



# 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.

## LETTER FROM THE PRESIDENT



It's summertime. Congratulations to our AWIS-SD members who have graduated, have children who have graduated (including the all important step into middle or high school), and have/are on the verge of defending a thesis. We've seen the June gloom weather come and go. As we head into July, be sure to catch the San Diego County Fair – a lot of fun for the family.

Summer programs for AWIS-SD members include a tour of the San Diego Botanical Gardens on July 31<sup>st</sup> and a Strategy Session about "Managing Up" on August 2<sup>nd</sup>. Details about the Botanical Gardens event and reservations for the Gardens tour are forthcoming. Stay tuned.

The Early Career Coffee Club has been meeting regularly on the 1<sup>st</sup> Thursday of each month since November 2009. This is one of the new member-initiated programs unique to the San Diego chapter. This member-driven group is composed mostly of graduate students and postdocs who discuss topics including resume review, networking, personal branding, and personality assessment. We are looking for a group leader for the Early Career Coffee Club. As a group leader, you will organize the meetings, maintain a list of the group's participants, and manage the discussion and topics. Please contact the Board at [awissd@awissd.org](mailto:awissd@awissd.org) if you are interested in taking on this level of leadership and for more information.

Safe travels for those with summer vacation trips and have FUN in the SUN.

With regards,

## Inside this Issue

## Page

Letter from the President	1
March Strategy Session: Going Green at Home and Work	1-2
Where is the Cure?	2
Mid-Career Coffee Club	3
Outrageous Oobleck at the San Diego Science Festival!	3
Getting Ahead of the Curve	3-5
News Update on AWIS Members	5
Upcoming Events	5
Newsletter information	5
AWIS-SD Sponsors	5
AWIS-SD Contacts	6

## March Strategy Session: Going Green at Home and Work

By Caroline Craig

The environmental challenges facing the earth are continuously in the news. Most of us want to do our part to help- but what does that really mean? March's highly informative Strategy Session, Going Green at Home and Work, offered useful information and tips for everyone, from seasoned environmentalists to those looking to make simple changes that will have a positive impact on our planet's future. The session was held March 1 at Biogen Idec and was organized by Reshma Jagasia and Valerie Kosheleff.

The session began with some eye-opening facts. For instance, 44% of U.S. greenhouse gas emissions come from products and packaging. So while recycling is an important component of going green, some other important 'R' words are Reduce consumption and Reuse.

We frequently hear green terms thrown around, but do we know what they really mean? Here are some definitions that were offered:

- Carbon Footprint: "The total set of greenhouse gas emissions caused by an organization, event or product."
- Sustainability: "Meeting the needs of our generation without compromising the ability of future generations to meet their needs."
- Triple Bottom Line: "Economy, Ecology and Equity – a corporate framework and measurement of performance."

General earth-friendly information was presented regarding responsible use of energy, water, food, and other consumables. The discussion covered recycling of common and not-so-common household items, as well as safe(r) disposal of universal waste.

Specific advice was offered for going green in the lab or office. Ideas included setting up recycling stations, reusing or recycling tip boxes, returning Styrofoam packaging, turning on only half the

lights, and using stabilization buffers that allow for room temperature sample storage.

Participants also joined in group brainstorming sessions, which allowed everyone to share some creative ideas and experiences.

The evening was both fun and educational. Everyone learned something new and left the session feeling more empowered and committed to positively impacting our world.

Strategy Sessions are held the first Monday of alternating months at Biogen Idec from 6-8 pm. Please check the AWIS-SD event calendar for upcoming sessions. We look forward to seeing you there!

---

### Where is the Cure?

By an AWIS Member

As a young research scientist, I was super-charged to present my findings at an immunology conference several years ago. I received a T-shirt from the conference organizers that made me pause for a minute. On the front side of the T-shirt was a list of diseases that immunologists have found cures for and on the back was another list of serious diseases for which we lack a deep understanding. While I paused for a minute over the clever and creative aspect of the T-shirt design, I moved on.

Many years later, I came across another pause in my life – the diagnosis of Multiple Sclerosis (MS). As a scientist, I asked myself this question: When we can fly to the moon and invent the Internet, why can't we make sure I will not be paralyzed? MS is not a new disease that society came to know of recently. Currently, there are 400,000 Americans diagnosed with MS, with women having a higher risk than men. According to the Food and Drug Administration (FDA) Commissioner, Lester M. Crawford, "Today, there's more spending on biomedical R&D than ever before. Total spending on biomedical research has grown exponentially over the past 10 years. And yet, a disturbing trend is unfolding: despite the doubling of US R&D spending in both the private and public arenas, output of new products has been dropping since 1997. The FDA is now receiving fewer applications for new drugs than in mid-1990s. Almost 50% of applications are failing in late-stage Phase 3 trials. This indicates we are not succeeding in extrapolating basic science to the clinic." Furthermore, the high cost of product development coupled with high rate of failure to reach approval leads product developers to focus efforts on products that would offset the high cost. This focus may offset the development of risky and desperately needed therapies for some grave diseases.

Our healthcare system is compartmentalized. Academia, pharmaceutical and medical device companies, regulatory agencies, and hospitals have received incentives that have resulted in the United States achieving a top-notch healthcare system. However, there is a serious disconnect in knowledge sharing and alignment of expectations between these agencies that is paralyzing the speed at which we can find meaningful cures that would impact the current generation sufferers. The FDA defines the critical path that biomedical advances need to successfully complete before reaching the commercial market. Along this critical path lie three significant hurdles: safety, the demonstration of high medical utility or greater benefit-to-risk ratio, and the ability to industrialize the product concept to achieve mass distribution. Currently, product developers lack effective tools to assess safety and determine the product's efficacy in a timely and cost-effective fashion. The FDA is in a unique position to offer insight to product developers for best

practices and lessons learned through witnessing failed approvals. However, the FDA's primary responsibility rests on its critical eye for public safety. While regulatory agencies and funding agencies such as the National Institutes of Health are suited to bridge the knowledge gap to product developers, there must not be any compromise on safety when the FDA starts having a stake in the number of products being approved. So, how do we utilize the FDA's knowledge about product failures and best practices without conflict of interest? Is there an optimal way to share knowledge without losing product developers' interest? A revolutionary way of collaboration is becoming increasingly necessary to achieve success in product development.

Medical professionals are in the best position to understand the disease and needs of patients. However, the current system is not providing focused channels to direct this knowledge effectively to improve formulating therapies. A recent article about Timothy Cope, Ph.D. (Professor and Director, Neuroscience Institute, Wright State University) and Mark Rich M.D., Ph.D. (Associate Professor of Neuroscience, Cell Biology, and Physiology, Wright State University) illustrates the benefit of proper collaboration and leveraging medical professionals' experience to bring about medical breakthroughs. Rich, trained as an M.D./Ph.D., is equipped with bedside knowledge of his patients' disease as well as training as a research scientist. When faced with problems with intensive care unit patients' sepsis, he was able to come back to his laboratory and work on a hypothesis he formulated. He states, "That's what the real luck was." His initial work led him to challenge the current understanding of the problem and this required further study by recording individual nerve fiber activity. This specialized work was being done in very few laboratories around the world. However, as luck had it, Rich's colleague, Cope, was running one of those laboratories. Rich, Cope, and Kathrin L. Engisch, Ph.D., from Emory University, came together and received a \$4.8 million award from the National Institute of Neurological Disorders and Stroke in 2007 for collaborative projects aiming to study recovery of nervous system function following injury. "These are the kinds of things that can happen when you have a group," Cope said. "This is why the creation of an environment where everybody brings something unique to the table, but all with the same kind of general theme, is critical."

As I reflect on my own experience, it is sometimes daunting to coordinate my medical care. The knowledge sharing between my primary care physician and neurologist is less than desired. My doctors and I have the first hand information on my disease. An effective collaboration would involve not only research scientists, but also doctors, patients, and regulatory experts. While knowledge sharing within the scientific community occurs through original articles, conferences, patents, etc., the timely knowledge exchange and comprehensive teams with same goals is critical for meaningful medical breakthroughs.

Check these references and websites for their novel efforts to break through the hurdles:

Myelin Repair Foundation: <http://myelinrepair.org/>

[Critical Collaborations](#)

[FDA Critical Path Initiative](#)

[Open Notebook Forum](#)

[Open Chemistry](#)

## Mid-Career Coffee Club

By Kathrin Keune

The AWIS-SD Mid-Career Coffee Club in May turned into an art laboratory. Seven women gathered around a table with AWIS member and career coach Kathrin Keune to experiment with their communication skills in building relationships - qualities needed for the manager and leadership side of a scientist's career. The results were quite astounding.

Three groups were given the task to construct a sculpture from only paper and green tape.

The challenge: no words, no pre-discussion, and only four minutes.

The result: a vivid process of creative problem solving and wonderful teamwork.

Analyzing the experiment was inspiring. We found that:

- general attitude of acceptance, flexibility and adaptability made communication successful and helped participants finish the task.
- communicating a tangible idea and emphasizing commonalities was important to fuel motivation, interest, and excitement.
- having fun and playing together lightened the atmosphere and made the challenge appear easy and joyful.

With only a four-minute, fun, little exercise, we were able to address important qualities needed to successfully communicate and build relationships – food for thought and further discussion. As each person left, the atmosphere was alive with the scent of new possibilities.

If you want to participate in a similar process, look out for the next Strategy Session in August – “Managing Up,” moderated by Grace Nakayama and Kathrin Keune, or contact Kathrin Keune for more information ([www.artsbased.com](http://www.artsbased.com)).

## Outrageous Oobleck at the San Diego Science Festival!

By Carmen L. Velez



Photo by Grace Nakayama

This past March, the AWIS-SD outreach committee and volunteers participated in the San Diego Science Festival at Petco Park. This event was organized by leading science organizations in the San Diego area with the purpose of building connections between the community and STEM (Science, Technology, Engineering and Mathematics) related fields. At our booth, we had a hands-on demo called *Outrageous Oobleck!*, a cornstarch and water mixture, where kids and families experienced the unusual physical characteristics of non-Newtonian fluids. Volunteers from AWIS-SD included Kristin

McCutcheon (organizer), Suzy Szumowski (organizer), Suzanne Lee, Lauren Forbes, Grace Nakayama, Huong Huynh, Jenny Chaplin, Leticia Vega, Diane Retallack, Julia Claggett, Wendy Ochoa, Jeannine Stuzka, Kristina Schimmelpfeng, and Carmen Velez.



Photos by Grace Nakayama

## The 9<sup>th</sup> Annual Symposium on Biopharmaceuticals-San Diego Bio-Pharma Conference 2010: Getting Ahead of the Curve

By Bhawanjit Brar

On the weekend of June 5<sup>th</sup>, the Annual Symposium on Biopharmaceuticals-San Diego Bio-Pharma conference was held at the Del Mar Hilton. I usually attend this meeting as the editor of the Sino-American Biomedical and Pharmaceutical Professionals Association (SABPA) and again, it was an astounding success. As a European-Indian scientist, I got involved with SABPA two years ago while working for a Chinese company, which was developing novel biological therapies for the treatment of chronic heart failure. I was lucky to visit China last year, and fell in love with the country immediately. There is vibrancy in China, and you know when you are there that something really big is going to happen.

The conference reminded me of my time in China. At the end of the day, many of the 500 attendees felt as I did, re-energized, motivated, and optimistic about the future of biopharmaceuticals. I was in awe of the talent and expertise of the people who both presented and attended the meeting. This year's event was appropriately titled "Getting Ahead of the Curve." It is important to know where the curve is, that is the biopharmaceutical industry curve, and where you can fit in. The purpose of this year's event was to bring global experts together and through a format of knowledge sharing and networking, to promote innovation and collaboration and support advancement of Southern California's biopharmaceutical research and development.

Brian P. Bilbray, Congressman, 50th District, California gave the opening address and acknowledged that a third of bioscience and life science research comes out of the US as well as 70% of commercial drugs. Congressman Bilbray also suggested that there

needs to be less stringent regulations by the government to allow the development of "miracle drugs" and that there should be a "fast track" system for getting drugs to the people who need them now.

The title of the first morning session was 'Collaborative R&D-Industry and Academia.' Dr. Peter Zhu, a senior scientist at Pfizer introduced Dr. Diego Miralles, head and Chief Medical Officer of Johnson & Johnson PRD, West Coast. Dr. Miralles discussed the general trend for decreased productivity and increase in cost of R&D in the pharmaceutical industry. He stated that the pharmaceutical industry needs to adapt to the ever-changing environment and Johnson & Johnson is developing new business models to increase collaborations for unmet medical needs in order to increase the number of drugs in the pipeline.

Professor Xiaodong Wang, Howard Hughes Medical Institute and Department of Biochemistry, University of Texas Southwestern Medical Center at Dallas, then discussed apoptotic pathways and targeting their therapeutic application using small molecules. Dr. Wang believes that there will only be a real cure for cancer when we can understand potential resistance mechanisms and a combination therapy will be the ultimate treatment approach.

The second session of the symposium was a plenary discussion entitled 'Emerging Fields and Adapting Strategies.' The moderator of the session, Lewis Shuster, CEO of Shuster Capital, introduced five outstanding panelists who each gave a short presentation of their perspectives reflecting life science activities. These activities range from cutting edge diagnostics and therapeutics to the challenges of delivering "personalized medicine," to current trends in venture capital funding of innovative new companies and products.

Gregory F. Heath, Ph.D., Senior Vice President & General Manager, Diagnostics Business Unit, Illumina, discussed how the company has grown in the last 12 years. Their future mission is to become the leading provider of integrated solutions that advance the understanding of genetics and health and to improve human health by enabling customers to accelerate the collection, analysis, and application of biological information.

Steve Kaldor, Ph.D., President and CEO, Ambrx Inc. discussed the recent struggles that the pharmaceutical industry is facing and why Ambrx Inc. is focusing on biologics.

John M. Dunn, J.D., Executive Vice President of New Ventures, Biogen Idec Inc. shared his insights on the future of the pharmaceutical industry. Biogen Idec has \$200 million to invest in new partnerships with academia and industry, and they are exploring new business opportunities. He said the main struggles facing the industry are declining revenue growth over the next few years, diminished R&D productivity, and finding an optimal balance of external and internal growth to fill the gap. The old system is not working, and financing remains a challenge as both public and private valuations are down.

Richard Neale, L.L.B., M.B.A., Chief Business Officer, Scripps Translational Science Institute, discussed healthcare reform, individualized medicine and its utility to physicians. He said that healthcare in the US is placed 37<sup>th</sup> in the world, yet the cost per capita is 2.5 times that of France, which is ranked number 1. There is a great waste of money on drugs that are not working. With the new reform, personalized medicine may reduce costs, yet only 25% of physicians are educated on genetic testing. There can be no

compromise on the quality of care and individualized medicine must reduce costs and improve outcomes.

The session ended with Robert More, M.B.A., General Manager, Menlo Park who talked about the future of venture capital funding and the focus on funding unmet medical needs in our aging population.

Following a networking lunch in the San Diego sunshine, the San Diego Bio-Pharma Achievement award was presented by Xiangming Fang, President, SABPA, to Ge Li, Ph.D., Chairman of the Board and Chief Executive Officer, WuXi AppTec. In 2000, Dr. Li had the vision, courage, and wisdom to start his own contract research organization (CRO) from scratch in China. WuXi PharmaTech employs >4000 people and recently, Charles River Laboratories bought Shanghai-based WuXi PharmaTech in a \$1.6 billion cash-and-stock deal. Dr. Li stated this merger was part of his future vision for his company- to be the leading CRO globally, not just in China.

The afternoon session was titled 'Drug Discovery in a Global Setting.' The first talk in this session was from Steve Yang, Ph.D., Vice President, Head of R&D, Asia, Pfizer. He encouraged scientists to return to China and said that this was the time for opportunity. Dr. Yang suggested that the current uncertain climate and evolution of the pharmaceutical industry is analogous to the evolution theory of punctuated equilibrium- long periods of stability followed by short episodes of change, specifically the Cambrian explosion that occurred 530 million years ago when over 100 species vanished from Earth.

"Combining the Best of East and West: Drug Discovery against the PI3K/mTOR Pathway" was the title of the next talk by Troy Wilson, Ph.D., J.D., President and CEO, Intellikine. Dr Wilson talked about his San Diego based company that is developing potent and specific PI-3 kinase inhibitors. In just three years they have developed three clinical programs, with only \$30 million and 23 people. The main reasons for his company's success in this turbulent climate include having a network of pharmaceutical collaborators, outsourcing, innovating, having the best team and internal network, and finally good focus.

The final session was a plenary discussion entitled '2010-2015. Stage 2 of China Life Sciences Industry' and was moderated by John Oyler, M.B.A. John currently resides in Beijing where he is setting up his next company. The panelists included Nancy Chang, Ph.D., Chairman and Sr. Managing Director, Asia, OrbiMed; James Tong, M.D., Ph.D., CFO, Chief Business & Development Officer, Tianyin Pharmaceutical, China; Xiaodong Wang, Ph.D.; Steve Yang, Ph.D., and Guo-Liang Yu, Ph.D., President, CEO and Chairman of the Board, Epitomics. The panelists each had to answer the question: "What is your vision of the bio-pharmaceutical industry in the next 10 years?" Responses included that technology may go beyond sequencing and the next challenge will be on how to harvest this information. There will be more holistic approaches to science and integrated technological platforms with greater translation from cells to the whole body. In addition, there will be a shift of focus from disease to health, and biotechnology will spread into other sectors such as food, environment, and non-medical fields. Dr. Yang predicted that 40% of pharmaceutical growth would come from the Asian market as well as new food and biomaterials. The lack of constraints on science in China allows freedom in research and this will increase productivity and creativity.

To summarize, the bio-pharmaceutical industry is in a turbulent period for which new business models are being developed. Some will fail and some will succeed. It is certain, regardless, that we will learn from this. To continue with the evolution theme of Dr. Yang, it is 'survival of the fittest.' The event was truly a success. A big thanks to the 27 sponsors of this event, the attendees, speakers and last but not least, the tireless effort of all the volunteers who have worked so diligently to put this outstanding symposium together. We look forward to seeing you all in 2011.

If you would like to network or find out about the importance of science and opportunities in China and San Diego, please visit the SABPA website: <http://www.sabpa.org/web>.

---

## News Update on AWIS Members

**Valerie Delmar** got married on June 13<sup>th</sup>, 2010 in Lake Tahoe at a small, intimate wedding. She is now **Valerie Horne**.

To include you career and/or personal updates in the AWIS-SD newsletter, please email [newsletter@awissd.org](mailto:newsletter@awissd.org)

---

## Upcoming Events

### Early Career Coffee Club

July 1, 2010, 7:45 am, Wired Cafe Le Bistro

Join this new group of supportive AWIS San Diego members who are about to, or who have just recently, entered the workforce. Come and exchange resources, job search tips, and constructive criticism on resumes and cover letters, etc.

### Mid-Career Coffee Club

July 15, 2010, 7:45 am, Food court at Mira Mesa Blvd. & Scranton Rd.

August 19, 2010, 7:45 am, Same location as above.

This is a members-only event for women in management positions.

### Working Mom Coffee Club

July 21, 2010, 7:45 am, Nobel Park-8810 Judicial Drive, San Diego, CA 92121

Please join us for a morning walk while we share our experiences with juggling a career and being a mom. Upon registration, we will forward details regarding our meeting location.

### San Diego Botanic Garden Tour

July 31, 2010, 12:30 pm, San Diego Botanic Garden

Mark your calendars for the AWIS Summer Family Event on July 31! A picnic lunch will be followed by a guided tour of the San Diego Botanic Garden. AWIS member discount rate: \$10. Kids \$5. Adult non-members \$13. Registration link will be posted soon.

### Strategy Session – Managing Up

August 2, 2009, 6:00 pm. Biogen Idec

Making the goals of your superiors work for you.

## About the AWIS Newsletter

The AWIS-SD 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.

Newsletter staff for July/August issue:

Bhawanjit Brar, Mindy Davis, Kerri Hebard-Massey, Alka Malhotra, Janice Payne, Shweta Sharma, Rachel Schwartz, Paula Soto, Geetha Srinivasan, and Norma Velázquez-Ulloa

Siobhan Malany and Sama Tamrakar recently stepped down as newsletter committee members. We would like to thank them for their invaluable contributions to the newsletter.

## Please contribute to the Newsletter!

If you are an AWIS-SD member, we encourage you to contribute to the Newsletter. Please send articles, photographs, and member news as MS Word attachments to [newsletter@awissd.org](mailto:newsletter@awissd.org). News articles should not exceed 250 words, event summaries should not exceed 500 words, and feature articles (special-interest stories and profiles) should not exceed 1000 words. The submission deadline for the next issue is **August 10, 2010**.

---

## AWIS-San Diego Sponsors

AWIS-San Diego thanks our corporate sponsors for their generous support. Donations from corporate sponsors help us fund scholarship awards, monthly events and Strategy Sessions, community outreach efforts, the Newsletter and the website.

For more information about how your company can support AWIS-SD, send e-mail to [fundAWISSD@gmail.com](mailto:fundAWISSD@gmail.com).

### PRINCIPAL

Gen-Probe, Incorporated

### PREMIER

Beckman Coulter Foundation

### CONTRIBUTING

Southern California Biotechnology Center and Miramar College

Morrison & Foerster LLP

Helicon Therapeutics, Inc

Genomics Institute of the Novartis Research Foundation

Anaphore, Inc

### FRIEND

Genoptix Medical Laboratory

UC San Diego Rady School of Management

Kyowa Hakko Kirin California, Inc

Synthetic Genomics, Inc

Pfenex, Inc

Absorption Systems (Perry)

Ardea Bioscience

**IMPORTANT CONTACTS****AWIS Board**

	<b><u>Name</u></b>	<b><u>E-mail</u></b>
President	Huong Huynh	President@awissd.org
Past President	Jenny Chaplin	Pastpresident@awissd.org
Treasurer	Aparna Aiyer	Treasurer@awissd.org
Secretary	Rosemary Cesario	Secretary@awissd.org
Members at Large	Rachel Soloff	rsoloff@awissd.org
	Diane Retallack	dretallack@awissd.org
	Dody Sears	dsears@awissd.org

To contact the Board, visit the following website:  
<http://awis.npaci.edu/officers/biographies.htm>

**Committee**

	<b><u>Chair(s)</u></b>	<b><u>E-mail</u></b>
Corporate Sponsorship	Anneke Raney Erin Dunn	CorporateSponsorship@awissd.org
Events	Kristine Briedis Monica Brown	Events@awissd.org
Job Board Manager	Lili Chen	Jobs@awissd.org
Newsletter	Mindy Davis Alka Malhotra	Newsletter@awissd.org
Outreach	Diane Retallack Jeannine Stutzka Carmen Velez	Outreach@awissd.org
Public Relations	Erica Stone Irene Ch'en	PublicRelations@awissd.org
Scholarship	Anita Iyer Cheryl Okumura	Scholarship@awissd.org
Strategy Sessions & Focus Sessions	Grace Nakayama Dorothy Sears	StrategySessions@awissd.org
Website	Corine Lau Laurence Fourgeaud	Website@awissd.org