnow, R. Schneider, A. Shyu, R. Silverman, N. Sonenberg, O. Uhlenbeck, S. Warren, M. Wickens.** Organizers: **J. Harford, RiboGene; M. Katze, University of Washington; J. W. Larrick, PAIMM.** Abstracts due August 31, 1995. Sponsor: **Palo Alto Institute of Molecular Medicine, 2462 Wyandotte Street, Mountain View, CA 94043. Telephone: 415-694-4996; FAX: 415-694-7717; Email: PAIMM@AOL.COM.**

MEETINGS

MITOCHONDRIAL AND FREE RADICAL INVOLVEMENT IN AGING

**October 6 to 10, 1995
San Antonio, Texas**

This conference explores the rapidly accumulating evidence that mitochondria and free radicals are significantly involved in aging. Six symposia featuring 26 speakers including leading investigators (e.g., **J. Müller-Höcker, E. Shoubridge, R. Sohal, D. Wallace**). For information, contact: **American Aging Association, 2129 Providence Avenue, Chester, PA 19013. Telephone: 610-874-7550; FAX: 610-876-7715; Email: ameraging@aol.com.**

ANNUAL MEETING, American Society of Tropical Medicine and Hygiene, November 17 to 21, 1995, Hyatt Regency, San Antonio, Texas. Over 600 presentations, including clinical tropical medicine, travelers' health; disease agents, pathogenesis; diagnosis; vaccines, drug design; epidemiologic investigations; public health interventions; impact of tropical disease; vector biology and control. Contact: **ASTMH, 60 Revere Drive, No. 500, Northbrook, IL 60062. Telephone: 708-480-9592; FAX: 708-480-9282.**

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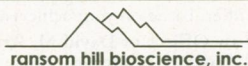
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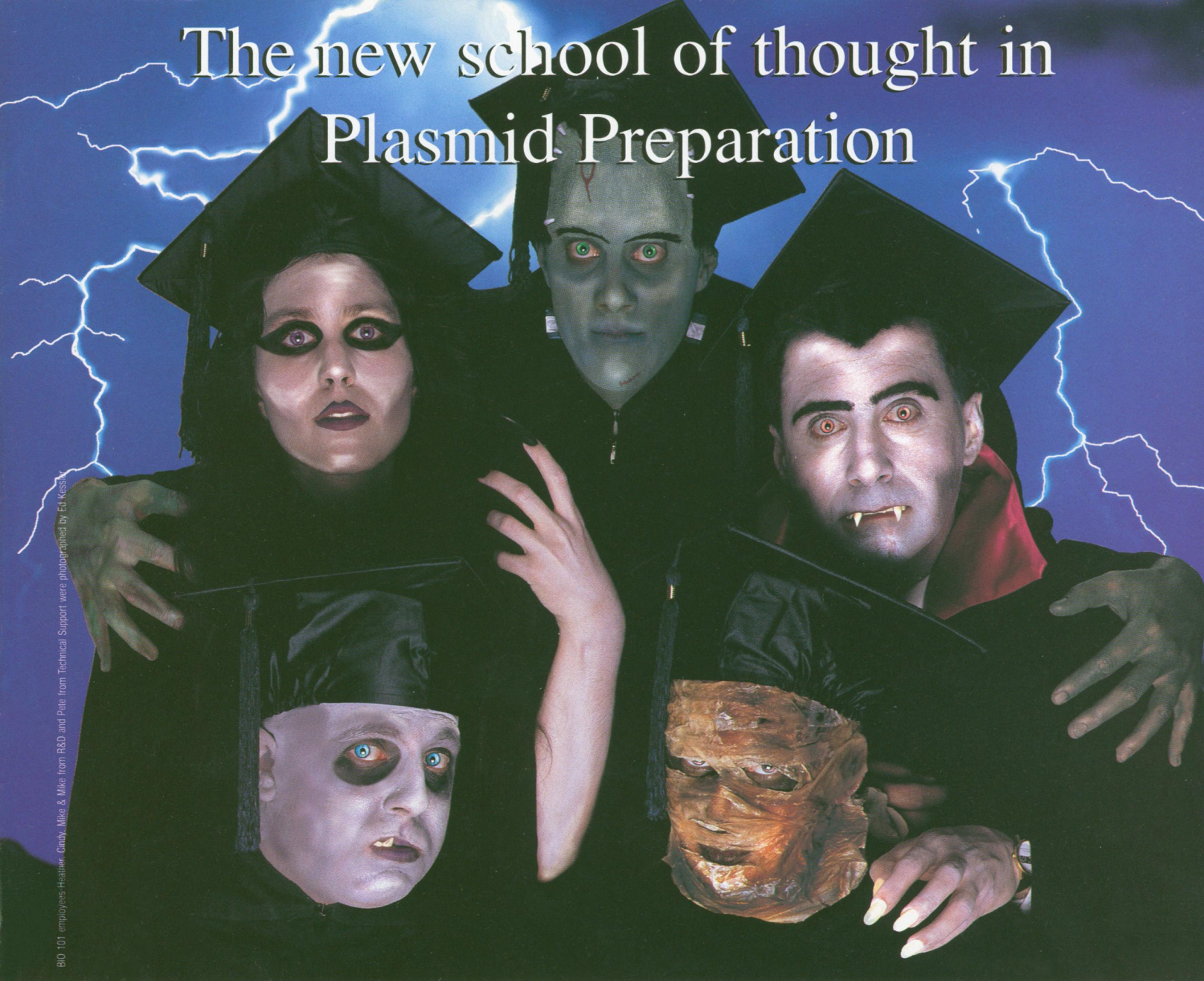
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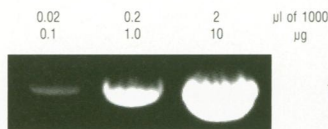
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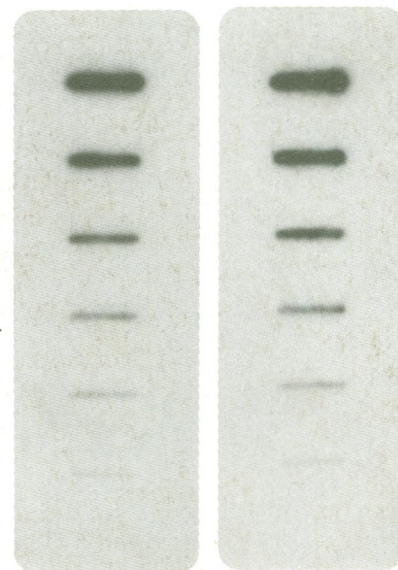
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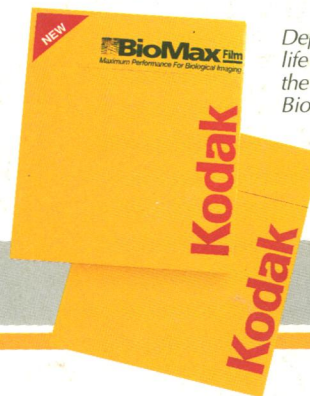
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