AWIS San Diego Newsletter

Fall 2018 Volume 26 Issue 4

Letter from the President

Dear AWIS-SD Members and Friends,

I hope this year has treated you well as we close out 2018. I wish for a happy 2019 to everyone with career growth, as well as personal development. If you are looking to advance your professional and personal skills, please consider joining a committee or the AWIS-SD Board. We will be holding elections later this month.

We are looking for co-chairs for several committees, including Corporate Sponsorship, Newsletter, Scholarship, and WIST. If you cannot take on a leadership position at this time, our committees are always looking for new members as well.

Joining a committee and taking a leadership role will enhance your communication skills, leadership skills, as well as team building skills. The AWIS-SD Board is also looking for Members at Large, as well as a new President. As my company and my career are rapidly expanding, I need to pass on the President role to a new person to lead this great organization.

If you or anyone you know is interested in any of these positions, or want to find out more information on what these roles entail, please contact me at president@awissd.org. Please consider joining and filling one of our rewarding positions in AWIS-SD, where we thrive for equity for women in STEM.

Also, check out the AWIS-SD calendar as we have many exciting events coming up. Happy Holidays!

Warm wishes,

Courtney

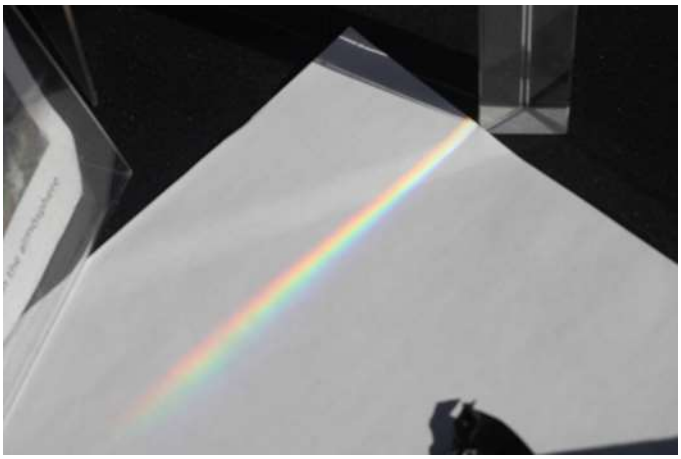
Courtney Benson
President, AWIS-SD
president@awissd.org

1) Outreach Committee at the 2018 Maker Faire

by Vanessa F Langness

The AWIS-SD Outreach Committee organized an activity for the October 2018 Maker Faire, which allowed makers of all types including artists, scientists, and engineers to showcase their creations. During this two-day event, our volunteers taught visitors about the physics of light by creating rainbows, rainbow paper, and giant bubbles.

Rainbows are created through a phenomenon called diffraction. When white light enters a prism, the light bends. Red wavelengths bend the least, whereas violet wavelengths bend the most. Since they bend at varying degrees, a prism can be used to see the different colors that make up white light. Rainbows are formed because raindrops effectively act as tiny prisms. Visitors at our booth were able to use prisms to see these principles in action.



Caption: AWIS-SD Outreach demonstrated the properties of light using a prism.

Visitors learned about another optical phenomenon called thin-film interference. This phenomenon causes bubbles and oil slicks to appear to have a swirl of rainbow colors. When white light bounces off of the upper and lower boundaries of a thin film, some wavelengths become out of sync and destructively interfere with each other, while other wavelengths constructively interfere to amplify certain colors. The colors that are amplified or cancelled out are determined by the thickness of the film. Visitors learned about this optical phenomenon by creating giant bubbles, which have swirling colors due to thin film interference.

Caption: AWIS-SD Outreach's activity to demonstrate thin-film interference.

Visitors were also able to create a thin-film interference souvenir by coating a black piece of cardstock with a thin film of clear nail polish. This created rainbow paper which showed all of the beautiful colors seen in an oil slick or in bubbles. This activity was a great demonstration of the STEAM movement, which was a major focus of the Maker Faire. The STEAM movement integrates STEM subjects with the Arts. AWIS-SD Outreach Committee members Vanessa Langness and Chistina Grobin were co-organizers for this event.

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2) Academia to Industry (A2I) coffee club – An evening with Diane Shanahan

by Dieanira Erudaitius

Overview

A2I coffee club held its monthly meeting on Wednesday, September 5, 2018. There were six attendees that comprised of professionals from industry and academia. Our guest speaker for this meeting was Diane Shanahan, the Director of Regulatory Affairs at BASF Enzymes. We were also privileged to have another BASF employee, Margo Woodring, New Business Development Analyst at the meeting as well.

Transition to Industry: Using one thread to create a sweater

Shanahan obtained her degree in biology, although she initially was interested in forestry science. Shanahan described that as a child she would climb trees and marvel at their beauty. Her affinity to nature is what drew her towards the field of forestry. She later broadened her interest to botany and eventually decided to obtain a bachelor's in biology.

Shanahan effortlessly described her career path through a beautiful story full of imagery and analogies, which engaged each of us at the table. Having a non-traditional career path, she explained her journey as a single thread, which embarked on a voyage full of twists and turns that weaved her unique sweater. The thread resembled her pathway and the sweater was symbolic of her career.

Shanahan explained that although an outsider perspective may describe her thread traveled haphazardly, she noticed it did follow a pattern. One such pattern was that Shanahan alternated between small and big companies throughout her career. Shanahan began at a big company called Monsanto. She was hired as an intern prior to graduation and was later hired full time to do research as a scientist. While she enjoyed the work, she had a desire to work for a smaller company and maybe become an entrepreneur. After recovering from a sports injury, Shanahan became interested in chiropractic medicine. After 2 years of study in that field, she came to realize that while she loved learning, it wasn't her passion to practice as a chiropractor. She then had an opportunity to become a co-owner for a small bakery business. Here she gained skills in sales, distribution, and marketing of baked goods.

As a co-owner of a small business, Shanahan was required to wear many different hats. The business eventually came to an end after the other co-owner decided that his product expectations and visions for the type of artisan bread was ahead of the times and market adoption was too slow. At this time, Shanahan decided to pursue science again. She was hired for an entry-level research position at Mycogen, a small biotech start-up. Once back in the lab, she then started working her way up and progressed rapidly.

While working at Mycogen as a scientist, she enjoyed her work in research with microbes. One day, HR approached her and asked her to transfer to regulatory. She absolutely loved doing science and initially said “No” to the offer. Eventually, she was able to make a deal with HR that allowed her to return to R&D if she wasn’t comfortable in the regulatory position. Having this option to fall back on was comforting to Shanahan and she decided to give it a try.

Why did she stay in regulatory?
Working in regulatory allowed Shanahan to understand a little more about her personality. The position allowed her to still have her fingers in science and at the same time it gave her the understanding of how science works with the law. She enjoyed the work a lot. She did not mind the structure nor detail, which are both extremely important in regulatory. She was required to have a broad understanding of the science and at the same time the ability to explain to scientists how regulatory studies were conducted to meet requirements. She had to guide the scientists but not be the subject matter expert in their areas of expertise. Shanahan was able to still tap into her curiosity, stay creative, and become fascinated with the integration of law and science. In regulatory, she was able to maintain her career mission which is always to “to do the right thing”.

During interviews
Shanahan noted that leaving research related jobs in her past to pursue other entrepreneurial jobs presented a resume with disjointed job experiences. At one time this could be seen in a resume as a distraction or lack of focus. Currently, this is more acceptable and can be a plus. She explained that each job in its own way became quite relevant to the careers she was interested in. Furthermore, she was able to gain a number of skills that were all transferable to her current position.

What her current position looks like
Shanahan is very happy with her current regulatory position and loves what she does. She is not sure where her future may take her or how the rest of her sweater will be sewn. Shanahan does not describe herself as much of a risk taker and is thankful for the opportunities that were presented to her. Shanahan does not think that she would be in regulatory had she not been given the opportunity and the option to return to R&D. Shanahan also explained how mentorship is extremely important and how grateful she was to her boss when she began her position in regulatory.

Shanahan enjoys working at BASF and likes the variety in her day to day work that enzymes afford because enzymes can have such different personalities and can be used in many different applications.

Advice to A2I members

1. Find a good mentor
2. Understand that there are many routes to obtain your goal, and it is not always necessary to follow the traditional pathway
3. Ask yourself: If you had to knit a sweater with one common thread that tells your story, what would your story look like?
4. Understand what you want. Do you have a job or career? Do you prefer working at large or small companies?
5. Evaluate your personality so you find what positions fit you well.
6. Where do you see yourself going and are you willing to change?
7. Stay accountable. If you don't know something, it is better to get back to the person later with the correct answer than always re-tracing your footsteps to correct what you have said.
8. Life can't be seen as a cookie cutter; one size doesn't always fit all.

Caption: AWIS-SD A2I members with speaker Diane Shanahan.

About BASF Enzymes

BASF Enzymes harnesses the power of enzymes to create a broad range of specialty products that meet high-value commercial needs. BASF offers enzymes for various markets including animal nutrition, grain processing, home care & industrial & institutional solutions, oilfield solutions and pulp & paper. BASF Enzymes has a site located in San Diego with ~150 employees supporting functions in: R&D, pilot plant & production, QA/QC, regulatory, IP, business, business development.

For additional information about BASF Enzymes please visit:
https://www.basf.com/en/products-and-industries/cross-industry-solutions/enzymes/markets.html

To apply to become a member of our team:
https://www.basf.com/us/en/company/career/jobs.html

3) AWIS-SD Outreach at 52 Weeks of Science - Clairemont: DNA Extraction from Strawberries!

by Ye Zhang

On Sunday, October 14, 2018, 52 Weeks of Science celebrated the first year of their program in the community of Clairemont at Madison High School. The beautiful and inspiring campus welcomed hundreds of families and students. More than 10 booths from local scientific companies, non-profit organizations and universities attended, using hands-on activities and demonstrations to educate the local community with interesting facts about science.

AWIS-SD took advantage of this opportunity to share some fun biological knowledge with the Clairemont community. During this half-day event, our volunteers guided students, kids and their families through the process of strawberry DNA extraction while explaining the concepts of DNA structure, as well as how each step could contribute to the successful extraction of DNA. The Outreach committee provided graphic protocols and professional lab supplies, such as Falcon and Eppendorf tubes, to create a “lab environment” experience for the attendees. In the end, the extracted DNA was collected in a cell culture tube as a souvenir for the attendees to bring back home. Impressively, many parents attending the event were aware of the importance of scientific education, and encouraged their children to ask the volunteers many “what” and “why” questions.

Caption: (left) AWIS-SD Outreach volunteers demonstrating how to extract DNA from strawberries. (right) AWIS-SD Outreach booth with Ye (event organizer, middle) and the volunteers (left to right: Catherine, Joanna, Francesca, Justine, Nirakar and April). Photo credit: Ye Zhang.

The event was a great success and AWIS-SD Outreach looks forward to participating in this event again next year. AWIS-SD Outreach Committee member Ye Zhang was the event organizer, along with volunteers April Cresse, Francesca Boscolo, Joanna Bundus, Justine Paradis, and Nirakar Rajbhandari. Catherine Etchechury attended as a high school volunteer, and Robin Wygal attended as the AWIS-SD Outreach Committee representative.

4) A2I: A Day in a Life Event at 1798 Consultants

by Dieanira Erudaitius

On September 13, 2018, Academia to Industry (A2I) coffee club visited 1798 Consultants, a strategic reimbursement healthcare advisory firm located in downtown La Jolla. The half-day event allowed attendees to get a glimpse of the typical day at a consulting firm. The company visit was a very insightful experience that was organized in an intimate setting, which allowed attendees to actively participate in each of the planned activities.

The event began with brief introductions between the employees at the consulting firm and AWIS-SD attendees. Many of the attendees were interested in transitioning out of academia and were curious about what a career as a consultant looks for a scientist. Following the introductions was a unique presentation titled 'U.S. Healthcare 101'. Here, attendees learned the history and evolution of healthcare in the U.S., which provided a foundation to understand the current healthcare system.

Following the informative presentation, attendees were split into two groups for the next two activities. One activity was a case study that walked the attendees through a sample project that a consultant would typically work on. The goal of the healthcare consultant is to streamline the process from the time that the patient becomes ill, visits the physician, is diagnosed, takes the first dose, and continues to through the ongoing disease.

The case study was a very engaging activity, where participants were questioned on how to approach various problems in a strategic manner. Guided by questions, attendees learned that viable solutions must be beneficial to each of the key stakeholders, commonly referred to as the '5Ps'. The five 'P's include: product, patient, payer, pharmacy, and provider. The case study was a great example for what type of work is completed by consultants at this company and was useful in teaching attendees how to best meet the client's needs.

The second activity was the 'value proposition discussion'. This discussion was a useful activity that allowed individuals to practice 'selling themselves and their skills' obtained in academia that are directly relevant for a consulting position. This activity was extremely beneficial for those aiming to transition out of academia into an industry setting. The value proposition development worksheet was kindly provided by the company and included here in the newsletter. Attendees were asked to fill out the worksheet and engage in a mock interview. Following the interview, detailed feedback and constructive criticism was provided to each individual. This activity was extremely useful in teaching individuals on how to present skills in a constructive manner that demonstrates their value to the company.

In addition, 1798 Consultants kindly accepted two attendees to gain experience as a business analyst intern to further the glimpse of transitioning into consulting as a scientist. Overall, this event provided attendees the opportunity to gain perspective of the healthcare industry, network, understand of the roles and responsibilities of consultants at 1798 Consultants, learn on how to transition from academia, and finally, it allowed attendees time to network.

5) AWIS-SD Family and Friends event at the Botanical garden
by Amy Thorne

On Saturday July 28, the AWIS-SD Events committee held the annual Family and Friends Event at the beautiful San Diego Botanic Garden in Encinitas, CA. The San Diego Botanic Garden is a 37 acre urban oasis, with four miles of trails meandering through restful vistas, flowering trees, majestic palms, and the nation's largest bamboo collection. In 2017, it was named a Top 10 North American Garden Tourism Award Winner, indicating it as one of the "top 10 North American gardens worth travelling for."

The event was a huge success with a full registration of 40 people. Admission to the garden through the AWIS-SD family event was free for AWIS members and their guests. The event took place in the Seeds of Wonder area with a potluck-style lunch at the picnic tables underneath a large canopy. There were lots of activities for the whole family to enjoy including potting succulents to take home, painting stations, and of course, the opportunity to roam around the garden at one's leisure.

Caption: AWIS-SD family and friends event at the San Diego Botanic Garden.
A huge thank you to the events committee and especially Adina Gerson-Gurwitz and Ksenya Cohen-Katsenelson for leading this event!

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6) Brewery Tour and Beer Tastings at Green Flash Brewery
by Ray Seraydarian

On Thursday, September 27, AWIS-SD Events Committee organized a brewery tour and beer tastings at Green Flash Brewery in Sorrento Valley / Mira Mesa area of San Diego that was sponsored by QIAGEN. Two biotech groups joined our events — Stacy Pham's Beer and Wine in Biotech meetup group, and B3 group. In addition to good beer, good company, and good conversation (and also good food from a local food truck), out of all attendees, 25 people participated in a combined guided tour and beer tasting through the brewery hosted by Green Flash employee Devin, who combined passionate beer-geek knowledge, beer-geek science, and beer-geek humor. I had a great time, even though I didn't drink the beer.

We thank the members of the Events Committee, especially Ksenya Cohen-Katsenelson, Adina Gerson-Gurwitz, Amy Halsey-Thorne, and Valeria Viscadi, for their work making the arrangements for this successful event.

Gentle reminder: Out of 25 AWIS registrants, only 16 actually attended. This wouldn't have been too bad, except that some people might have missed the event because the online registration showed that all AWIS spots were filled on the day of the event. For future events, if your plans change and you cannot attend an event for which you have registered for, please email the Events committee.

Caption: Brewery tour at Green Flash Brewery.

News Ticker

by Alyson Smith

- Carlsbad-based International Stem Cell Corp. administered stem cell therapy to the 10th Parkinson's disease patient in its Australian clinical trial. They transplanted neural stem cells derived from immune-matched human eggs into the patient's brain with the goal of replacing neurons lost to the disease. The therapy appears to be safe and preliminary results show signs of disease reduction.

- The Salk Institute has reached confidential settlements with two of the three female faculty who sued the Institute last year for gender-based discrimination. Katherine Jones and Vicki Lundblad, the plaintiffs, released a joint statement with Institute president Fred "Rusty" Gage announcing the settlement. The suit of Beverly Emerson, the third plaintiff – who left Salk last December when her contract expired – may go to trial in December.

- Former Scripps Research postdoc James Allison shared the 2018 Nobel Prize in physiology or medicine with Tasuku Honjo of Japan. Allison and Honjo discovered separate pathways to release molecular brakes on T cells and unleash their ability to kill cancer cells. Their findings have fueled the development of safer and more targeted cancer therapies.

- On August 1st, Scripps Institution of Oceanography scientists recorded the ocean surface temperature as 78.6 degrees – the highest reading in 102 years of daily measurements at the Scripps pier. High ocean temperatures throughout the summer attracted large crowds and wildlife such as stingrays to San Diego county beaches.

- Amazon opened a "Tech Hub" campus in University City. Joining 16 other Amazon Tech Hubs in the U.S. and Canada, this campus will create around 300 new jobs in software development, machine learning, cloud computing, and digital entertainment.

- Scientists at Scripps Research and Human Longevity developed the "metabolome" – a profile of more than one thousand metabolic products including proteins, fats, and uric acid – as a new tool to assess cardiovascular health. The scientists found that an abnormal metabolome correlates more strongly with cardiovascular problems than body mass index (BMI), a more traditional method of assessing disease risk.

- Frank Bennett, vice president of research at Ionis Pharmaceuticals, will share a 2019 $3 million Breakthrough Prize in Life Sciences with Adrian Krainer of Cold Spring Harbor Laboratory. They received the prize for developing Spinraza, the first drug that can treat spinal muscular atrophy, an often fatal genetic disease.

Member News

- Dieanira Erudaitius, co-chair of A2I, is now a Fellow at Cato Research.

- Min Zong recently started a new job as a Scientist at Sorrento Therapeutics.

- Stephanie Verbrugghe, an industrial pharmacist by training, started Farbridge Pharma Consulting, LLC, in 2017 after moving to San Diego. Farbridge is a company providing GxP Quality Assurance services, helping companies willing to start clinical trials on both sides of the Atlantic, and providing trainings to professionals to advance their career. A first GMP training session is planned for Q1 2019. Email info@farbridgepharma.com for more information.

- Miriam Cohen is now a Senior Medical Writer at Paragon.

Upcoming AWIS-SD Events

1) STRATEGY SESSIONS: Decoding Career Options in STEM
Date: Monday, December 03, 2018, 6:00 - 8:00 PM
Venue: Hera Hub, 4010 Sorrento Valley Blvd, Suite 400, San Diego, CA 92121
Event details and registration:
http://www.awissd.org/index.php/all-events/events-calendar/326-strategy-sessions-decoding-career-options-in-stem

2) OUTREACH - 52 WEEKS OF SCIENCE IN BARRIO LOGAN
Calling for volunteers!
Venue: Dolores Magdaleno Memorial Rec Center, 2902 Marcy Ave, San Diego, CA, 92113

Date: Tuesday, December 11, 2018, 4:00 - 6:00 PM
Event details and registration:
http://www.awissd.org/index.php/all-events/events-calendar/352-outreach-52-weeks-of-science-in-barrio-logan-tuesday-december-11th?date=2018-12-11-14-00

Date: Tuesday, January 8, 2019, 3:30 - 6:00 PM
Event details and registration:
http://www.awissd.org/index.php/all-events/events-calendar/353-outreach-52-weeks-of-science-in-barrio-logan-tues-january-8th?date=2019-01-08-14-00

About The Authors

Vanessa Langness moved to San Diego after completing her BS at MSUDenver where she double majored in chemistry and biology. She is now a PhD candidate in the Biomedical Sciences Program at UC San Diego. She is using neurons derived from human induced pluripotent stem cells (hiPSCs) to study the role of cholesterol in Alzheimer's disease pathogenesis. Vanessa is an active member of the AWIS San Diego Outreach Committee.

Dieanira Erudaitius obtained her PhD in Bioengineering from the University of California Riverside. The focus of her doctoral research was investigating the underlying mechanism behind selective cancer cell susceptibility to hydrogen peroxide generated during ascorbate therapy. Dieanira joined AWIS in 2016 and is currently serving as co-chair of Academia to Industry Coffee Club.

Ye Zhang is currently a 4th year PhD student at Biological Sciences Division, UCSD. She studies the functional interaction between compartmentalized *Drosophila* olfactory receptor neurons. Through self-initiated volunteer roles and consulting experience, she hopes to leverage her scientific training to help better bridge academia and industry.

Amy Thorne is a scientist in the Immuno-Oncology R&D group at Inovio Pharmaceuticals. She received her Ph.D. in Neuroscience from The Ohio State University in 2012 and moved to San Diego in 2014 to pursue a post-doctoral position at the Ludwig Institute for Cancer Research at UCSD. She has been a member of the AWIS events committee for one year. In her free time, she enjoys scientific editing, traveling, and spending time with her family in the great outdoors.

Ray Seraydarian earned his BS and M. Eng. degrees in Engineering Physics from Cornell University, and has spent his entire professional career in San Diego working in visible spectroscopy and areas closely involved with nuclear fusion research at General Atomics (GA) and UCSD. He is currently employed by UCLA at GA working on a microwave instrument for the large ITER fusion experiment being built by an international consortium in southern France. Outside of work, Ray enjoys theater, movies, bicycling, downhill skiing, and small boat sailing. Ray is a long standing AWIS-SD member, and he currently serves as a co-chair of the Events Committee.

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. 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 Jan 10, 2019.

AWIS-SD Newsletter Committee

Newsletter@awissd.org

Co-chair: Corine Lau and Juliati Rahajeng
Member: Pat Rarus, Alyson Smith, Mai Khuong, Jean Spence

2018 AWIS-SD Board Members

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