

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.

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NEWS

Upcoming Events

By Fan-Li Chou and 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

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

December 17: Social, Wednesday, December 17, 7-10 p.m. Rock Bottom Brewery on the corner of La Jolla Village Dr and Via La Jolla Cost: TBA

Featuring: Sebastian the Magician, great food and drinks, a wonderful opportunity to network and have fun.

January 26: Dr. Lotte Bailyn Professor of Management at MIT Sloan School of Management Gender equity and life/work balance:

February: Strategies for a successful academic career

February 2: Strategy Sessions – Smart Women (and men) Finish Rich. Strategies for becoming financially savvy.

Outreach Committee Leads a "Bubble Exploration" with Local Girl Scouts

By Tamara Garbett and Jodi Connolly

For the second year, the AWIS-SD Outreach Committee participated in Girls Matter, a math, science and technology conference for local Girl Scouts. The event was held on August 2 at the San Diego County Office of Education and sponsored by Qualcomm. Representing the Outreach Committee at this year's event were Tammy Garbett, Tanya Ghanjanasak, Lisa Lai, and Tammy Seasholtz. The Outreach Committee led hands-on workshops on the physics of bubbles. There were three stations of activities for girls who were between the second and fourth grades. All the girls built their own bubble wands to use at the stations. The girls first explored how differences in chemicals affected the ease of making bubbles and how long the bubbles lasted before popping. Then they developed techniques for blowing super large bubbles and bubbles inside each other. All throughout the activities, the Outreach volunteers engaged the girls with interesting facts about bubbles and how they are formed. The girls enjoyed the activities and learned a lot about the physics of bubbles in the process.

AWIS Outreach members have also recently participated in the second annual Expanding Your Horizons Conference (www.sdsa.org/eyh) at UCSD. Expanding Your Horizons is a San Diego-based science and technology conference for sixth- through tenth-grade girls and their parents. Approximately 30 AWIS members volunteered to lead five different hands-on workshops or participate in a career panel. More information will follow in the next AWIS-SD Newsletter.

The next event for the Outreach Committee is the Sally Ride Science Festival (www.SallyRideFestivals.com) on November 2 at UCLA. The Sally Ride Festival includes a keynote address by Sally Ride, discovery workshops and a Street Fair with hands-on science activities for the fifth- through eighth-grade girls attending the event. The Outreach Committee will sponsor a booth for the Street Fair, where the Committee will have hands-on science activities and information about AWIS. To volunteer for this event, or for more information about the AWIS-SD Outreach Committee, please contact Tammy Garbett (tammylindell@hotmail.com) or Jodi Connolly (jconnolly@san.rr.com).

New Address for the AWIS-San Diego Chapter Website: www.AWISsd.org

By Tobey Tam and Barbara Armstrong

AWIS San Diego Board Acts to Simplify Chapter URL

In August, the AWIS San Diego Board decided to register the domain name: www.AWISsd.org to make it easier than before to locate the chapter website on the World Wide Web.

Every computer on the Internet has a unique address, called an "internet protocol (IP) address." An IP address is a complicated string of numbers that is usually difficult for people to remember. So, the domain name system, (DNS) was created to allow a mnemonic substitute string to be used instead of the computer IP address.

Since 1999, The San Diego Supercomputer Center has been kind enough to host our website under the name awis.npaci.edu. By registering www.AWISsd.org, we are now able to use a more intuitive name to locate our chapter website on the World Wide Web. If you have already committed awis.npaci.edu to memory, don't worry. Both DNS names will find the website.

August AWIS Event

Tour of the Donald P. Shiley Center for Science and Technology University of San Diego By Janice Payne

Innovative is the word that came to mind as I toured the University of San Diego Center for Science and Technology with a group of AWIS members on the evening of August 6. The design of the new Center will unite the scientific disciplines of biology, chemistry, physics, marine science and environmental studies, which had previously been scattered across campus. Each floor of the four-story science center has laboratories, classrooms and office space occupied by members of each scientific field. This will encourage scientists and students in different fields to share information and learn from each other.

We were fortunate to have representatives from each department to serve as our tour guides. Sue Lowery, Ph.D., is an Associate Professor of Biology and she served as the new Center's faculty coordinator. Debbie Tahmassebi, Ph.D., Assistant Professor, and Tammy Dwyer, Ph.D., Professor and Chair, represented the Chemistry Department. Anne Sturz, Ph.D. is an Associate Professor and Director of the Marine Science and Environmental Studies Department. They each provided insight into the background, design and educational opportunities offered by the new Center.

The outside design of the Science Center is patterned after the 16th century Spanish Renaissance architecture evident around the USD campus. The interior of the building, on the other hand, takes visitors into the 21st century. The focus of the lobby is a chandelier-like structure made up of over one hundred fiber optic cables and four rotating color wheels. David Smith, Chair of the USD Fine Arts department, designed the sculpture, which contains motion detection sensors that increase the amount of light as visitors enter the lobby. Interactive touch screens along the wall highlight activities of each department.

Dispersed between the four floors of the building are 73 research and teaching laboratories, six classrooms, 48 faculty offices, aquariums, a greenhouse, an aviary and an astronomy deck. Also available to students is an electron microscopy lab, a nuclear resonance spectrometer and a geographic information system lab that will map out San Diego ecosystems. The center was awarded a \$458,000 equipment grant from NASA, which funded the purchase of a wave tank, weather station, computers and telescopes.

In addition, the center boasts some unique architectural features. Several circular tile nodes in the hallways transform science into

art. Behind the building is the Strata Plaza, a geologic garden, which contains layers of rock and fossils representative of those found in San Diego County. Opposite the Strata Plaza is a garden and walkway patterned after a DNA helix.

More than 700 corporate, foundation and individual donors provided funds for the \$47 million center with naming rights going to Donald P. Shiley following his generous donation of \$10 million. Donald Shiley is known for his invention of the Bjork Shiley heart valve, while his wife Darlene Shiley has served on the USD board for the last decade.

With fall quarter just getting underway at USD, all incoming science students are expected to benefit from the Center. For more information about the Science Center, visit the USD website at <http://www.sandiego.edu/>

Thanks to Professors Lowery, Dwyer, Tahmassebi and Sturz for showing us your state-of-the-art facility! Thank you to Tracy Vivlmore for organizing this event.

AWIS Open House a Success

By Hima Joshi

Approximately 200 people attended the AWIS Open House on Thursday, September 4 at the Salk Institute. The evening began with mingling in the foyer outside the Frederic de Hoffmann Auditorium. Each of the AWIS committees had a booth with information and sign-up sheets.

After the crowd moved into the Auditorium, AWIS-San Diego President-elect Janet White presented a series of awards to active AWIS members. **Anjali Kansagara** received an award for **Achievement in Innovation**. She developed and implemented the popular Strategy Sessions. **Karin Lucas** was named **Rookie of the Year** for jumping into AWIS with both feet and for chairing the Membership Committee. Lucas was also in charge of public relations for the Women in Bioscience Conference, and she was instrumental in organizing the Open House. The **Mentor of the Year** was **Swanie Schmidt**. In her Strategy Sessions on mentoring, Schmidt has helped many people find mentors. She has also shared her wisdom and given support to many individuals in the AWIS community. **Elaine Weidenhammer** received the **Leadership Award**. While she was the president of AWIS-San Diego, Weidenhammer built the foundation that has led to the amazing growth of the San Diego Chapter of AWIS. The chair of the Outreach Committee, **Jodi Connolly**, received the **Outreach Award**. Connolly was recognized for her great ideas and her ever-present enthusiasm. The **Lifetime Achievement Award** was presented to **Susi Jennings** for her dedication and her enthusiasm in creating and maintaining the AWIS-San Diego member database.

The evening ended with improvisational pandemonium, led by Milo Shapiro of IMPROVentures. Shapiro's interactive presentation, entitled "You Gotta Fail...To Succeed!", had the audience vocalizing as an "emotional orchestra" and speaking in made-up languages with their neighbors. Shapiro's exercises were designed to encourage teamwork and communication...and they were a lot of fun!

Thank you, volunteers from the Membership Committee (Karin Lucas, Ursula Kessen, Nina Robinson, Huong Huynh, Julie Kinyoun, Karen Arden, and Swanie Schmidt), and volunteers from

the Events Committee (Fan-Li Chou, Tracy Vivlemore, Janice Payne, Stella Kim, and Lisa Lai) for organizing such a fun and productive Open House.

SMART Mentorship Event

By Julie Kinyoun

The first of three follow-up sessions for those who committed to finding a mentor at the June 2 Strategy Session, took place on July 14.

The theme of the first mentoring follow-up session was SMART, an acronym for Specific, Measurable, Achievable, wRitten, and Timebound which was emphasized by facilitator Swanie Schmidt throughout the evening. No, finding a good mentor does not require an unusual level of intelligence. In order to find a good mentor, Schmidt asserted that goals must be set that fulfill the words represented by the acronym.

Participants completed exercises including drawing a picture of a mentor with key body parts labeled, and writing a letter to a friend describing efforts to find a mentor. Picture comparison provided an opportunity to mingle with other participants and to share thoughts. Those who felt comfortable were encouraged to share their letter with the entire group.

Under Swanie Schmidt's guidance, members of the session further expanded their knowledge of mentoring gained at the initial mentoring Strategy Session of June 2. An additional follow-up session, for those who were interested in finding a mentor took place on September 8.

Strategy Session- Life Coaching Seminar

By Julie Kinyoun

Suzan Tusson of Wisdom Quest Life Coaching presented a seminar called "Balancing the Web of Business and Personal Life" on August 4. This Strategy Session offered an overall analysis of both personal and professional aspects of life. Slightly different from the traditional theme-focused strategy sessions, this event allowed participants to widen their scope of thought.

Swanie Schmidt introduced Tusson as a personal friend and colleague in the field of career development. The evening began with a brief outline on balance. Tusson's introductory message encouraged finding time for oneself, keeping a gratitude journal, practicing the art of saying "no" and remembering that the web of life starts within ourselves. Any one aspect of life that is neglected might influence the stability of all other parts.

Tusson stressed five practices that will help us to move toward life balance:

- Play and express creativity
- Honor values
- Focus on what is calling our attention
- Live with intention
- Pause for rest

As an exercise, participants selected their top five values from a long list of values. Everybody categorized these values in order of importance and added word associations to each value, as appropriate. Next, each person selected Life Focus areas from another lengthy list. Each Life Focus area was ranked in order of each person's current satisfaction with it. Then, we selected our

lowest ranking life value. Using a spider web as an organizational format, each Life Focus area filled the inner area of the web followed by the value we associated with it. The web was bordered by a specific goal, which would bring us toward fulfillment of that Life Focus area. The web illustrated the importance of different life areas and their relevance to overall goals and dreams.

Participants outlined specific actions that would fulfill each goal. To conclude the exercise, participants partnered up and discussed the Life Focus area with which they were least satisfied. Each person was encouraged to follow up with other participants to see if those action steps were taken.

Tusson closed with ideas about setting and achieving goals.

- The goals you set must be in alignment with what you personally value most now, or you won't want to pursue them.
- Set goals that force you to move out of your "comfort zone."
- Be flexible. Life happens, and sometimes you may need to shift course.
- Avoid sharing your goals with friends or family members who tend to be pessimistic
- Think positive thoughts.

Her talk smoothly transitioned into the "wine and cheese" socializing and networking of a traditional strategy session.

Nominees Sought for FASEB Excellence in Science Lecture and Award 2005

Submitted by Donna Simmons

Please consider nominating candidates for the Federation of American Societies for Experimental Biology (FASEB) Excellence in Science Lecture and Award for 2005.

Selection Criteria and Eligibility

This is sponsored by Eli Lilly and Company to recognize outstanding achievements by women in the biological sciences. All women who are members of one or more of the societies of FASEB will be eligible for nomination. Nominations recognize a woman whose career achievements have contributed significantly to further our understanding of a particular discipline by demonstrating excellence in research.

<http://www.the-aps.org/awards/other/faseb.htm>

Deadline: March 1, 2004

FEATURES

Lifestyle Essentials: Health, Diet and Relaxation

By Shermali Gunawardena

Genetically modified foods, are they good or bad for us?

Genetically modified (GM) foods, from rice to salmon, are slowly creeping into our local supermarkets and we do not even know it! Genetically engineered commodity crops like corn and soybeans, both widely used in food processing are found in everything from baby formula to snack foods. More than 130 million acres are planted with biotech crops, and it is estimated that more than 70 percent of all processed foods on grocery shelves contain at least one genetically engineered ingredient. While supporters for GM

foods claim that the genetic engineering technology is capable of feeding the world by making crops more productive and resistant to disease and pests, opponents say that genetic engineering produces "Frankenfoods" which can endanger the health of people and our environment. Both arguments have some basis and with inadequate oversight by the U.S. Department of Agriculture (USDA), it is up to the consumers to decide whether they want to consume GM foods or not.

In the first wave of GM foods, foreign genes, commonly from bacteria, were inserted into plants to either tolerate a particular herbicide or to produce their own insecticide, creating genetically engineered crops. For example, genetically engineered corn and cotton plants produce their own insecticides with genes derived from *Bacillus thuringiensis* or *Bt* bacteria. Monsanto's Roundup Ready soybean, canola and cotton plants can survive spraying with Roundup herbicide because they contain a bacterial gene that renders them resistant to the herbicide's active ingredient. More recently genetic engineering has been used to remove a major allergen in soybeans, demonstrating that GM can also be used to reduce the allergenicity of food and feed.

In contrast genomics-guided transgene techniques, which are based on native or homologous genes from related species, are used to modify crops. Such genes will often modify metabolism in a manner similar to that of natural or induced mutations. Native dominant alleles, which are important to agricultural goals, but poorly represented in breeding populations because they are rare or deleterious to wild progenitors, can be created and inserted for genomics-guided transgene modifications. These modifications are generally achieved by altering the function or expression of key regulatory molecules that influence plant/animal development, including enzymes, transcription factors and signal transducers. Traits that have already been genetically engineered in this manner include diverse modifications to plant/animal reproduction, stature and lipid and lingo-cellulose chemistry. A good example of a genomics-guided transgene modified food is the Aqua Bounty Farms' "super-salmon." At the company's experimental hatchery on Canada's Prince Edward Island, aqua-culturists have modified Atlantic salmon by inserting a growth-hormone gene from the Pacific Chinook salmon hooked to a powerful promoter sequence, which boosts the fishes' growth rate. FDA approval is still pending for these "super-salmon." Regardless of the benefits, some ecologists warn that transgenic salmon could wipe out natural populations of related fish, should they escape to the wild, an issue that is of great concern.

One of the major concerns to consumers is the view that GM foods are unnatural. For centuries, nearly all-human civilizations have depended heavily on inbreeding plants (particularly wheat, barley, soybeans and other inbreeding legumes), as well as outbreeding vegetatively propagated species (white potatoes, yams) for their dietary needs. In cattle breeding, step-by-step (artificial selection, artificial insemination, and embryo transplantation) the animals' own role in the process of reproduction has been completely taken away from the animal and has been brought under the control of humans. Thus, whether it is GM or traditional breeding techniques, in both cases the plants/animals produced are not natural in the sense of pristine nature. But, there is an important difference between genetic engineering and traditional breeding that we should not forget and that is the origin of the added genes.

Thus are GM foods safe to consume? There is nothing intrinsically unsafe about GM food and ingesting bacterial genes, which we do daily in drinking water and eating salads. But some proteins in bacteria can cause allergic reactions or be toxic and this poses

perhaps the greatest food safety risk that is associated with genetically engineered crops, although now genetically engineered foods are being modified for allergenicity. Perhaps a significant environmental concern is the potential for foreign proteins in genetically engineered crops to escape and possibly poison animals or contaminate other plants, which might create herbicide-resistant "superweeds" or eliminate native populations altogether. Environmental anxiety about this concern was sparked when a group at Cornell University found that corn pollen containing *Bt* protein could kill Monarch butterfly caterpillars in a laboratory setting. Studies later found that only one commercially available *Bt* corn variety posed a significant threat. The Environmental Protection Agency (EPA) registration for this variety expired in 2001, with the phase out of existing stocks being completed by the end of this year.

To avoid such problems, what policies do the USDA and Food and Drug Administration (FDA) implement? While the USDA considers most genetically engineered crops to be "plant pests" until the developers submit data demonstrating otherwise, the FDA considers *Bt* corn and potatoes as "pesticides" to be regulated by the EPA. In addition, today's FDA policy remains a "voluntary consultation," which went into effect after thorough review of the first GE food, the Flavr Savr tomato. After four years of review, the Flavr Savr tomato, with a flavor touted as rivaling that of a vine-ripened fruit and a long shelf life, hit stores nearly a decade ago and was well received by consumers. Proclaiming GM foods safe prior to its appearance on the market in the early 1990s, the FDA noted that companies did not seek its approval for genetically engineered plant derived foods unless the foods contained food additives. The EPA is recently aiming at a scheme that could lead to the monitor of GM crops from space. Experiments will begin next spring to determine whether subtle differences in the way leaves reflect the sun's rays can distinguish transgenic from conventional maize. If it works, the technology could allow the EPA to track farmers' compliance with planting guidelines, and might even spot the emergence of insecticide-resistant pests. This would be quite a remarkable effort, since to the naked eye, transgenic plants appear identical to normal plants.

Do we the consumers have a choice when buying our food? Since GM foods are not labeled at this time, we'll have to be savvy about our food shopping. Manufacturers are not required to label products with genetically engineered ingredients, nor are they volunteering information. Many producers of GM foods fear that labeling might scare consumers away. Thus, the only way to know that our food does not contain biotech components is to buy organic products. Organic foods are legally barred from containing any genetically engineered ingredients.

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Quick and Healthy Fixings for Women on the Go

Greek-style penne with fresh tomatoes, feta and dill

(adapted from *Bon Appetit*)

4-6 servings

- 2 pounds tomatoes, halved, seeded and chopped (make sure to use ripest, juiciest tomatoes)
- 1 cup chopped green onions (both white and green parts)
- 7 ounces feta cheese, crumbled
- 6 tablespoons chopped fresh parsley
- 1/4 cup chopped fresh dill
- 1/4 cup extra-virgin olive oil
- 12 ounces penne pasta

Mix first 6 ingredients in large bowl. Set aside. Cook pasta until just tender. Drain. Add hot pasta to tomato mixture and toss to coat. Season to taste with salt and pepper.

Member Profile: Natalie Schiller Corporate Liaison

By Tobey Tam

Anative of Kansas City Natalie Schiller found that she was destined to lead a life within science.

Schiller was always interested in science. "Just had a natural affinity for it," she says. As a kid, Schiller enjoyed studying nature on her own. She had a microscope that she would use to look at all sorts of things she collected from the neighborhood. "I held make-shift dissection sessions with acorns and bugs. And I had an insect collection," Schiller proudly describes. "My fifth-grade teacher was very into zoology and reptiles. We would have science shows for the kindergarteners that year. I think my role was to teach them about some type of snake. Anyway, I never thought about science in terms of a job or career," says Schiller.

Early on, Schiller thought she wanted to be a teacher because she had spent all her life in school idolizing her favorite teachers and because her parents were both teachers. Her mother, however, encouraged her to aim higher. Schiller's mother felt that during her day, girls had fewer career choices. Those that were smart often went into nursing or teaching. But, times had changed, and her mother felt that there was nothing out of Schiller's reach. "Sounds cliché, but I always heard the words 'aim high,' meaning, if you strive for something that you think is out of reach, even if you don't get there, you're better off than if you had tried to achieve something easily reached," Schiller elaborates.

After her great experiences with her fifth-grade teacher/zoologist, Schiller continued to have excellent science teachers who further encouraged her desire to study science. At some point, she thought she wanted to be a medical doctor and so she focused on preparing herself for a medical career. She went to college in Springfield, MO at Drury College and began a pre-med program there. After spending time shadowing doctors and volunteering in hospitals, Schiller started to be less interested in giving up her life for her career. "I also was under the impression [that] one needed a noble

reason for going into medicine. [I] couldn't have been more wrong. Nevertheless, I looked into other options. Graduation was nearing, and I couldn't finish school without a plan," she says.

Schiller's favorite class in college was human physiology, and what she enjoyed most about the lectures was learning how drugs affect physiological functions. She explains, "So, I decided to go to graduate school to learn pharmacology. Not because I had this deep desire to be a research scientist, but because I thought it was a cool subject. And hey, if they are going to give me a tuition waiver AND pay me to go to school...it sounded like the perfect move after college."

"I decided I would need a complete change in lifestyle in order to continue school for another five years with no break. So, I chose to go to Tulane University in New Orleans to give me the distractions I desired. Man, did I get it. I can say that my years in New Orleans were some of the best of my life."

"When I finished my Ph.D., I was still unconvinced I wanted to continue as a bench scientist. However, I felt that to completely bag the idea of bench science based upon one lab experience would be a waste. I decided to write to some investigators to see about joining their labs for my post doctoral research. I was interested in coming to the west coast because I'm an outdoorsy person and wanted to be where the weather was nice. Three of my four interviews were in California (SF, LA, SD) and the fourth was in Boston. It came down to two positions, one at UCLA and the other at Scripps. When the day came to make a decision, lifestyle won again. I thought my life would be more pleasant in SD and chose to come work with Linda Curtiss at TSRI," she continues.

When asked about the joys/frustration of science, Schiller answers, "How about the extremely low ratio of joy to frustration in basic research." That summed it up for her. Whatever the case, she continues pursuing a career in science which has now led her to a scientific advisor position at the law firm of Heller Ehrman White and McAuliffe LLP. She joined the firm this past summer and now spends her time in patent prosecution.

In her spare time, Schiller is the Corporate Liaison to AWIS-SD where she coordinates communication with local companies that would like to post career opportunities through the new AWIS job website. And even after rupturing both of her Anterior Cruciate Ligaments (ACLs) and having two knee surgeries, Schiller is itching to get back onto the tennis court. For more information about posting jobs or if you want to challenge a rusty tennis player, contact Natalie Schiller at nschill@cox.net.

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 second of a two-part article discussing the requirements for these classifications, and strategies and tips in preparing a petition. The first installment covered the regulatory requirements and approach to preparing your petition. In this second installment, I will discuss important issues to remember when filing a petition. This article will also address the eventuality of request for further evidence and denial of a petition.

PART 2

Tips and Strategies in Preparing your Application

- **Articulate your area of expertise.** Clearly explain, define and articulate, in layman’s terms, your area of expertise, your most significant research or contribution to the field. It is best to document your credentials and accomplishments. Your case will be submitted entirely in written format; drafting and refining your explanation of your expertise will be more effective in conveying your background and legal arguments to the Bureau of Citizenship and Immigration Service (BCIS) officer.

Remember, you may need to obtain documentary evidence explaining terms or to explain why your research is so important. The BCIS officers adjudicating your petition are not experts in your field, and scientific terms may be difficult to understand. They may easily overlook the significance of your research or your accomplishments. Take the time to help them to understand why your evidence is significant. You may need to do additional research to clarify terms and concepts. The Internet is an easy avenue and a great source for this type of information. Showing government interests or funding is always helpful.

- **Peer Letters of Support.** Create a list of professional references who may be willing and able to provide letters explaining why your research is internationally recognized and why you are considered to be at the “top of your field” or “outstanding.” Gather the names of your potential references, even before you speak with them to get their consent. In this way, you can selectively choose whom to contact and in what order. You may need to seek assistance from a colleague or an employer, who may be willing to intervene on your behalf.

Your list of professional references should include contact information, how they know you and what they can say to corroborate your expertise and international acclaim. Conduct Internet research about your references and print out materials on their background and/or obtain their curricula vitae and other evidence demonstrating their expertise in the field of endeavor. This background information is important as you describe their stature

within the scientific community and bolster their credibility. This is important, because your references will need to express their opinions regarding your publications, authorship of books or articles, and scholarly research in their letters.

You should try to obtain a combination of letters from peers who can corroborate your stated achievements, and independent references from others who know your work through your international reputation or publications. BCIS examiners many times overlook letters from individuals, who worked directly with you at institutional research facilities, universities and government research facilities. However, be prepared to argue their relevance and be ready to rebut these allegations.

- **Documentary evidence.** Create a list of evidence that will be submitted with your petition to the BCIS. Your list should include headings based on the criteria required under each category. Insert the evidence into each category. Scrutinize each piece of evidence and focus on how this evidence proves “international recognition” within your field. Organize everything in a binder or folder and separate each piece of evidence by category. Peruse your evidence carefully and remember that some evidence may fall into more than one criterion.
 - **Publications, Original Scientific or Scholarly Research Contributions, Authorship of Scholarly Books or Articles.** Gather all your evidence together and place it in a binder or folder, labeling each piece of evidence by category. If possible, request more than one set of copies. The reason that organization is very important is that the documents you gather may be voluminous. Thus, to ensure that nothing becomes “lost in the crowd,” each document must be placed under the proper category. This will facilitate easy review of all of your works.
- Reference to your work is also important. Do citation searches, as widely cited or followed work is given considerable weight. Keep in mind that ranking the total number of citations to your scientific journals may not be enough. However, citation rankings coupled with other corroborative evidence from your references or other documentary evidence that the author’s work has been widely cited or followed is key.
- **Requests for Additional Evidence.** In many instances, the BCIS examiner will ask for additional evidence. Requests for additional evidence (RFE) are not uncommon in today’s immigration climate. It can be discouraging to receive an RFE after you have spent so much time and effort in preparing your application, particularly when a colleague of yours in the same department was able to get an approval. Sometimes the RFE is difficult to decipher when it appears that the BCIS is asking for evidence that you have already submitted.

Read the BCIS RFE carefully to determine what additional evidence is requested. Most of the time the RFE will single out the specific criteria you need to address. In responding to the RFE, address each point carefully and persuasively continue to argue the merits of your case. Explain what additional evidence is being submitted or, if the RFE requests evidence that has

already been submitted, address that in your response and submit the evidence again. In the event you are unable to obtain the additional evidence requested, be prepared to explain why. For example, the requested evidence may not be available or it may be impossible to obtain. Alternatively, if you believe there is no basis under the regulations for this request, explain why the request is onerous. Responding to an RFE can require extensive additional research, and can be even more time consuming than preparing the original application. Extensions to file responses to RFEs are not permitted.

- **Appeals.** You have a limited time to file an appeal after you receive a denial. Thus, remember the deadline. It is extremely important to read the BCIS decision carefully to determine if there is a basis for an appeal.

Unfortunately, new evidence cannot be submitted on appeal, and the majority of cases are not overturned.

Instead, you may wish to consider filing again. A denial does not preclude you from re-filing a petition in the same or another category. If you do so, you will need to address the denial and persuasively argue the merits of your case again, maybe with additional evidence you have been able to obtain. You also may consider other avenues of obtaining a "green card" either through labor certification, family-based sponsorship, or possibly a spouse's employment-based options.

Conclusion

There is no key to success or any guaranteed formula. This article should provide you with a basic guideline for what you will face in seeking approval as an extraordinary ability alien, outstanding professor or researcher, or an alien whose work is in the national interest. If you are considering seeking immigrant visa status under one of these categories, you should seek the advice and assistance of an attorney, who can help you prepare the evidence, and articulate the legal arguments needed to successfully gain an approval.

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DEPARTMENTS

Your Two Cents

Compiled By Hima Joshi

Question posed in the September-October Newsletter:

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

Responses:

"We spent many mornings at my house debating the question! My answer is antibiotics, but we had strong opinions about refrigeration, vaccination and the combustion engine."
- Margaret M. Dunbar

"Birth Control!! And the shower."
- Karin Lucas

"I really struggled with this, but my mind kept coming back to different forms of communication - from the telegraph to the Internet. I think even more basic and vital to our existence is written language. While any written record is certainly subject to influence by the person doing the writing, once pen has met paper, or stick the clay tablet, or even sharpened bone the wall of a cave, the words are the same to all those who can read them. Unlike oral history, which tends to vary from teller to teller, as long as a written document exists, the record will have the same content for everyone. History may be doomed to repeat itself due to man's shortcomings, but I can bake a loaf of banana bread that tastes exactly the way my mother's does, or build a coffee table the same way someone in Sweden designed it, thanks to written language."
- Laura Fernau

"After thinking about this, I've decided that the most important invention of all time would be 'feminine products.' I can't imagine life as we know it without the comfort and mobility of tampons (or related products)."
- Jenny Hsieh

"This is such a tough question! But, my gut answer is the birth-control pill. It's liberated women like almost nothing else."
- Julie Schames

Question for the January-February Newsletter:

When you were a little kid, who was your hero/heroine?

We would like to publish your responses to this question in the next AWIS Newsletter! Please reply to Hima Joshi (hjoshi@sandiego.edu). **Note:** Unless you indicate that you would like to remain anonymous, your name will be included with your response. Thanks for your "two cents!"

AWIS Book & Movie Club Review for August:

"The Secret of Photo 51"

Reviewed by Cindy Atwell

The PBS Nova special, "The Secret of Photo 51," was highly recommended by the AWIS Book & Movie Club members. This film was partially based on the book *Rosalind Franklin: The Dark Lady of DNA* by Brenda Maddox. Seventeen members and guests were present at the August movie meeting. Overall, the attendees gave the movie 4.6 (out of 5) stars.

"The Secret of Photo 51" reveals an alternate view of the story of the discovery of the structure of DNA. The film describes Dr. Rosalind Franklin's life, career, and research. Franklin's involvement in determining the structure of DNA was discussed in detail. Unfortunately, her data were shown to James Watson without her consent. She was not given credit, and she was portrayed as a villain in James Watson's book, *The Double Helix*.

The film portrays Franklin as a meticulous scientist. She accepted a position at King's College in 1951 to study the structure of DNA with Maurice Wilkins. Wilkins and Franklin did not get along, and eventually they worked separately within the same lab. Franklin continued her work and discovered that DNA can exist in two forms. In May of 1952, she took Photo 51. It was an extraordinary photograph of the B form of DNA, and the distinctive pattern clearly predicted a helical structure. In January of 1953, Wilkins showed Photo 51 to Watson. without Franklin's knowledge or

consent. Watson and Crick then built a model using her data. Ironically, they asked her to inspect their model before publication.

Nobel laureate and friend to Franklin, Sir Aaron Klug analyzed her notebooks. Dr. Klug concluded that she was very close to discovering the structure by herself through empirical research. Various interviews with Aaron Klug, Maurice Wilkins, Raymond Gosling, and Barbara Maddox supported the view that Franklin's data were critical to the discovery of the structure of DNA. Watson, Crick, and Wilkins received the Nobel Prize in 1962. Franklin died of ovarian cancer in 1958. Even if she had been given credit, Franklin would not have been awarded the prize posthumously. She never knew that her data had been crucial in the discovery of the structure of DNA.

Many Book and Movie Club members agreed that the information in "The Secret of Photo 51" was presented from Franklin's point of view. However, this did not discredit the film. The evidence presented in the film was solid. It was sad but enlightening. The film presented the forgotten side of the story, and it leaves us with questions. Would Wilkins have given Franklin's data away if she had been subservient to him? Would Watson have given Franklin more credit if she had been male? What would Franklin have done if she had known?

AWIS - San Diego Chapter Welcomes New Members:

By Emily Leong and Susan Jennings

Jennifer Meyer Bearer	Health Advances
Catherine Borden	Salk Institute
Alice Elisabeth Budai	
Madeline Butler	UCSD
Marta L. Camacho	
Sonya Summerour Clemmons	SSC Enterprises, LLC
Laura L. Horky	
Jill Jarecki	
Kristin J. Johnson	Althea Technologies
Lilia K. Koriazova	Gemini Science
Valerie A. Liu	UCSD
Christine Martin	The Strategen Group LLC
Bettina Anita Moser	The Scripps Research Institute
Nga T. Nguyen	Beckman Coulter
Tina Perez	UCSB/Southwestern Community College
Cindy M. Pudiak	Johnson & Johnson
Erin Leigh Richard	SDSU- student
Laura Mary Robinson	Chrysalis Consulting
Sarah M. Shoffler	NOAA/NMFS/SEFSC
Sooyeon Sohn	
Sonja Strah-Pleynet	Arena Pharmaceuticals
Camilla Svensson	UCSD
Sventja von Daake	UCSD
Elizabeth R. Waters	SDSU – Dept. of Biology
Chunyan Xu	The Burnham Institute
Lynn Yieh	Johnson & Johnson PRD
Jessica Yingling	UCSD

Salt: A World History by Mark Kurlansky

Reviewed by Karin Lucas

Thanks to the plentiful sodium found in today's processed foods as well as the advent of refrigeration, most of us are not aware of the crucial role salt used to play in human survival, both as an essential mineral and as a means to preserve food. Mark Kurlansky's book is an ambitious attempt to chronicle the history and uses of salt throughout the world. The book begins in China over 2,000 years before the birth of Christ and slowly meanders to 20th century western civilization. The reader learns how governments from ancient times through the 19th century raised funds and controlled the lives of their people by controlling the salt markets. Wars were waged over salt, and their outcomes were often determined by the availability of salt to the warring factions. Empires were built on salt and, then they deteriorated because of shifts in the salt trade. All of this is according to author Mark Kurlansky, a pastry chef by training and noted food historian. The AWIS Book and Movie Club agreed that Kurlansky might have over emphasized the role salt played in some of the historical moments he covers. We also agreed that the book was difficult to finish and read more like a laundry list of interesting facts than a story.

However, Kurlansky does share a number of fascinating facts and anecdotes. One fact is that the Chinese had bamboo plumbing as early as 1089, which was near the time of the Norman conquest of England. Kurlansky asserts that Venice grew to the great city-state it became through the lucrative salt trade its merchants mediated. The Catholic Church supported the salt trade by increasing the number of fasting days required by law. On these days, subjects were not allowed to eat meat, but they could eat salted fish. In the 1500s, the Polish Crown earned fully one-third of its revenue from the salt of only two mines.

Because of Kurlansky's culinary expertise and love of food, much of the book is devoted to chronicling the uses of salt in the kitchen and includes many detailed recipes from historical sources for salting various foods for preservation. While reading the descriptions for salting hams and creating the wonderful Italian and French cheeses, I found myself becoming especially hungry.

The general consensus of the Book and Movie Club was that the author bit off more than he could chew and would have benefited from a more relentless editor. Those who had read his book Cod recommended it as a much more enjoyable read with a tighter focus. Salt: A World History certainly presents an interesting and novel viewpoint from which to look through the chronicles of time, but it fails to maintain momentum through its 450 pages.

AWIS Member News

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

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*.

IMPORTANT INFORMATION ABOUT



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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. The subscription rate for non-members is \$20 a year.

November/December Newsletter staff:

Janice Payne	Hima Joshi	Shermali Gunawardena
Julie Kinyoun	Tobey Tam	Barbara Armstrong
Joanne Mullen	Sarah Shoffler	Isabelle Forter
Sumita Anant	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 December 5, 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 December 5, 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.

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