

AWIS NEWSLETTER

Mission Statement: The Association for Women in Science, Inc. (AWIS) is a non-profit organization dedicated to the achievement of equity and full participation of women in all areas of science and technology

The AWIS Newsletter is Going Online!!!!

By AWIS Newsletter Committee

The AWIS newsletter committee is happy to announce that, beginning with the November/December issue, the AWIS San Diego members and newsletter subscribers will be accessing the newsletter from the San Diego AWIS website (<http://awis.npaci.edu>). The electronic format will permit us to include more graphics, photos, video, etc. Those who prefer a hardcopy, will be able to download a PDF version of current and past issues.

AWIS newsletter editor Tobey Tam has taken on the responsibility of keeping the AWIS web-site up-to-date. She will be instructing the other newsletter editors on html and other webpage editing formats.

The plan is to notify AWIS members and newsletter subscribers by e-mail when the latest newsletter edition is available on the website. In order to accomplish this, we will need to have your e-mail contact information. You can do this by filling out the flyer included in this mailing or sign up online at <http://awis.npaci.edu>.

AWIS 2002 Spring Gala Needs Volunteers!

Volunteers are needed for the Spring Gala committee! Every other year AWIS holds a Gala event, proceeds of which benefit the AWIS scholarship fund for promising young college and graduate women who aim to pursue careers in science. Our first meeting will be held Thursday, Oct 4th at Scripps (for directions go to: <http://awis.npaci.edu/scholarship.html>).

If you would like to participate in the planning of this event, please contact Tobey Tam at tobey_tam@yahoo.com

Important Information for AWIS members!

By Susi Jennings, Membership Chair

Check out the updated membership section of our AWIS website: <http://awis.npaci.edu/membership.html>. Here you can find information on how to renew your membership online, what your membership benefits are, how to get on our chapter e-mail list, how to update AWIS (both our chapter and the national office) when your contact information changes and where to send others who are interested in joining AWIS.

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Members on the Move

Grai Andreason is halfway through an Executive MBA program at UCLA (i.e., she continues to work in SD) and has recently made an internal transfer from Senior Scientist to Manager of Corporate Development at GenStar Therapeutics.

Grai has worked at GenStar for the past 2 1/2 years and she greatly looks forward to getting involved with AWIS again after she finishes her MBA - in July 2002!

Melody Clark, Ph. D. has joined the biotechnology intellectual property firm of Campbell & Flores LLP. Although she had not planned to leave "bench science" she saw, in her own work, how important patents have become in research. She decided to investigate the world of patent law and interviewed at a firm that specializes in biotechnology (Campbell & Flores.) She was very impressed with the number of PhDs at this firm and joined them in January as a Scientific Advisor. She reports that the learning curve is very steep, but eventually she will take the patent bar exam and become a patent agent. She is enjoying the challenges of her new position and is very happy with her decision to move into a different field.

Cheryl Munday has joined Cell Genesys as a Compliance Specialist. She is responsible for providing QA oversight of clinical manufacturing operations in San Diego to assure compliance with state and federal regulatory agency requirements.

Melissa M. Fitzgerald, Ph.D. has recently joined the Technology Transfer & Intellectual Property Services Department at UCSD as a Senior Licensing Officer. Melissa's responsibilities include evaluating technological innovations made by UCSD researchers, helping to protect commercially valuable intellectual property, and promoting the transfer of technology to the private sector through licensing agreements. (website: <http://invent.ucsd.edu/>)

Shila Jalali gave birth to a son, Tiahm on August 4th. Both are home with dad and two grandmothers to help out.

The Newsletter Committee Thanks Christine Haws and Susan Brown!

The AWIS Newsletter Committee would like to thank Christine Haws and Susan Brown for their service to the committee. Christine joined the newsletter in November 1999 and has contributed several "Member Profile" articles, has been in charge of mailing labels, and has joined with the rest of the committee in folding, labeling and stamping the newsletters for mailing.

Both have decided to step off the committee for the present as their time is largely spent away from science. Susan, who joined the committee in March 2000, contributing her fine editing skills, has decided to move away from science to study Architecture with the goal of becoming an Architect. The committee wishes them the best and is looking forward, perhaps, to their return to the AWIS newsletter committee. Good luck, Christine and Susan!

Meet our Gold Corporate Sponsors

By Janice Payne

AWIS San Diego thanks the following corporate sponsors for their generous support of the 2001 Women in Bioscience conference.



Alexion Antibody Technologies (formerly Prolifaron) is a wholly owned subsidiary of Alexion Pharmaceuticals. Their focus is on development of human therapeutic antibodies through the use of human Combinatorial Antibody Library Technology (CoALT). Their therapeutic targets include cancer, autoimmune diseases and inflammation. Visit their website at www.alxnsd.com.



Avanir Pharmaceuticals develops and markets therapeutics for treatment of chronic diseases. Formerly known as LIDAK Pharmaceuticals, which was incorporated in 1988, Avanir became the new company name in 1998. In July 2000 the FDA approved Avanir's first product Abreva®, an over-the-counter treatment for oral herpes. Avanir has also created a subsidiary company, Xenexer Biosciences, to develop human monoclonal antibodies. Visit their website at www.avanir.com.



PharMingen, now known as BD Biosciences, was established in 1987 and became a division of Becton Dickinson & Company in 1997. They develop, manufacture and market reagents and instruments for cell biology, immunology and molecular biology. Their products include antibodies, both polyclonal and monoclonal, conjugates, recombinant proteins and protein expression systems. Visit their website at www.pharMingen.com.



Chugai Biopharmaceuticals, Inc. was established in 1995 and is a wholly owned subsidiary of Chugai Pharma USA. Their focus is to discover, develop and market therapeutics aimed at cardiovascular disease and cancer. Their fields of research and development include genomics, informatics, high throughput screening and combinatorial chemistry. Visit their website at www.chugaibio.com.



Invitrogen Life Technologies, located in Carlsbad, CA, was founded in 1987. They market products to improve gene cloning, expression and analysis. Other product lines include Novex® electrophoresis products, GIBCO™ cell culture products and Research Genetics genomic resources. Visit their website at www.invitrogen.com.



ISIS Pharmaceuticals, Inc., founded in 1989, develops therapeutics based on antisense technology. Vitravene™ an antiviral developed in collaboration with Novartis to treat CMV retinitis, became the first antisense therapeutic approved by the FDA. Isis Therapeutics™ is a new division of ISIS established to develop therapeutics that bind to sites on RNA. Visit the ISIS website at www.isip.com.



The Torrey Mesa Research Institute (formerly Novartis Agricultural Discovery Institute) was established in 1999 and is now a division of Syngenta Research & Technology. Their research focus is agricultural genomics and they strive to improve seed traits and develop safer crop protection chemicals. In January 2001, in collaboration with Myriad Genetics, scientists at the Torrey Mesa Research Institute were able to map the rice genome. Visit their website at www.tMRI.org.

AWIS San Diego's New Treasurer

AWIS San Diego would like to thank Melissa Cunningham for her outstanding service as AWIS Treasurer! Her responsibilities have included reimbursing AWIS committee members for their expenditures, making sure the phone and PO box bills are paid, and keeping track of the Women in Bioscience Conference expenditures. Congratulations on a job well done! We are happy to announce that Kathleen Ogilvie, who served as the Chair of the Facilities Committee for the Women in Bioscience conference, has agreed to serve as AWIS San Diego Treasurer.

Technology Profile: Denial-of-Service Activity (DoS)

By Tobey Tam

As much as computers have increased our productivity and improved the quality of life, they have also made us vulnerable to new types of disruptive and anti-personal behavior. Nowadays, anyone with a computer connected to the Internet is a potential target for attack through cyberspace. The antics of hackers and cyber-terrorists are generally feared and make good press, but the true extent of the damage they inflict on data systems and computer infrastructure in government and industry networks is hard to infer from anecdotal evidence alone. Many obstacles as well impede gathering good-quality statistics. Service and content providers consider such data sensitive and private, and the number of sites needed to obtain a representative measure of traffic on the Internet is more than feasibly possible to monitor. In spite of this, one study has recently been published on one type of intrusive activity—a resource that could be useful in efforts to develop effective countermeasures.

Denial of service (DoS) attacks involve bombarding a target computer or Internet website with spurious requests for service. This in turn overwhelms the ability of the affected system to respond to legitimate requests, resulting in blocked services and possibly even disabled server infrastructure. Unlike 'hacking' or slipping in Trojans, these attacks are not intended to gain access to information or machines. They do not deliberately damage files like viruses. Moreover, they are highly 'visible,' in that the intended result is immediately realized, as with worms. But unlike other types of attacks, they leave traces that can be examined. And

these traces form the basis for the only known quantitative and empirical study of this phenomenon to date.

A collaboration between the Cooperative Association for Internet Data Analysis (CAIDA) and the Jacobs School of Engineering at UCSD addressed the nature of these attacks, focusing on trends and patterns. They tracked a side effect termed 'backscatter,' the spread of information requests across the Internet created by victim servers responding to attacks using faked source addresses. Using data gathered from a sampling of Internet traffic, researchers estimated the extent of DoS activity over the world-wide network. Over a three-week period, they determined more than 12,000 attacks took place. Three interesting observations were made about these attacks. First, 10-20% of these attacks were directed at home machines (dialup or broadband), suggesting the use of cyberspace in carrying on personal vendettas. Second, 5% of attacks are directed at network infrastructure such as name servers, which direct traffic to the proper domain name, and routers, which direct internet traffic to appropriate locations in the network. Disabling routers can cause massive service outage to a cross-section of users, not just those at particular sites. Third, a variety of attacks are on commercial businesses including Yahoo, CNN, Amazon, and a range of small- and medium-size businesses. Surprisingly, aside from the U.S. a considerable number of attacks were directed against sites in Romania and Brazil. David Moore, the primary investigator of the study, notes that many computer hackers are found in Romania, and that the country lacks laws or policing of such attacks. According to his group, Romania may be a testing ground for hackers to 'practice' their techniques on businesses and other establishments, as well as to carry on personal vendettas. Moore also suggests that Brazil may be a 'revenge' target area, since it is known to host many spam servers. High-profile incidents include the recent Code Red worm detected this July, the February 2000 attacks against the Internet e-commerce sites Yahoo, Ebay and E*trade, and one in January 2001 on Microsoft's name server infrastructure. This study reveals that by far most, less well-known attacks involve government and industry sites, as well as personal machines. The findings touched off such wide interest as to be reprinted in a flurry of stories throughout the mainstream and technology press, from the New York Times and CNN to CNET and NewsBytes. They also remind us that everyone is a potential target, and as yet there are few effective defenses available to counter the threat. The results appear in the paper "Inferring Internet Denial-of-Service Activity" by David Moore, Geoffrey Voelker, and Stefan Savage, and will be presented in August at the 2001 USENIX Security Symposium in Washington, D.C., where issues involving computer security, cryptology, and cyber-law enforcement will be discussed.

The San Diego Chapter of AWIS welcomes the following new members:

Christina Chang	University of California, San Diego
Lynn Fink	University of California, San Diego
Miya Fujimoto	
Alice Hayes	University of San Diego
Anjali G. Kansagara	Aurora Biosciences Corp.
Maria Lastra	Waddell & Reed
Judith Lazar	
Sandra Matsumoto	Biocept, Inc.
Jessica Montag	
Annika Montag	
Paula Norris	
Colleen Shea	
Robin Smith	Agouron Pharmaceuticals
Rose Straney	Ligand Pharmaceuticals
KilluTougu Sanborn	IngleWood Ventures
Joan White	
Michelle Yankauckas	Aurora Biosciences Corp.

Posting Jobs in the AWIS newsletter: Contact Elaine Weidenhammer at eweiden@hotmail.com, or AWIS voicemail: 619-687-5580, or AWIS PO Box: 178096, San Diego, CA 92177-8096 for the details. Deadline for inclusion in the next AWIS newsletter is October 5, 2001. If submitting by snail mail, include the words ATTN: Elaine Weidenhammer on the bottom left corner of the envelope.

Job Opportunities

Arizeke Pharmaceuticals is an exciting new start up company with novel technology in the drug delivery field. We're well-funded and looking for several people in Process Development, Pharmacokinetics (Pharmacology), Formulations, Protein Chemistry, and Protein Engineering.

We need both senior (4-6 years experience) and technical level (2-5 years experience) scientists.

Process Development scientists should have expertise in scale up purification and fermentation and should have significant experience with proteins.

Pharmacokinetic scientists should have expertise in simple surgical techniques (duodenum and jugular vein cannulation) in rodents (mainly rats).

Protein chemists and engineers should have expertise in purification (column chromatography, affinity chromatography), analytical methods typically used to characterize proteins, and the process of re-engineering proteins to improve and refine their activity.

Please e-mail your resume to HR@arizeke.com.

Job Opportunity

Yoh Scientific
Technology Staffing

Dear AWIS members,

Yoh Scientific, the leading provider of long and short term talent in the biotech and pharmaceutical industry, is currently looking for scientists (i.e. chemists, molecular biologists, microbiologists, biochemists, etc.) in the San Diego area.

The local job market is remaining strong and there are many rewarding positions that are currently available for all backgrounds. If you are interested in advancing your career, please don't hesitate to call.

Also, please inquire if you are interested in finding out what your 'market value' is as a scientific professional or if you would like more information on what opportunities exist for you out there.

Thanks,

David Ullum

Recruiting Specialist

Yoh Scientific

Ph: (858)622-9005 x 230; Fax: (858)622-9048

dave.ullum@yoh.com

Know greater talent.

Recap of the June AWIS Event

By Fan Li Chou

“From Mouse to WoMan”, - was the title of the June seminar presented by Robin M. Smith, held at the Scripps Research Institute. Robin is the director of clinical study management and monitoring at the La Jolla based Agouron/Pfizer Pharmaceuticals. She generously shared her insight and experiences with a conference room packed with eager listeners.

Robin began her career as a nurse, and then she moved into the clinical trial monitoring, first as a study coordinator for Eli Lilly. Since then, Robin has worked for several large pharmaceutical companies, as well as small start-ups. Through it all, she has continued to advance her career in clinical research. Her presentation gave the audience an idea of the process of bringing a drug to the public. Unlike laboratory research, clinical research is multi-center by nature. One clinical study can involve multiple research sites located nationally, even internationally. An important aspect of clinical research is the management of people involved in the research, patients, clinicians, researchers, as well as the management of the millions of pieces of data generated as a result of the research project. Aside from the research, other important aspects include interactions with the marketing department, and the law department, in regards to patents, licensure, and compliance with the FDA. The success of a team in bringing a product from clinical trials to market is dependent on several issues - not just on the efficacy and effectiveness of the drug. One must assess the environment of the market. What is the public's view of the company? What sort of competition exists? How tight is the intellectual property issue? All these, and an element of being at the right place at the right time, will factor into the trials to market success equation.

According to Robin, clinical research is a “people-oriented” industry. Several important job skills are essential to one's success. One must have good organization and communications skills, flexibility in managing changing priorities, attention to detail, and ability to work as part of a team. There are many career opportunities in various clinical research settings. In both private and academic clinical centers, one can be involved on all levels of the clinical trials process, from study coordinator to site investigator. The UCSD Extension offers several certification programs. Individuals can select a program based on their personal and scheduling needs. These courses are taught by clinical research professionals like Robin.

The following associations can provide more information regarding careers in clinical research:

Drug Information Association
 Association of Clinical Research Professionals
 Society of Clinical Research Associates
 Regulatory Affairs Professionals Society

For more information regarding UCSD Extension programs, contact:

Donna Stern
 UCSD Program Manager
 858-748-5580, dmsstern@home.com

Spotlight on Education: The School of Healing Arts

by Tobey Tam

With our busy, hectic schedules, we can sometimes overlook some important things, like our health. Working hard at landing a good job, having a family, and building a home, it seems, may not be enough to feel satisfied with day-to-day living. Why else would more and more people go out for massage therapy in San Diego, for example? Sitting at the bench all day, straining your neck and back from writing grants and papers, or even running around the lab can build tension within your mind and body. On the other hand, proper exercise, a balanced diet and a positive attitude are among the factors that may help in achieving a satisfied lifestyle. One approach is offered in Pacific Beach at the School of Healing Arts, which offers courses in professional career training or personal growth and self-development. Non-conventional schools like this are springing up everywhere in response to public demand. Other holistic schools in San Diego include IPSB, California Naturopathic College, Mueller College of Holistic Studies, Pacific College of Oriental Medicine, and Body Mind College. Issues that mainstream medical practitioners tend to downplay, including mental well being and understanding your body's needs, are being addressed with holistic practices. Holistic health takes care of the physical and mental well being of the whole body or integrated systems, rather than that of individual body parts. Examples of holistic practices include detoxifying the body with herbs that aid in cleansing, using traditional home remedies such as teas or ear candling, and increasing your body's energy by eating certain foods. Using these, one can hope to become more relaxed, healthy, and self-confident, while at the same time reduce pain, sleep better or study effectively through mind relaxation techniques.

Holistic practitioners are not all hippies and nature-loving people, as depicted in stereotypes. Stephanie Everage, for instance, had a wonderful husband, faithful dog, beautiful house, and a solid, well-paying job. But in spite of her success she still felt that she was missing something. She sought guidance and answers at the School of Healing Arts. There she learned about the human need to feel at ease with one's mind, soul and body, and techniques that can aid in becoming fulfilled. She is now a practicing Massage Therapist and training to become a Holistic Health Practitioner in order to help others. Practitioners can have their own businesses, working from home or making house calls like Everage. They can also work as adjuncts to other establishments. Chiropractors, spas, massage parlors, physical therapy clinics and medical clinics are starting to have practitioners on staff. According to Everage, “Relieving stress from your body helps relax your mind, which ultimately helps you to focus on more important issues in your daily life.” Everage is dedicated to advising people on how to become healthier.

It should be noted that many in the medical and scientific community are deeply skeptical of the effectiveness of holistic medicine. While it is true that an aura of mysticism surrounds many practices, such as acupuncture and herbology, it must be noted that many pharmaceutical breakthroughs had their basis in traditional healing arts that are now categorized as alternative medicines. The techniques or concoctions themselves may work, but the rationale often given for why they work is not scientifically tenable, thus deterring people from taking them seriously. If this prejudice is overcome, some progress can be made. Urbane health care providers no longer take stock in the theory of ‘humors,’ but they have recently found new uses for ‘medieval’ techniques based on this concept, such as maintaining blood circulation with leeches during certain procedures. They've even invented a procedure for clearing dead flesh around wounds with live maggots. For the most part, however, doctors are quick to criticize those they probably see

as competitors in the healing industry, often failing to address needs and concerns that led former patients to seek alternative help in the first place. Modern medicine itself has not always had a smooth track record in creating safe, affordable remedies. As with anything, some approaches work and some do not, and the consumer should be free to choose the way they will be healed. The School of Healing Arts is a non-profit charitable organization dedicated to the education and application of Holistic Health Therapies. Courses offered there and at other holistic schools include communication, Eastern studies, energetic healing, herbology, hypnotherapy, massage, movement and whole foods nutrition. The School of Healing Arts even offers a free wellness clinic every Thursday at 7pm that features a one-hour lecture on various topics followed by a free massage, hypnotherapy or Nutritional Counseling session. For more information call 858-581-9429 or visit www.schoolofhealingarts.com on the web. Or for a massage, free advice, or just someone to talk with about holistic practices, you may contact Stephanie Everage at stephanieeverage@netscape.net or 619-522-6707.

Book Committee September Meeting

By Tobey Tam

The Book Committee will hold its first meeting on September 12, 2001 at 6pm at Scripps. We will review the book The Door in the Dream: Conversations with Eminent Women in Science by Elga Wasserman. In her book, Wasserman examines complex issues such as equality in the workplace and equal access to leadership positions for women by interviewing the few women elected into the National Academy of Science. These 86 women, who constitute about 5 percent of the membership of the Academy, are the elite women of American science; their accomplishments clearly identify them as having succeeded in a traditionally male-centered environment.

Please attend even if you have not read the book and are interested in the committee. We will spend time socializing, organizing this new committee, and choosing the next book to read. For more details or directions go to: <http://awis.npaci.edu/book.html> or e-mail tobey_tam@yahoo.com

Letters to the Editors

I think it would be great to get the AWIS newsletter as a PDF file. I might view it as a web page too w/ video and sound and color photos, but I'm more likely to read the newsletter at lunch as a paper version. PDF is a nice 1/2 way where you can receive and read online or off line but we all save postage.

Judith Finlay
Via e-mail

About the AWIS Newsletter

The AWIS Newsletter is published bimonthly and provides AWIS members and supporters with information on chapter activities, career developments, and issues related to women in science. The newsletter is free to AWIS members. Subscription rate for non-members is \$20 a year.

September/October Newsletter staff:

Tobey Tam Barbara Armstrong Cathy Manner
Janice Payne

Send news items, comments, and subscription requests to Barbara Armstrong via e-mail: baawis@nethere.com; or AWIS, PO Box 178096, San Diego, CA 92177-8096. If you would like your article included in the next issue, the deadline for inclusion is October 5, 2001.

Moving? Address Change?

Please notify us of your new address so you won't miss our mailings! E-mail **Susan Jennings** at: sdawis@san.rr.com, phone the AWIS voicemail: (619) 687-5580, or mail changes to AWIS - San Diego, PO Box 178096, 92177-8096.

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The AWIS e-mail list will keep you up-to-date with news of job opportunities, AWIS news and events (between newsletters.) To subscribe, please send e-mail to sdawis@san.rr.com. Include your full name, address, and phone number.

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