### **AWIS San Diego Newsletter**



Spring 2020 Volume 28 Issue 1

#### Letter from the President

Dear AWIS-SD Members, Partners, Sponsors, and Allies,

I would like to wish everyone a Happy New Year in 2020! Since this is a new decade, I hope everyone gets a productive start on accomplishing their goals, both personally and professionally.

As a long-time member of AWIS-SD, I look forward to working with each and every one of you to make our organization the best it can be! If you have any questions or concerns, please do not hesitate to contact me at <a href="mailto:president@awissd.org">president@awissd.org</a>. AWIS-SD is one of the largest chapters in the AWIS family. Through the hard work of our volunteer



members, we provide an exceptional array of committees and events to foster career development, networking and community engagement focused on improving access and inclusion for women in STEM (#stemwomenunite).

We have re-tooled some of our career development/networking groups which include groups focused on Outdoor activities (STEM Active Connect), Academia to Industry (A2I), Back to Work, Career Advancement (Early to Mid Career), and the Leadership Network (Senior Career). If you are interested in learning more about or joining one of these groups, please check them out at awissd.org. In addition, we are looking for new committee members to join our committees including Events, Public Relations, Corporate Sponsorship and more. If you are interested in learning more about our committees and what we do at AWIS-SD, please visit awissd.org.

I would like to personally thank all of the AWIS-SD members who have graciously volunteered many hours of their time to make this organization what it is today. I would also like to thank the sponsors of AWIS-SD who have made it possible for us to offer so much to our members and our community.

Warmest wishes,

#### Kina

Varykina Thackray, Ph.D. President, AWIS-SD president@awissd.org

### **AWIS Welcome to 2020 Event** by Raymond Seradarian

On Wednesday, February 5, 2020, the local AWIS chapter held a Welcome to 2020 New Year's event in Sorrento Mesa in a private party room at Gravity Heights Brewery restaurant. The room had its own bar and attentive waitstaff. In addition, there was plenty of space to mix and mingle, and to stand or sit while enjoying the food, which was delicious and plentiful. Many of the 38 attendees that night were longtime chapter members, but there were also a few new faces as well. These new attendees said that this was the first AWIS SD event they'd attended in years.

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The event also included the presentation of the chapter's Outstanding Volunteer awards as listed below:

Achievement in Innovation: Angela Macia Rookie of the Year: Betty Cabrera, Norazizah Shafee

Achievement in Outreach or Community

Service: Alina Luk, Chistina Grobin
Outstanding Volunteer: Alex Clark
Leadership Service: Courtney Benson
Board Special Award: Robyn Wygal

President's Award: Corine Lau, Lori Yang

Long

Service Awards:

25 years: Grace Nakayama20 years: Victoria Cagle15 years: Laura Pereira

10 years: Wendy Ochoa, Parisa Abedinpour5 years: Takako Noguchi, Cristina Giachetti,

Adriana Bankston, Karrie Kwok

At this writing (February 25, 2020) the recipients' names are also listed on the AWIS SD home page.

This celebration was organized by the AWIS-SD Events Committee. We are looking for new members. If you are interested, please email for more information: <a href="mailto:events@awissd.org">events@awissd.org</a>

### AWIS-SD Retreat 25 January 2020 by Jean Spence

The 2020 Annual AWIS-SD retreat was held on January 25, 2020 with 24 attendees from the Board and Committee leadership. Courtney Benson, our former president, presided as Kina Thackray, our current president, was unable to attend. Highlights from the past year include the awarding of five \$1000 scholarships to female students in community college, undergraduate, or graduate schools in San Diego County; two \$1000 scholarships to AW-IS-SD members to cover costs of classes at UCSD Extension; and 14 science fair awards for female middle school and high school students from the Scholarship and Outreach Committees. The Scholarship Committee also successfully organized an Awards Celebration for the awardees and the Outreach Committee organized and participated in multiple community STEM events with a focus on encouraging young women in science, including EXPO Day at Petco Park, the Expand Your Horizons conference for middle school girls at USD, and the ACS Chem Expo held at Miramar Community College.

Committees tasked with the functions related to the management of the chapter such as Public Relations, Website, and Newsletter are running smoothly with outstanding leadership. The Corporate Sponsorship Committee had a banner year last year, raising over \$25K for 2018-2019, and they are well on their way to raising a similar amount for the 2019-2020 fiscal year. Current sponsors include: Thermo Fisher, Celgene, Vertex, Quidel, Takeda, Bio-Legend, TriLink Biotechnologies, Pfizer La Jolla, Blue Nalu, and GASEF. UCSD Extension donated two \$1000 scholarships. The Events Committee has been retooled under new leadership and will focus on organizing the Annual New Year Party. Spring and Fall Happy Hours/ Networking Events, and a Speed Mentoring Event.

The Academia to Industry group held 6 meetings in 2019 for members, each featuring a speaker from the biotech community, and conducted 3 biotech company tours (Vertex, Celgene and Thermo Fisher).



The <u>Back to Work</u> group will restart later on this year. The <u>Career Advancement Committee</u>, a new committee for early to mid-career professionals, was formed to replace the previous Strategy Sessions Committee. They will organize events pertinent to this career stage. <u>The Leadership Network</u> group for members in leadership positions such as Senior Scientist, Associate Professor, and above held monthly meetings that included social events and career advancement events, such as Industry and San Diego Trends Workshop and Strengths Based Leadership.

Another highlight was the organization of the Women in Science and Technology conference in 2019 by chapter member volunteers on the WIST Committee, led by Robyn Wygal. This event was held at the Thermo Fisher campus in Carlsbad and facilitated through the generous sponsorship of Thermo Fisher and other local companies. The event was a great success with over 150 attendees, many who joined AWIS-SD for the first time. The Public Relations Committee is working on enhancing chapter member interactions with the greater San Diego STEM network by hosting STEM Active Connect and the LinkedIn STEM network.

One issue raised at the meeting is declining chapter membership, which is probably linked to difficulties in renewing membership on the AWIS National website and linking chapter membership with National membership. Discussions are ongoing with AWIS National to remedy this situation. All committees also reported the need for more members. Therefore, the Board and the Public Relations Committee are working hard to highlight the benefits of joining one of the chapter's committees. Another issue is maintaining continuity on the various committees since there has been some turnover. Committees that don't already have SOPs plan on creating instructions for their events and functions to help with the transfer of knowledge.

### AWIS-SD Visit to Thermo Fisher by Takako Noguchi

Nineteen participants, members of AWIS-SD and non-member students and post-docs in the San Diego area, visited Thermo Fisher Scientific located in Carlsbad, on December 3, 2019. The Thermo Fisher Carlsbad campus was the headquarters of the former Life Technologies, a merger of Invitrogen and Applied Biosystems. Here, three large buildings host about 2,500 employees. The Carlsbad campus is responsible for producing tens of thousands of laboratory supplies, including restriction enzymes, antibodies, and Western blot gels. They also develop new products such as next generation sequencers.

The tour was focused on the introduction of manufacturing line of commercial products. Tod Lusher, the Manufacturing Supervisor, kindly guided us through the facility. The company's hallway was fully decorated with bioscience-inspired paintings created by local high school students, whose activities the company supports.



Many manufacturing processes are automated by custom made machines, such as the one that fills reagents, packs in dry ice, and stores in a freezer. Interestingly, some operations, including filling of small batches or quality inspection of Western blot gels, are performed manually. In the protein purification laboratory. E.coli that are engineered to produce desired proteins are cultured in bioreactors as high as the ceiling, like in a beer brewery. The distribution center looked like a Costco store with many tall shelves. There, many adorable human-sized robots help people by carryi products from point A to point B. Different from a typical warehouse, they have two huge cold storage rooms with temperatures set at 4 and -20 degrees Celsius. We enjoyed walking through these rooms and shouting 'It's COLD!". Products were automatically organized by temperature and destination, and placed into Fedex cargo to be distributed worldwide.



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### AWIS-SD Visit to Thermo Fisher (cont)

The second part of the tour was a panel discussion with Mini Manchanda (Manager, Molecular Biology), Aparna Aiyer (Director, Molecular Biology), Stephanie Nilsen (Senior Di-Operations), Rhonda Newman rector, (Director, R&D), Erene Mina (Senior Manager, Clinical Affairs), and Sarah Pilote (Senior Regulatory Affairs Specialist). They shared their experience on how they transitioned from academia to industry and answered our wide range of questions. As women scientists, many of their career paths were not straightforward. For example, Nilsen wanted to do R&D initially, but she took an opportunity in a manufacturing position. There, she solved technical problems and learned industrial operations that she never knew before. She found the position satisfactory and interesting. Mina started her industry career as an industrial postdoc at a neuroscience-based biotech company and stepped up to a senior scientist position. After she moved to San Diego, she attended many networking events and applied to a wide-range of scientific jobs from technical writing to R&D scientist. She was initially employed as a technical writer by Thermo Fisher.



While she was working as a technical writer, she took UCSD extension classes for clinical affair and got a license, then successfully transitioned to a clinical scientist internally. Panelists emphasized the importance of networking. They also told us that they consider publication records of candidates just a proof of writing and presentation skills, and find their actual skill sets and soft skills are more important.

After the panel discussion, we were offered a delicious sandwich lunch and we enjoyed a speed mentoring session with other Thermo Fisher's women employees. Overall, the tour was very enjoyable and informative. We learned about biotechnology product manufacturing and enjoyed networking with these established women scientists.

We would like to thank Nicole Lucia and Colleen Carpinella, the main organizers of this tour, and all other Thermo Fisher employees for giving us a wonderful learning opportunity.



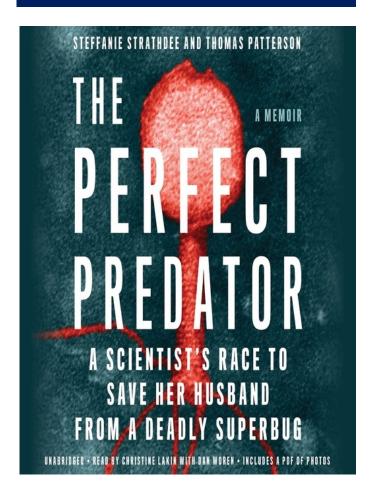
### **Book Review:** The Perfect Predator by Jennifer Overklift

Dr. Steffanie Strathdee is an infectious disease epidemiologist known for her research on human immunodeficiency virus (HIV). At the University of California San Diego School of Medicine, she is Associate Dean of Global Health Sciences and Harold Simon Professor of Medicine, as well as co-director of the Center for Innovative Phage Applications and Therapeutics. Her husband Thomas Patterson is a Professor of Psychiatry at UC San Diego. Together, the couple also directs a research and training program on the Mexico-US border. Strathdee recently spoke at the 2019 Women in Science and Technology (WIST) Conference about the book she and her husband wrote together, The Perfect Predator: A Scientist's Race to Save Her Husband from a Deadly Superbug, which chronicles Strathdee's race to save Thomas from a deadly superbug.

The book documents a real life story, combining genres of science, horror, and romance, told from Strathdee's perspective with brief interludes from Patterson. Dr. Strathdee was able to explain complex medical terminology in a way that is easy to understand, while simultaneously spinning a heart pounding personal narrative. She included lessons on the history of certain medical practices to enhance the reader's understanding of how complex the medical world is and explained how this will affect future medical practices.

The book begins with the couple traveling to Egypt on a cruise. Their trip was off to a great start until Patterson began to show signs of food poisoning. Assuming it was simply a stomach bug, Strathdee gave him an antibiotic. When his symptoms worsened the next day, he was taken to a hospital in Luxor, Egypt. As his symptoms worsened, Patterson began experiencing hallucinations. He was later transferred to a hospital in Germany, where it was discovered that he had been infected with a deadly antibiotic resistant bacteria known as "the worst bacteria on the planet." From there, he was transferred to UCSD's Thornton Hospital.

### **BOOK REVIEW**



As Patterson's condition continued to deteriorate, his medical team ran out of options to treat his infection. Strathdee began searching for alternative treatments, and found a paper on alternative treatments that mentioned phage therapy. A phage is a virus that infects and replicates itself within bacteria and archaea. Phage therapy is the therapeutic use of lytic bacteriophages (bacteriophages capable of causing cells to disintegrate by rupturing the cell wall) to treat pathogenic bacterial infections. The treatment is considered experimental in the West because it was overshadowed when antibiotics (specifically penicillin) were invented.

### **Book Review:** The Perfect Predator (cont)

After further research, she emailed Patterson's medical team, asking if they could try using phage therapy. The team began their mission of finding phage specialists and creating a treatment plan to help them save Patterson. In collaboration with various research groups and the Food and Drug Administration (FDA), they were finally able to find a treatment that saved Patterson's life.

Strathdee recounted Patterson's recovery, telling of the medical problems he acquired as a result of his infection and the therapy he had to go through to learn to live normally again. She also wrote of her own experience stepping back into her regular life after spending a year working to find a cure for Patterson's infection. In the epilogue, she wrote about other cases where phage therapy was applied, ending the book with a rallying cry about the approaching superbug crisis and the potential solutions that are available if more research is done.

### **BOOK REVIEW**

Overall, the book's fast pacing coupled with the heart wrenching first person narrative of a wife desperate to save her husband makes it ideal for any reader. The medical and science language is clearly explained, and provides an engaging perspective on the state of medical research in epidemiology. The interludes from Patterson's perspective also show readers the importance of this research for the victims of superbug infections. This book is an amazing work of science fiction that took place in real life



### Interview with Donna Simcoe by Jennifer Overklift



sociation (TIPPA).

Ms. Simcoe is currently Principal at Simcoe Consultants. Inc., a biomedical consulting company focusing on medical publication strategy and medical writing. She has twenty five over years of publication management medical writing in small and large pharmaceutical

companies. Her in-

dustry career includes roles of increasing responsibility in publication strategy, planning, and medical Writing, and she has managed publication programs across 15+ therapy areas. Ms. Simcoe has Masters degrees in Bio-Medical Writing and Biotechnology and an M.B.A. She is a Certified Medical Publication Professional (CMPP). She is an active member of the International Society of Medical Publication Professionals (ISMPP), the American Medical Writers Association (AMWA) and

I met Donna Simcoe at the annual 2019 WIST Conference. Three people I'd talked to previously had recommended her for an interview, so I introduced myself during the first break of the day. She was nice enough to agree to an interview on the spot, with no preparation.

the International Publication Professionals As-

## SPOTLIGHT

### J: Can you describe your career path and how you got into your current job?

**D:** I started my career with a Bachelor's in microbiology, and worked at Cephalon, a small biotech company. Because it was a smaller company, I worked in publications, regulatory writing, and SAS pharmacokinetic programming.

After three years there, I moved to Wyeth, performing SAS programming in their pharmacokinetics group. I also went back to the University of Sciences in Philadelphia for my first Master's in biomedical writing, then moved over to the publications group at Wyeth, a pharmaceutical company. I stayed at Wyeth for eight years and obtained my second Master's in biotechnology from Drexel University. I then moved to AstraZeneca, another top-10 pharmaceutical company, and worked there for five years in roles as a U.S Publication Lead and as a Project Director in business development. I obtained my third Master's, an MBA from Wilmington University. I then moved to San Diego to become a publications director at Cadence, a small pharmaceutical company and also became the president of the local American Medical Writers Association (AMWA) Pacific Southwest chapter.

In total, I spent 20 years as an employee in industry before starting my own S-corporation in 2011 (Medical Publication Consultants [Simcoe Consultants Inc., www.medicalpublicationconsultants.com or www.simcoeconsultants.com ]). I am a Publication Consultant and a Freelance Medical Writer for small to midsize biotech, pharmaceutical, or medical device companies.

#### Interview with Donna Simcoe (cont)

### J: How did your perception of the field change once you entered the industry?

**D:** I think a lot of us who go into medical writing don't even know the field exists. Some people are in a lab space; they're bench scientists, and are looking for a way to get out of the lab. But maybe they already do some writing there: they might be writing grants, or helping with publications, developing journal articles or poster presentations. It becomes a nice segue to do something different as a career. That's what changed for me. I suddenly realized that there's a whole field of medical writing out there. It's great to have a background in science and learn how to write for specific audiences. There are also people who have a background in English who learn the science, so you meet people from both backgrounds in this field.

Also, there are a lot of women in the medical writing field. It's a very supportive environment. We have a lot of networking, which means a lot of opportunity, and I do see this as a less competitive environment than you might see in other fields. There are lots of jobs out there, especially in regulatory writing.



### **SPOTLIGHT**

I think having organizations like AWIS that host discussions and networking events and provide opportunities to learn something new is great. You can tell everyone is very dedicated

## J: What challenges did you face starting off? What advice would you give to others trying to enter the medical writing field?

**D:** Networking and learning are definitely important. If you like to write, and you like the science, then you could volunteer to be a part of different committees. Through volunteer work, you can give back to the community and help move the field along while also reaping personal benefits. It lets you network with others in your field. It puts your name out there; it informs people that this is what you're really interested in and this is what you love to do. This way, and by also learning as much as you can, people will get to know you, and may see you as an expert in this field.

I think one of the things that has always struck me, is that any job I've had, either as an employee or through freelance, has always been acquired through networking. I have a website (<a href="www.medicalpublicationconsultants.com">www.medicalpublicationconsultants.com</a> or <a href="www.simcoeconsultants.com">www.simcoeconsultants.com</a>), but I get most of my work through referrals or the people I've worked with in the past. I think it's important not to be shy. Just put it right out there, put it on Linkedin, put it out everywhere that this is what you do or would like to do.

### J: Thank you Donna for sharing your experience today.

I'm very grateful to have had the opportunity to interview such an amazing person. Donna's advice and insights on the medical writing field are useful across the science field as a whole. This interview was one of the best highlights of my experience at the 2019 WIST Conference.

#### **Local Research on Coronavirus**

by Jean Spence

The coronavirus SARS-CoV-2, which causes the COVID-19 illness, is closely related to viruses found in bats and pangolins and unlike previously known human coronaviruses. The receptor binding domain of the spikes have mutated to target human cells and the structure of the virus has changed from closely related viruses from natural sources. Kristian Andersen from the Scripps Research Institute is lead author on the article "The proximal origin of SARS-CoV-2" which was published in Nature Medicine.

Dr. Davey Smith, UCSD professor of medicine and his lab are evaluating a rapid test for COVID-19. The test was initially developed by Fluxergy, a biotech company in Irvine. Fluxergy used a synthetic virus for the test and Smith's lab will confirm the accuracy of the test with the real virus. The test may be able to identify COVID-19 within an hour.

The local biotech company Arcturus is creating a vaccine based on self-replicating RNA that creates the antigen in a few weeks. Arcturus is collaborating with Duke Medical School and the National University of Singapore which has experience with SARS and MERS epidemics. Arcturus CEO Joseph Payne is seeking approval for clinical trials.

Mesa Biotech, Inc. will receive \$561,330 and technical assistance from the Biomedical Advanced Research and Development Authority, a subdivision of Health and Human Services. Mesa Biotech will develop its test for COVID-19 with its Accula Dock Instrument.

Jiang Zhu from the Department of Integrative Structural and Computational Biology at Scripps Research is developing vaccines with protein fragments of SARS-CoV-2 spikes on a protein nanoparticle scaffold which would mimic the virus.

San Diego based Ligand Pharmaceuticals is licensing its technology to partners for the development of treatments for COVID-19. Captisol, OmniAb and LTP (Liver-Targeted Prodrug) platforms have been licensed to partner companies in China and the United States.



Inovio Pharmaceuticals received \$5 million from the Gates Foundation and \$9-million from the Coalition for Epidemic Preparedness Innovation to develop a DNA-based COVID-19 vaccine. Kate Broderick, senior vice president of research and development is leading this effort. The vaccine has been tested in animals and clinical trials may begin as early as this summer.

Alessandro Sette's at the La Jolla Institute of Immunology and scientists at the J. Craig Venter Institute have published a paper in Host, Cell and Microbe that investigates the immune response to SARS-CoV-2. This research is valuable for developing vaccines. Similarly, Dennis Burton at the Scripps Research Institute of Immunology and Microbiology are studying the immune response to SARS-CoV-2 in order to identify "broadly neutralizing antibodies".

Thermo Fisher Scientific, Hologic and Quidel, three local medical diagnostic companies, have been approved for manufacturing test kits for COVID-19. Genmark Diagnostics has applied for emergency authorization from the FDA for their ePlex systems which can give a two-hour result turnaround.

#### **Upcoming AWIS-SD Events**

In-person meetings are currently suspended until the end of April in order to prevent the spread of COVID-19.

Academia 2 Industry Coffee Club – Virtual Meetup with Katelyn Archer

Date: Thursday, April 2, 2020, 5:00 PM Event details and registration:

https://www.awissd.org/index.php/all-events/events-calendar/422-a2i-coffee-club-december-meeting-3?date=2020-04-02-17-00

#### **About the Authors**



Takako Noguchi received her PhD in Biological Science from Osaka University. She is a Project Scientist at the Center for Circadian Biology at UCSD, studying cellular and neuronal mechanisms of circadian rhythm using innovative bioluminescence imaging technology. She joined

AWIS-SD in 2017 and is currently serving as cochair of Academia to Industry Coffee Club. She hopes to transition into the biotech and pharmaceutical industry.



Jennifer Overklift was born and raised in San Diego and is scheduled to graduate from Clairemont High school in June 2020. She hopes to pursue a degree in environmental science and plans to be a scientific writer once she enters the workforce. Some of Jennifer's hob-

bies include reading, running, and swimming. Jennifer also has a passion for wildlife conservation. She is currently interning at AWIS San Diego as a Communications Specialist.



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.



Jean Spence earned a Ph.D. from the University of Utah in microbial genetics. Subsequently, she did several postdoctoral fellowships at M.I.T., Harvard Medical School, UCSD and the University of Rochester. She pursued her interest in systems biology by developing a novel platform and

publishing 3 manuscripts and a book chapter as communicating author. She has been a reviewer for the AWIS-SD newsletter since 2014 and became a co-chair this year. She was also a co-chair of the former Back to Work group in AWIS-SD.





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#### **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 <a href="newsletter@awissd.org">newsletter@awissd.org</a>. 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 May 15, 2020.

#### **AWIS-SD Newsletter Committee**

Co-chairs: Alyson Smith,

Jean Spence

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