

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.

Inside this Issue	Page
NEWS	
AWIS2004 Scholarship Gala Needs Volunteers	1
Upcoming Events	1
Team AWIS San Diego to Take Part in Breast Cancer Walk	1
The Southern California Biotechnology Center	1-2
July AWIS Event - Directed Job Search Strategies	2
FEATURES	
Academic Profile: Susan Forsburg	2-3
Discover the Biosphere 2	3-4
Santa Fe Science Writing Workshop	4-6
Seeking Lawful Permanent Residence in the U.S. Post 9-11	6-7
San Diego Bioinformatics Forum – Johnson & Johnson	7-8
DEPARTMENTS	
Your Two Cents	8
July Book Review – <u>Ellen Foster</u>	8
New Members	8
Members on the Move...	9
June Movie Review – <u>The Race for the Double Helix</u>	9
Job Postings	9
AWIS Chapter Contact Information	9-10

NEWS

AWIS 2004 Scholarship Gala Needs Volunteers!

Volunteers are needed for the Scholarship Gala committee! Every other year, AWIS holds a Gala event. Proceeds of the Gala go to the AWIS scholarship fund for promising young college and graduate women who aim to pursue careers in science. If you would like to participate in the planning of this event, to be held in May 2004, please contact Anna-Maria Hays at haysam@scripps.edu.

Upcoming Events

Compiled from the AWIS website by Barbara Armstrong

For more information on any of these events go to:

<http://awis.npaci.edu/shtml/events.shtml> or

http://awis.npaci.edu/shtml/events_meet.shtml

September 4: SD-AWIS open house; Salk Institute; 6-9 p.m.; for information contact Fan-Li at flchou@scripps.edu or Karin at kkillerm@ucsd.edu

October 6: Strategy Sessions – Strategic Problem Solving & Conflict Resolution in the Workplace.

October 20: Fact or Fiction: Working in the Biosciences Industry; Hilton Hotel in La Jolla. Co-sponsored with the Forum for Women Entrepreneurs. For information contact Fan-Li at flchou@scripps.edu

November 18: Myers -Briggs personality test; Ligand Pharmaceuticals; 5:30 p.m. – 9:00 p.m.; cost is \$25 per person. RSVP no later than Oct. 28 to: Janice Payne at janice_payne@hotmail.com

December: Social, TBA;

December 1: Strategy Sessions – How to Negotiate Strategically: A workshop on personal vs. professional negotiation skills.

Team AWIS SAN DIEGO to Take Part In The Breast Cancer 3-Day Walk

By Lynne Friedmann

Chapter members are invited to join Team AWIS San Diego in this year's "Breast Cancer 3-Day" -- a 60-mile walk -- that will benefit the Susan G. Komen Breast Cancer Foundation.

The walk takes place Nov. 21-23. Thousands of women and men will participate. Many are cancer survivors; others have lost loved ones to this disease. Event organizers have thought of everything. You will spend two nights in a tent city, have access to hot showers and transportation of your gear so you don't have to carry anything during the walk. Also, there will be snacks, water, and first-aid stations all along the route.

As a team, we'll support one another during training, fundraising, and the walk itself. For general information, visit the Breast Cancer 3-Day Website (www.breastcancer3day.org). For specific information about Team AWIS San Diego, contact Karin Zeh at kzeh@yahoo.com. Chapter members are already signing up. Become a part of this tremendous community event.

The Southern California Biotechnology Center: Serving the Educational Needs of the Biotech Industry

By Sandra Slivka

The Southern California Biotechnology Center (SCBC) has recently moved to Miramar College. The SCBC is pleased to have this opportunity to inform you about a new initiative and invite your participation in this effort.

The SCBC is one of six centers funded by the Education Development Network California Community Colleges Biotechnology Initiative. The Biotechnology Initiative specifically serves the workforce needs of the biotechnology community in California. The statewide and regional directors of the Biotechnology Initiative address the life-long learning needs of the workforce for the biotechnology industry in California, thus fulfilling the mandated purpose to support economic growth in California.

The six Biotechnology Centers coordinate with community colleges, high schools, state and private universities, local biotech industry companies, economic development groups, and biotech industry organizations to fashion comprehensive education programs to prepare and upgrade skills in the biotech workforce. The goal of the centers is to partner with biotechnology firms, secondary schools, universities, public agencies and associations, and lay the groundwork to prepare the workforce for new jobs.

Here's how you might participate. Let us know if you would like to:

- Partner for specific training needs (e.g., AWIS and the SCBC)
- Take a specific topic-related short class (e.g., HPLC, tissue culture, bioinformatics, etc.)
- Send employees for additional training
- Teach a short-term class
- Donate surplus/outdated supplies to local schools
- Provide internship or job shadowing opportunities

Please contact: Sandra Slivka, Ph.D.
Project Director, SCBC
sslivka@sdccd.net
619-388-7490

July AWIS Event Directed Job Search Strategies

By Janice Payne

With the assumption that most of us could use a little direction in our job search, we invited two speakers to join us at our July event on directed job search strategies. Lauren Rice, Human Resources Manager at BD Pharmingen, has been working in human resources in the biotech industry for 10 years. Lee Martson, who has two biology degrees from UCSD, is a staffing consultant at K-force.

Their well-coordinated presentation opened with ideas on how to begin your job search. Start by defining your target list of companies and what you want to know about each company, and then use several approaches to get the information you're looking for. Browse company websites, publications and annual reports. Find a friend or acquaintance who works at the company and can tell you about the culture and whether they are hiring. Learn as much as you can without going into "analysis paralysis." Make sure that the focus of the company is consistent with your background and skills.

Once you have identified five to 20 solid prospects, it's time to begin marketing yourself. Should you use a recruiter? Martson gave us her perspective on this question. Since most positions are not advertised, it may be better to have a recruiter help with your resume and then pitch you to a client. Recruiters play a part in 30-40% of all new hires. Look for a recruiter who specializes in the type of job you want, and be willing to work with that person and maintain contact once every two weeks or so. Beware of a recruiter who tries to charge you a fee. The company pays the recruiter if you take a job.

Another marketing tool is the cover letter. Our speakers advised against the "spray and pray" approach of sending letters and resumes to every company you can find. Focus your search through research and networking, and try to get a contact name to use on your letter. Limit your cover letter to one page, and avoid personal or salary information. Do not give an explanation of why you are leaving your current situation. Give a little background about yourself and why you should be the person hired for the job.

In preparation for an interview, you should continue to build your network of contacts. Begin making calls for interviews, either formal or informational. Prepare your story, and be able to tell an employer about yourself in under 45 seconds. If all goes well, you get the interview. Make sure you have the correct time, address and directions for the interview. Don't be late, and don't be too early. Get there about five minutes ahead of time. Review your

resume and highlight three to five accomplishments that you would like to get across in the interview. Don't bad mouth your current employer or give out negative information. Practice your handshake. Avoid chewing gum, perfume, too much makeup or jewelry. At the end of the interview, make sure you understand the next step. Let them know you are interested in the job and finish with "Can I expect to hear from you?" Don't forget a thank you note. Good luck in your search!

We appreciate the efforts of the Events Committee: (Fan-Li Chou, Tracy Vivlemore, Janice Payne, Michelle Krakowski, Stella Kim, Lisa Lai, and Jessica Shade) for organizing this program.

FEATURES

Life as an Associate Professor – An Academic Profile on Susan L. Forsburg

By Shermali Gunawardena

Susan Forsburg is an associate professor in the Cancer Center and the Molecular and Cell Biology Laboratory at the Salk Institute in La Jolla. Her lab uses the fission yeast *Schizosaccharomyces pombe* to understand replication of DNA and how it affects chromosome dynamics during cell division. Her research has relevance to cancer, which is characterized by unregulated cell division and abnormal chromosome dynamics and to birth defects, which results from abnormal chromosome segregation during meiosis.

At the age of 16, Forsburg wanted to be a veterinarian. She soon realized, however, that "the really cool stuff" was in the diagnosis. She was captivated by the "how" question rather than the caring aspect of biology, and at the age of 17 her interests shifted toward basic biomedical research. Although she knew she wanted to be a scientist, she also loved English. At the University of California at Berkeley she earned a double major in molecular biology and English Literature. She wrote two honors theses, one on late gene transcription and bacterial phage P2 and the other on the clerical characters of George Elliot and the history of the Church of England. Her passion for genetics led her to Leonard Guarente's lab at the Massachusetts Institute of Technology, thus making the transition to studying yeast and eukaryotes. At the Yeast Genetics Meeting in 1987, it became clear to Forsburg that yeast as an organism was becoming an ideal genetic tool to dissect complicated cell biology problems, which led her to the 2001 Nobel Laureate Paul Nurse's laboratory, at Oxford University for her postdoctoral training. "I liked the idea of approaching a big problem, a broad cell biology problem, and, in this respect, understanding the mechanisms of the cell cycle was ideal."

She loves England. "It is great to get off a plane and feel like I go home." She seriously considered staying there, but it is a long way from California, which she now calls home. One of her great passions is theater, and while at Oxford she attended the theater in London every couple of weeks. Although she did not take part in theater, she admits to singing in a college choir during her first year there.

Forsburg says that she chose to work at the Salk Institute, "not for the money." She was drawn to Salk because it is different from most research labs in that "everyone knows everyone." "There are no barriers here, no walls or locks, allowing faculty, postdocs and students to mingle easily." Everything is shared, and there is no room for "empire building." The atmosphere at Salk leads to intellectual co-development, not found in most places. In addition,

the Salk Institute is in close proximity to UCSD and the Scripps Research Institute. She is also an adjunct associate professor in the division of Biology at UCSD, and spends a great deal of time with students from UCSD, some of whom are also in her lab.

Speaking about challenges and sacrifices she had to overcome to be able to get to where she is now, she remarks, "I don't think I have crossed my biggest hurdle yet. There are many, and they still keep coming. It is a very demanding profession at the highest level. I have very little time to do anything else." She is very focused on working full-time "to keep in the game"- in the "tournament." "As you go higher, the stakes keep getting higher, and if you look at the standards and expectations now, compared to 10-15 years ago, it is getting tougher. The money is tougher and the competition is tougher, and these are all big challenges." She admits that as university professors "we need to sit down and think about whether we are happy with the way the profession has moved and do we want to reclaim its humanity in some ways." "Why do I stay in? - because of total intellectual freedom. I do not do well in a chain of command. I am a rebel. I like to do what I want to do, and I love having students."

Forsburg believes that it is essential to improve science education at all levels. "It is important how we train scientists, and their expectations are important and are greatly influenced." Her advice to young scientists is, "If you love it, do it." "I think women tend to under-sell themselves." She believes that to make it in science, "you have to be prepared to work hard and be prepared to sacrifice." She urges young scientists to "make the effort rather than becoming eaten up with regret that I could have, would have, should have ... instead of seizing the day." "It is a difficult and a competitive profession and your Ph.D. does not entitle you to anything, except hard work. On the other hand, if you decide on something different, it should be for the positive reason that you like it better and it challenges you, rather than the negative reason that you don't like the academic research environment. Take on the responsibility, and with a little bit of luck you can have a very satisfying career in any aspect of science."

She admits that she is not so good at the balancing act. One good thing that she has done to keep her "sanity" is the fact that she took up running a couple of years ago, and with an improved physical fitness plan, she handles stress better. "You have to decide at every level what matters to you in your life. There is nothing that says that you cannot do excellent science in a less stressful environment, but it will be different." She is very committed to the ideals of the academy and loves educating students. "The biggest high for me was graduating my Ph.D. students. It's like a parental thing - very unexpected surge of emotion."

Forsburg used to paint and write but now only has time for professional writing. "I used to play [piano] every other night but have not done so for two years - in fact the piano needs to be tuned." "The further up you go the faster you feel you have to keep moving." She rarely gets to even look through her telescope. She is still working on finding a sense of balance.

Her web site (<http://pingu.salk.edu/~forsburg/>) is a great resource not only for scientists working on fission yeast, but also for women in science looking for career advice. She has also included links pertaining to her interests in the theater, running and astronomy. "It first started with the pombe page." The phone used to ring off the hook with requests for strains and reagents. "It got so bad that the lab had a joke on the board saying 'thank you for calling the Forsburg lab, please have your credit card ready.' The web was just introduced, and writing HTML was like a puzzle." She loves

puzzles and wrote all the HTML codes herself, in a text editor. "It started to grow, and it turned out to be this great learning tool and, an excellent recruiting tool. Many of my postdocs have come to work for me because of the Web page." The Women in Biology page started because of her involvement with the BioNet Women in Biology newsgroup. She remembers 1992-1993 as being "vibrant times at the beginning of the internet rush, when guys would write messages to the newsgroup blaming women for all their own problems." She and a few others passionately participated in such discussions, and she became much more of an activist for women in science issues. Later she started publishing her own collection of bookmarks regarding some of these issues. She proudly mentions, "the pombe page had its 100,000th visitor this weekend since 1995, a figure that for technical reasons is an underestimate." These days she does not need much time to maintain the web site, perhaps an hour or so on a weekend to post an interesting article she has read.

Now her goals are modest. She wants "to do good work that's respected for having made a contribution." She wants to be productive and have a meaningful career. The students she trains are important to her and are a part of the legacy that she wants to leave behind. "I want to train them well, and maybe I'd like to play that piano again," she says laughing. She acts as historian on the board of AWIS-SD. She has also been appointed to the Women in Cell Biology committee of the American Society for Cell Biology. And she keeps running--last year she helped raise money to fight leukemia by running in the La Jolla Half Marathon, teaming up with a 10-year-old leukemia survivor. She also captains the Salk Institute team for the Breast Cancer Race for the Cure. Despite her busy schedule, she finds time to talk to postdocs from her own and other labs, to advise them on effective academic job-hunting strategies.

Speaking with Susan Forsburg, one feels the excitement as she illustrates the satisfactions and challenges of being a university professor. Forsburg's exuberance about her research and her students make her an ideal role model for young scientists.

Discover the Biosphere 2

By Janice Payne

Have you seen what's "Under the Glass" at Biosphere 2? If you're interested in ecology, preservation of the environment, or survival, take time to visit the Biosphere 2 Center. Located in Oracle, Arizona, just 35 miles north of Tucson, Biosphere 2 was constructed in the late 1980s to mimic Biosphere 1, otherwise known as the planet Earth.

The Biosphere 2 Center is a 3.15-acre, self-contained habitat that houses several ecosystems: a rain forest, an ocean, a desert, a savanna, a marsh mangrove area, an agricultural farm and a human habitat. In 1991, eight scientists were sealed inside Biosphere 2 with the hope of sustaining themselves by farming their own food and recycling their own water and waste. Each morning for a two-year period, the eight biospherians spent three to four hours farming, harvesting and processing crops to be used in preparing their meals. This included threshing rice, grinding flour and hulling beans. Their meals were eaten as a group, with each biospherian taking a turn as the cook on a once-a-week rotation. Their diet was primarily vegetarian, although they housed African pygmy goats, chickens and pigs in the farm area. They also harvested an occasional lobster from the ocean. Two favorites in their diet that provided natural sweeteners were bananas and papayas. Their diet and recipes are documented in the book *Eating In* by Sally Silverstone.

In addition to farming and preparing their food, the biospherians spent their days maintaining and studying each of the other ecosystems. Each ecosystem was carefully controlled with a massive network of sensors that recorded temperature, humidity and gases. The lush, humid rain forest measures 91 feet tall and contains 300 species of tropical plants, including the bananas that the biospherians grew to appreciate. One edge of the rain forest overlooks the ocean, which boasts the largest man-made coral reef. The ocean, which is 25 feet at its deepest point, contains almost a million gallons of salt water, along with several species of fish, snails and algae. A wave machine and several pumps generate waves and currents that travel to an artificial beach, which became a favorite place to celebrate biospherian birthdays. The desert ecosystem is modeled after a coastal fog desert found in Baja California and contains 125 species of plants. It is on a controlled rainfall schedule and blooms in the winter. The marsh mangrove area contains 700 trees and resembles the Florida Everglades with the water gradually changing from fresh to salt water as it approaches the ocean.

The human habitat area, which borders the three bays of the agricultural farm, was made up of individual two-story apartments to house the biospherians. They shared a dining room, kitchen, library, exercise room and office area. In order to reduce waste, the decision was made for their office to be paperless. That meant receiving all news, family correspondence and project updates via television, radio, phone or computer fax. Family and friends were permitted to visit by communicating with the biospherians from the opposite side of the glass.

After accumulating a wealth of knowledge about each ecosystem and how to sustain themselves, the eight biospherians emerged from Biosphere 2 in 1993 to return to their own lives and families. In 1996, management of the Biosphere 2 Center was taken over by Columbia University with the hope of promoting environmental research and education for students and visitors.

As a visitor to the Biosphere 2 Center, you can tour the grounds of the campus and get a glimpse through the greenhouse-like windows at the rain forest, desert and ocean. The general site tour is \$12.95 for adults. For an additional \$10, visitors can take the "World of Discovery, Under the Glass Tour" and enter the biosphere for a walk through each ecosystem. After touring the aboveground areas, visitors descend into the two-acre basement, which houses air handlers, desalination systems, water storage tanks and recycling equipment. An underground tunnel leads to one of two "lungs," geodesic domes, which contain giant rubber diaphragms that expand and contract to maintain a constant air pressure inside the Biosphere. Once you exit the Biosphere, visit either of two restaurants, gift shops or botanical exhibits on the extensive campus.

For undergraduate students, the Biosphere offers "Earth semester," a 16-week, on-campus program with courses focused on geology, ecology and the human role in environmental change. The "Universe semester" offers courses in astronomy, astrobiology and physics. The "Research semester" gives students the opportunity to work on a research project with a principal investigator. Current research projects are focused on evaluating the effects of increased levels of carbon dioxide in the atmosphere.

If you're interested in learning more about the Biosphere 2 Center, visit their website at www.bio2.columbia.edu. Another great reference is the book, *Life Under Glass*, by two biospherians, Abigail Alling and Mark Nelson.

Julie Kinyoun and Siobhan Malany, two members of the AWIS – SD Newsletter Committee attended the science writing workshop held in Santa Fe, New Mexico. Here are their stories....

Santa Fe Science Writing Workshop 2003 By Julie Kinyoun

"Ok, let's look at the next person's sample." George Johnson stretched out his legs and then shuffled his papers. His ten-person group included many physical scientists interested in science writing because his area of expertise is physics and quantum mechanics. Each member brought a personal writing sample to share with the group. Each student was also told to write a lead from one of the two press conferences held earlier at The Santa Fe Institute. The attendees gathered at the Institute earlier that day to hear seminars on economics and evolution given by scientists. In hopes of imitating a press conference, each speaker provided a diversity of ideas for a story angle. Over the duration of the five-day conference, small groups met frequently to exchange possible ideas and story leads from these mock press conferences.

Upon surfing the web last spring, I found the Santa Fe workshop website (www.sciwrite.org.) In retrospect, the web search that guided me to this workshop began a yearlong journey that I anticipated to be a continuing path toward my dream job.

Over the past year, I found library copies of books written by past instructors at the conference. Many articles were easily accessible on the Internet. Reading background material provided not only a sample of carefully crafted literature, but biographical information about the authors. Once at the conference, I found conversations to flow more readily with instructors because I had familiarized myself with their literature.

The conference started with a name game. This icebreaker set a relaxed atmosphere for all to write and socialize. Our first full day unfolded at the Santa Fe Institute where, in addition to attending two press conferences, Cornelia Dean explained how *The New York Times* selects and arranges stories for *Science Times* Tuesday editions. We also met in our groups for the first time at the Santa Fe Institute. Each group was led by one of the five instructors for the week.

On each successive day of the conference, we heard individual talks by the instructors about their own career decisions and experiences on their path to becoming successful writers. Interspersed between these talks were small group sessions with our instructors.

The second evening, the instructors read excerpts of their works-in-progress or proposed ideas for future books. George Johnson's reading of his biography about a female astronomer was especially moving to me because of his word choice and eloquent sentence structure.

The attendees were not solely bookworms throughout the week. Outdoor adventure, in Bandelier National Park, daunting for those acrophobic members of the group, required climbing thirty-foot high ladders to ceremonial grounds of the natives. The hike especially facilitated conversation because of the history associated with the area. We analyzed how roofs were attached to the clay shacks and how residents climbed the steep ladders, which we all assessed carefully before we climbed.

A frolicking picnic at Sandy Blakeslee's desert hideaway consumed the final evening of the conference with ample opportunities for fun, laughter and networking.

The final good-byes on the last morning were difficult. Our week was packed with educational knowledge and networking. The five-day length fulfilled the goals of the workshop without excessive free time.

Now, the time had come for the fledglings to leave the caring nest of the Workshop and try their newfound wings in the world of science journalism.

Santa Fe Science Writing Workshop 2003

By Siobhan Malany

"I know there is little chance for me to attend this year's workshop," I wrote in an e-mail to George Johnson and Sandra Blakeslee, coordinators of the Santa Fe Science Writing Workshop. There were seven people on the waiting list. I wrote on, explaining why I wanted to attend. I talked about my desires as a writer, my disappointment in myself for "losing my voice" through my years of academic training and the disillusionment I felt in my first biotech job. Was I more of a science writer than a scientist? Several weeks later, I was on a plane to Northern New Mexico with a small collection of writing samples.

Forty-seven of us retreated to Ghost Ranch, Santa Fe for a five-day workshop. We were newspaper writers, editors, freelance writers, public relations people, environmentalists, and scientists who all shared a will to write science.

At points throughout the workshop, we rejoined as one group from our small workgroups, and four of our five instructors shared with us their personal trials and tribulations they had experienced in their science writing careers. I found these sessions particularly enlightening. Each personal story carried an essence of what it means to be a science writer. Here's some information about the professors and a little of what they shared:

George Johnson co-coordinates the workshop every year and invites a panel of science writers to be instructors. He writes regularly for *The New York Times* from his home in Santa Fe. He has written several books. The most recent include: [Fire in the Mind](#), and [A Shortcut Through Time, The Path to a Quantum Computer](#).

"Does the number 188 in the 188 Synchrotron refer to the circumference?" writes George Johnson in an e-mail to a physicist at Lawrence Berkeley National Laboratory.

"188 cm is the DIAMETER of the Synchrotron," booms the reply.

George Johnson hooked up his laptop computer to a digital projector, and, through nearly 300 e-mail correspondences, retraced for us what he refers to as "the rise and fall of element 118." Initially, Johnson was interested in writing an article for *The New York Times* about the 1999 discovery of the heaviest element. When the article appeared in print, the one line that hung between the authors' names and the abstract intrigued Johnson. It read: "this article is withdrawn by all but one of the authors." He set off to piece together clues to the truth behind that one line. Through artful e-mailing and perseverance, Johnson built a rapport with the Lawrence Berkeley scientists involved and gained a glimpse of the scientists' perspectives, the validity of the data collection, and the implications of operating a several-thousand-dollar-a-day

instrument. His completed article finally appeared in the October 15, 2002 issue of *The New York Times*. What started out as a story about the picosecond lifetime of a new element unraveled into a tale of scientific fraud, and ended with the firing of a young, brilliant and warmly-regarded physicist who sailed off on his boat under a large gray cloud.

Margaret Wertheim is a freelance science writer living in Los Angeles and writes regularly for *The LA weekly*. Originally from Australia, Wertheim has written widely for Australian Magazines, television, and radio. She is the author of [Pythagoras' Trousers: God, Physics, and the Gender Wars](#).

"[Margaret], was there anything you would have done differently during your 15 years as a freelance writer," asked a workshop attendee.

"Yes, I would have gotten a job."

Wertheim won't be giving up her freelance stance for a while. It is who she is, but, as she insinuates, her success has come about purely by rolling up her sleeves and lobbying hard to become the most effective science voice that she can be.

"Whom is science writing for?" she queries us. She flips onto the overhead projector the statistics of the best-selling science magazines in the U.S. They include *Wired Magazine*, *The Scientist*, *New Scientist*, and *Science*. Based on these readership statistics, the answer to the question is: predominantly men over 40 making more than 60K per year. Cumulatively, these magazines have a readership of around 300,000. This number doesn't encompass the online readers, who tend to be younger, but an important question remains. "Who is writing for women?" Women's magazines, on the other hand, like *Vogue*, *Elle*, *Cosmopolitan*, and *Glamour Magazine* have a collective readership of over 70 million. Having done her own research, Wertheim fought hard to convince publishers of women's magazines that women would be interested in reading about science and technology. She published a series of articles, but it proved to be a continuous uphill battle. Eventually she gave up on the publishers of these magazines and returned to writing for popular science magazines. Nonetheless, she remains devoted to reaching out to a younger, gender-mixed audience.

Erica Goode has a science background in psychology and is a staff writer for *The New York Times*. She sat on a stool in front of the audience and reflected on three hard-learned lessons of her writing career.

In the first lesson, Goode was on an assignment to write a psychological profile of a young man who was in jail for having incidentally shot and killed a man during a convenience store hold-up. During the interview process, the subject became a likeable character, Goode describes. He had hopes and goals. The story Goode was to write was from the single perspective of convicted murderer and placed him in a redeeming light. But what of the victim's family? "I did ask my editor if I should speak with the family." But, her editor didn't find it relevant to the story, and Goode never met with them. Shortly after the article appeared in print, the victim's daughter suffered a nervous breakdown. "She said it was a violation she will never forget," Goode says quietly. Then she adds with more force, "I had an obligation to speak to the family."

The next story involved a medical doctor who was suspected of helping his wife commit suicide. Through a series of interviews,

Goode developed her own deep suspicions of the doctor. “There was something not right about him,” she describes. But, she masked these feelings behind a story that was simply “too soft.” When she reread the published copy, she knew it was not a true account of who this man really was.

The last story Goode shared with us was about writing the profile of a neuroscientist and Nobel Prize hopeful. Goode recalled her excitement over the opportunity to interview a leading expert in psychoanalysis. But, in each successive interview session, it became harder and harder to maneuver past the extreme egotistical and controlling nature of the interviewee. Then on one occasion, the neuroscientist offered Goode a gift. “I explained to him that *The New York Times* prohibits me from accepting gifts.” In the end, Goode reluctantly accepted the gift and told her editor that if she were to write this story, it would be a very negative profile. The story was dropped.

“You can’t always keep the peace,” explains Goode. But, as her stories tell us, a writer must always write a balanced and true story.

Keay Davidson has over 15 years of newspaper experience writing for the *San Francisco Examiner*, which in 2000 became *The Chronicle*. He is also the author of the biography of Carl Sagan.

“In the third grade, I named Carl Sagan as my hero,” states Davidson with a smirk. When Davidson was asked to write the biography of Carl Sagan, he thought of it as a good opportunity to understand the role Carl Sagan played in his childhood. It was also the challenge Davidson was looking for: addressing real science versus pseudo science, reason versus non-reason, facts versus fallacies. Carl Sagan, with his dazzling style, was the “companion” for pseudo science believers. “He was a man of this time,” Davidson remarks. A key source for Sagan’s biography turned out to be Sagan’s third wife. Had Davidson not built a solid rapport with this woman, who had many important connections, he doesn’t believe he would have been as successful in completing his task. His advice to us: “you cannot be dependent on a few relationships to write a book. Get the support.” Keeping up with the pressures of writing for a leading newspaper and grappling with the issues between science and non-science in his book did take its toll. Davidson spoke openly about a panic attack he suffered near the completion of the biography and about how he needed to work through it to publish the book.

What did I get from the workshop? My hesitation to write had lasted 10 years. The day after I returned from the workshop, I looked over my story idea and the critiques made by my group. I browsed the magazine racks for best-fit magazines and picked two. Referring to the tips for writing a query letter and keeping in mind the essence of one of the magazines, I developed and submitted a 500-word query.

Seeking Lawful Permanent Residence in the United States Under Post 9-11 Rules: The Extraordinary Ability Alien, Outstanding Researcher and National Interest Waiver

By Suzanne Brummett

Suzanne Brummett (suzanne@americavisalaw.com) is an immigration attorney in Carlsbad, CA.

Under the employment-based immigrant visa categories, there are three classifications which allow professors, research scholars and scientists to seek lawful permanent residence in the United States, without pursuing the onerous labor certification process. As the nomenclature suggests, aliens with extraordinary ability, outstanding professors and researchers, and those working for the “national interest” may petition for immigrant status based on their achievements and potential benefit to the U.S. Moreover, except for the outstanding researcher category, the other two classifications do not require an offer of a permanent, full-time position. The significance of waiving the job offer requirement is that the foreign national may submit the petition, as opposed to having an employer do so on his or her behalf.

The following is the first of a two-part article discussing the requirements for these classifications, and strategies and tips in preparing a petition. While this first installment will delve into the regulatory requirements and approach to preparing your petition, the second part will discuss strategies for filing your petition and dealing with potential obstacles to obtaining an approval.

PART 1

Common and Differing Elements

The evidence required for these three types of immigrant petitions can be very similar in many instances. Consequently, it is normally possible to submit an application for immigrant status under two or more categories simultaneously.

The main difference between these categories is the focus of the eligibility requirements. Both the extraordinary ability and outstanding researcher categories focus on the foreign national’s superior qualifications as being “at the top of his or her field” or “outstanding.” On the other hand, the national interest waiver category focuses on the needs of the U.S. and how the foreign national’s achievements have benefited the U.S. and how his or her abilities will benefit the country in the future.

Eligibility Requirements

The **extraordinary ability alien** category may sometimes be the most daunting to prove. The foreign national must meet the statutory requirement of proving that he or she has risen to the **top of his or her field of endeavor** and that he or she has **sustained national or international acclaim and recognition**. Immigration officers have been known to scrutinize these types of petitions very stringently. The federal immigration regulations set forth the specific criteria to show extraordinary ability, requiring that evidence be submitted to establish at least three of the 10 criteria listed. The more evidence you obtain, the stronger your case may be. The difficult part will be proving you are among the top few percent in your field. Remember, this may be a matter of opinion, which can vary significantly among different experts and different officers. Also, a “small percentage” has varying numerical value,

depending on the total number of people in your field of endeavor. If you can establish that you are an extraordinary ability alien, you may submit your own petition, with a statement detailing plans on how you intend to continue your work in the U.S.

The **outstanding researcher** category may sometimes prove to be the better alternative, as the standard of proof is not as high as that in the extraordinary ability category. Professors, researchers and scientists need only satisfy two regulatory criteria; hence, it may be an easier standard to meet. Foreign nationals seeking classification under this category must prove that they are **recognized internationally as outstanding in the academic field**. A major obstacle for many professors, researchers, and scientists is that an employer must sponsor the petition. In many instances, due to the nature of the funding of research grants, the typical employer-employee relationship simply does not exist. However, it may be possible to argue that a position is permanent in nature, despite the funding issue.

Additional factors to consider are that you must have at least three years experience as a researcher, and the petitioning company or research facility is required to employ at least three full-time research staff with a proven record of accomplishment in an academic field. Individuals in the early stages of their careers and small research facilities may have difficulty meeting this standard.

The **national interest waiver** is available for individuals, who are members of the professions holding advanced degrees or who are of exceptional ability in the arts, sciences, or business, whose work is in the "national interest." There is no per se "standard of qualifications" for this waiver. In fact, legislative history shows that Congress did not provide a specific definition of the term "in the national interest." Moreover, the immigration regulations likewise fail to define this term. A precedent Administrative Appeals Office decision, *Matter of New York State Department of Transportation (NYSDOT)*, Int. Dec. 3363 (Comm. 1998), provides examples of what kind of work might be deemed to be "in the national interest."

Additionally, NYSDOT provides a three-prong test that must be met. This test is briefly summarized as follows:

1. The petitioner (whether an employer or a self-petitioning foreign national) must show that the beneficiary seeks employment in an area of work that is of "substantial intrinsic merit."
2. The petitioner must demonstrate that the proposed benefit will be "national in scope."
3. The petitioner must show that the "national interest" in granting the national interest waiver is greater than the national interest in requiring an approved labor certification. In other words, the beneficiary must establish that he or she will serve the national interest to a "substantially greater degree" than would an available U.S. worker having the "same minimum qualifications."

The most problematic feature of the national interest waiver category is the undefined nature of this category, which gives a Bureau of Citizenship and Immigration Services (BCIS) examiner a high degree of discretionary decision-making authority, and may sometimes lead to inconsistent decisions. It is incumbent upon you to establish a track record of past achievements, as well as to show a promise of future success, and to highlight specifically the benefits to U.S. national interests. You must also clearly articulate and explain your contribution to your field.

Proving Your Case and Avoiding Pitfalls

Before preparing your case, you must consider your overall approach. Simply providing evidence that fulfills three or more of the criteria set forth in the relevant regulations of the BCIS, formerly the Immigration and Naturalization Service, is not enough. Cases must be **well documented and you must succinctly argue the merits of your case**. Although you are not in a courtroom setting, you must present persuasive arguments regarding your eligibility. Preparing an application under one of these categories is difficult and time-consuming and involves a significant amount of legwork.

In some cases, timing may be an issue. It may be wise to postpone filing until a publication or other major research contribution can be documented or until you can gather the strongest evidence possible to be able to present your case in the most favorable light. Foreign nationals who are in the early phases of their careers may want to consider delaying filing for a year or longer. Understandably this may not be possible if you have no available temporary worker visa options left to allow you to remain in the U.S.

It is important to gather and organize your evidence well ahead of time in order to be able to evaluate your eligibility. It is incumbent on you to take time in organizing and categorizing evidence based on the criteria outlined in the regulations. It may take months to be able to gather everything you need and to prepare your application. You cannot be impatient and rush through the process just to be able to file. When you review your evidence, you must scrutinize every document and be selective. The volume of material submitted does not guarantee success. In fact, this can work against you.

Finally, you must also be aware of pay issues. Start-up companies and smaller companies have been receiving additional scrutiny particularly in meeting the "ability to pay" standard required for most employment-based immigrant visa petitions. Even self-sponsored petitions can experience problems in this area and may need to rebut issues of public charge.

In the next part of this article, tips and strategies in filing your application will be discussed. Part Two will appear in the November/December 2003 edition of the AWIS Newsletter.

Copyright © 2003 • Suzanne Brummett • All Rights Reserved

The San Diego Bioinformatics Forum: Johnson & Johnson, Integrating Bioinformatics into Large Pharma Organizations

By Barbara Armstrong

At The San Diego Bioinformatics forum on August 12, Dr. Simon R. Smith, Head, Bioinformatics Software Development at Johnson & Johnson (J & J) talked about developing Web-based bioinformatics tools in a large pharma organization whose main concern is finding New Chemical Entities (NCEs), not developing bioinformatics tools.

J & J is a large pharmaceutical company with 110,000 employees in eight sites on two continents. Each site is semi-independent and each has a different focus. The La Jolla site, for example, has a genomics focus where the Belgium site has a chemicals focus.

The Bioinformatics department at J & J is charged with developing and integrating software across a diverse organization. The tools they have developed service high-throughput screening, pharmacokinetics, compound distribution, scale-up and other tasks.

The major bioinformatics tools used at J & J are:

- Support software for tracking DNA Chip microarray data
- GeneView – an internal database covering all genes of interest. This software integrates information from internal and external sources.
- Clone Directory – an internal database to track clone information
- A search engine to run BLASTS behind J & J's firewall – data from NIH are downloaded to an internal server.
- Leapfrog – A system to track the drug discovery process
- iDiscovery – a personalizable tool similar to a "my Yahoo" page that brings links to the latest research papers, scientific websites, or weather and news to the scientist's computer.

The Forum drew 90 people. About half of the people were attending the event for the first time. The next two meetings will be held on October 14 with a presentation by Cengent Therapeutics, and December 9 with a presentation by Elitra Pharmaceuticals. For more information please go to <http://www.sdbioinfo.org/>. If you have any questions contact Tobey Tam tmtam@hewm.com.

The event was sponsored by LION BioSciences and San Diego Technical Books (<http://www.booksmatter.com>.)

DEPARTMENTS

Your Two Cents

"What, in your opinion, is the most important invention of all time?"

Tell us what you think! We would like to publish your responses in the next Newsletter! Please reply to Hima Joshi (hjoshi@san Diego.edu). **Note:** Unless you indicate that you would like to remain anonymous, your name will be included with your response.

AWIS Book & Movie Club Book Review for July:

Ellen Foster

By Kaye Gibbons

Reviewed By Jenny Hsieh

The book Ellen Foster is a story of an abandoned, 11-year-old girl, who manages to survive many hardships and obstacles to find meaning and purpose in the world. It is a self-portrait told in Ellen's voice, of her life growing up in the south. Her mother is a sick, abused woman who commits suicide. Her father is a drunk, abusive man who terrorizes Ellen. Somehow with humor, intelligence and grit, Ellen manages to provide and take care of herself. After her father's death, a judge awards custody of Ellen to her grandmother, a bitter and vengeful woman. Ellen's grandmother treats her very badly; the woman blames her son-in-law for ruining her own daughter's life and hates Ellen for bearing physical resemblance to him. Throughout the book, Ellen maintains the belief that there is a place for her in the world and she continues her search for a home that will fulfill her desire for love,

acceptance, and order. Her narration alternates between the struggles and horrors of her childhood and the faith and goodness of her present life. Although the story is about a little girl, it can easily be an old woman's tale. The story ends with a visit from Ellen's childhood friend, Starletta, who brings hope to Ellen that she will enjoy the happiness and innocence that a girl her age deserves.

Major discussion points for the book included an elaboration of Ellen's character and her desire to search for a home, her need for order, her survival instincts and her division of things as either good and bad, or black and white. Other discussion points focused on the themes of how society and the legal system deal with abandoned children, racial prejudice, slavery, traditional vs. non-traditional family values, and religion.

The author, Kaye Gibbons, has chosen not to use quotation marks for dialogue. The story is instead told in Ellen's voice as she flips back and forth from her past life to her present life. There were different opinions regarding the effect of this for the reading experience; some of which ranged from initial confusion and distraction to delight in absorbing a story told from a child's mind, as if the reader is listening in on a private conversation.

Twelve people attended the meeting, and the book received an average rating of 3.4 stars (out of 5). Most of the readers appeared to enjoy the book and commented that it was a quick read and would recommend it to a friend. Personally, I loved Ellen Foster. I am drawn to books written about strong, confident female characters who manage to find happiness, despite life's hardships. What I enjoyed about Ellen Foster is how Kaye Gibbons managed to develop the character of Ellen; it's easy to adore Ellen and appreciate how precious she is. I also highly recommend other books by Kaye Gibbons, such as A Virtuous Woman, Sights Unseen, and Charms for an Easy Life. Most of Gibbons' themes revolve around women, family, and life in the South.

AWIS - San Diego Chapter Welcomes New Members:

By Emily Leong and Susan Jennings

Hui Cai	
Lani J. Callison	Pfizer
Becky A. Diebold	The Scripps Research Institute
Peggy Eis	
Marina G. Harris	GNF
Charlene Hooper	
Yessenia Ibarra	
Jennifer Kisko	Heller Ehrman
Victoria Lynn Koller	IriSys Inc.
Susan Luo	
Lyudmila Lyakh	National Cancer Institute
Karen J. MacFarlane	UCI
Virginia McClintock	
Alison McManus	Paradise Valley Hospital
Magdalini Moutaftsi	UCSD
Rosemary Remigio-Baker	San Diego State University
Caridad Rosette	Sequenom, Inc.
Ciara Ryan	The Burnham Institute
Kimberly Sams	Mesa College
Zhu Shen	BioForesight
Valerie Uzzell	
Joan H. Winters	UCSD
Heidi Woelbem	Ligand Pharmaceuticals
Lauren D. Wood	

AWIS Members On the Move...

In this section of the newsletter, we report on the accomplishments (new jobs, promotions, awards, publications, etc.) of AWIS-SD members. If you have an accomplishment to report, send it to Barbara Armstrong at baawis@nethere.com and put "members on the move" in the subject heading.

Joy Jacinto, a member of the Newsletter Committee and the Publications Committee for the 2003 Women in Bioscience Conference, has joined Acon Labs. She will be working as a Marketing Assistant for Acon's International Sales & Marketing. Her responsibilities will include product management and marketing.

Michelle Krakowski, who served as co-chair of the Events Committee, has accepted a position in Vancouver, Canada. She will serve as the Consulting Chief Scientific Officer for the Michael Smith Health Research Foundation. Michelle worked on the 1999 Gala & the 2001 Women in Bioscience Conference.

Siobhan Malany, a member of the Newsletter Committee, recently joined Neurocrine Biosciences as a principal investigator in pharmacology/lead discovery. She is responsible for assay development for G protein-coupled receptor targets.

Cathy Manner, who served on a number of AWIS committees (Newsletter, Outreach, Scholarship, Events, and Publications committee for the 2001 and 2003 Women in Bioscience conference) has accepted a job in Frederick, Maryland with Science Applications International Corporation (SAIC.) SAIC contracts with the Department of Defense to manage their medical research funded programs. Cathy will work with SAIC and military staff in Frederick, MD, to manage the Department of Defense's medical research programs. Cathy said she accepted the job because it sounded challenging and intellectually stimulating, and she needed a change of scenery.

Jodi Connolly (Outreach Committee co-Chair), **Tobey Tam** (AWIS Board and AWIS website, as well as Newsletter, Outreach, and Scholarship), and **Tracy Vivlemore** (Events Committee co-Chair) all recently passed the Patent Bar exam.

AWIS Book & Movie Club Movie Review for June: "The Race for the Double Helix"

Reviewed By Susan D. Brown

AWIS BOOK CLUB EXPANDS TO INCLUDE MOVIES

Fourteen AWIS members and guests gathered for the first meeting of the "movie" part of the newly expanded AWIS Book and Movie Club. At the meeting we viewed "The Race for the Double Helix," starring Jeff Goldblum as James Watson. This made-for-TV movie depicts the scientific, institutional, and social context in which Watson and Francis Crick deduced the structure of DNA, as well as the process by which they arrived at their model. The movie is based loosely on Watson's 1968 book "The Double Helix," but does not adopt his point of view.

Rosalind Franklin, the meticulous scientist whose excellent images of X-ray diffraction by DNA fibers provided essential information for Watson and Crick's model, is portrayed in a far more favorable

light than in Watson's book. The social milieu is also presented with a more modern sensibility. For example, the faculty lounge at King's College where Franklin worked on DNA, was off limits to women, and Franklin was not invited to join the men in their evenings at the pub. This film vividly portrays an environment in which a talented woman was given a prestigious position and invited to share her work in formal seminars, but was excluded from the important informal discussions, which are also critical for the advancement of science and of individual careers.

The movie was generally well received and sparked an interesting and wide-ranging discussion. For example, Watson and Crick assembled their proposed structure based on the experimental work of others, including Franklin, but did no empirical work on DNA themselves. Considering their accomplishment and how it was achieved, we discussed the role of meticulous, careful, and cautious step-by-step work versus the leaps and synthesis of others' work, that often characterize major advances in knowledge. We also discussed how Crick and Watson were allowed to pursue their interest in DNA at the expense of the projects they were expected to complete, and how that differs from the life of most graduate students and post-doctoral fellows, who must pursue the projects for which they and their advisors have obtained funding, usually with little leeway for side interests.

Of course, we noted how women's roles and opportunities have changed over the course of 50 years. We're no longer excluded from official and institutional opportunities, although it's still important to be sure that we are included in the informal discussions in which collaborations are established and important information is exchanged. AWIS has served that important function for many of us. We should also remember to invite each other, and the men, to the pub.

The AWIS Book and Movie Club meets monthly, alternating between book and movie reviews. Look for e-mail updates or log onto the website: <http://awis.npaci.edu/shtml/book.shtml>.

Job Postings

For an up-to-date list of jobs and job requirements, please check our website: http://awis.npaci.edu/newsletter/job_board_viewer.cgi. The username is: awis and the password is: gala. The following jobs were posted July 15, 2003. Kforce-Scientific, the premier provider of both traditional and web-based specialty staffing has the following exciting openings available immediately.

Manufacturing Supervisor	Information Specialist
Regulatory Affairs Specialist	Senior QC Microbiologist

For a complete list of Kforce's jobs visit their website: <http://www.kforce.com>

Subscribe to the Free AWIS E-mail List

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

About the AWIS Newsletter

The AWIS Newsletter is published six times per year and provides AWIS members and supporters with information on Chapter activities, career development, 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:

Janice Payne	Siobhan Malany	Shermali Gunawardena
Julie Kinyoun	Hima Joshi	Barbara Armstrong
Joanne Mullen	Tobey Tam	Sarah Shoffler
Joy Jacinto		

Send news items and comments 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 to be included in the next issue, please submit it by October 3, 2003.

To post jobs in the AWIS newsletter, contact Natalie Schiller at nschil@cox.net, or AWIS PO Box: 178096, San Diego, CA 92177-8096 for details. Deadline for inclusion in the next AWIS newsletter is October 3, 2003. If submitting by snail mail, include the words "ATTN: Natalie Schiller" on the bottom left corner of the envelope.

Moving? Address Change?

Please notify us of your new address so you won't miss our mailings! Please log onto our new membership update page <http://awis.npaci.edu/html/login.html> using your AWIS-San Diego username and password. If you have not yet received a username and password, or have misplaced them, please e-mail sdawis@san.rr.com. If necessary, you can also mail your updated information to: AWIS - San Diego, PO Box 178096, 92177-8096.

IMPORTANT INFORMATION ABOUT



San Diego Chapter

Website: <http://awis.npaci.edu>
 E-mail: sdawis@san.rr.com
 Mail: AWIS, San Diego Chapter
 PO Box 178096
 San Diego, CA 92177-8096

National Chapter

Telephone: (202) 326-8940
 Website: <http://awis.org>
 E-mail: awis@awis.org
 Mail: AWIS National
 1200 New York Avenue, NW, Suite 650
 Washington, DC 20005

IMPORTANT CONTACTS

<u>Committee</u>	<u>Contact</u>	<u>Email address</u>
Book & Movie Club	Hima Joshi	hjoshi@sandiego.edu
Corporate Liaison	Natalie Schiller	nschill@cox.net
Database	Susi Jennings	spena@ucsd.edu
Events	Fan-Li Chou	flchou@scripps.edu
Events	Tracy Vivlemore	tracyviv@aol.com
Membership/PR	Karin Lucas	kkillerm@ucsd.edu
Newsletter	Barbara Armstrong	baawis@nethere.com
Outreach	Jodi Connolly	jconnolly@san.rr.com
Outreach	Tammy Garbett	tammylindell@hotmail.com
Scholarship	Fran Putkey	fputkey@earthlink.net
Strategy Sessions	Anjali Kansagara	StrategySessions@hotmail.com

<u>AWIS Board</u>	<u>Name/ Email address</u>
President	Dr. Anna-Maria Hays haysam@scripps.edu
Vice President	Dr. Barbara Coleman pharmascout@covad.net
President Elect	Janet White Janet.white@pfizer.com
Outgoing President	Dr. Elaine Weidenhammer eweiden@hotmail.com
Treasurer	Dr. Kathy Ogilvie myersogilvie@cox.net
Secretary	Dr. Karen Arden karden@ucsd.edu
Historian	Dr. Susan Forsburg forsburg@salk.edu
Member-at-Large	Dr. Tobey Tam Tobey_Tam@yahoo.com

<u>Advisors</u>	
Bylaws	Denise Hickey dhickey@collateralthx.com