

2018 KWISE Concurrent Regional Conference Day Report

The KWISE (Korean Women in Science and Engineering) Concurrent Regional Chapter Conference Day was held to promote scientific collaboration opportunities and close networking of Korean women in Science and Engineering field, and to stimulate the enthusiasm to participate and serve the community at individual Chapters. KWISE Regional Chapter Conferences were simultaneously held on May 5th (NIH-DC and NY/NJ) and 19th (LA-SD and SE), 2018, while Texas KWISE chapter conference was held on May 12th, 2018. With more than 200 women scientists' participation, this event successfully provided opportunity to build strong connection and solidarity among the current members of KWISE, and to identify new women professionals who will serve KWISE as mentors and role models for younger professionals and students. Following are the individual conference reports.

NIH-DC Chapter

The Annual KWISE NIH-DC Chapter Joint Symposium was held at the NIAAA Conference Room (5625 Fisher Lane, Rockville, MD) on May 5, 2018. About 70 members gathered for this event. Both the DC Chapter President Dr. Hyojin Kim and the NIH Chapter President Dr. Myung Hee Park (NIH) opened the meeting with a Welcome Remark, which was followed by a brief introduction of the KWISE missions and activities summarized by the KWISE Headquarter President Dr. Hee-Yong Kim (NIAAA, NIH).

The morning Keynote session was chaired by Dr. Myung Hee Park, who introduced the Keynote speaker Dr. Marian Young (NIDCR, NIH). Dr. Young briefly talked about her career path that led her to her current position, and gave a seminar on her research which focuses on the role of small proteoglycans in bone formation, function and repair. In particular, she talked about biglycan (Bgn), which is an extracellular matrix protein highly expressed in bones and teeth. Her research demonstrated that Bgn plays a critical role in bone fracture healing process as well as in angiogenesis.

Scientific Session I followed, which was chaired by Dr. Haewon Sohn (NIAID, NIH). The first speaker Dr. DoHwan Park (Univ. Maryland Baltimore County) talked about her research applying statistical methods for identifying mutation loci across protein domains. In particular, she shared her collaborative study that led to the development of a new statistical model that allows systematic analysis of highly mutated loci across the catalytic domain of a protein kinase. This methodology can be potentially applied to other protein domains that can aid in identifying high mutation loci from sequencing data available from various gene databases. Second speaker, Dr. Soo-Young Kim (Virginia Commonwealth Univ.) gave a talk on her research on age-related macular degeneration (AMD), which involved description of a murine model of AMD and its pros and cons as to how it relates to human AMD cases. This was followed by the third speaker Dr. Yumi Kim (Johns Hopkins Univ.), who talked about the molecular control of meiotic chromosome dynamics. Using *C. elegans* as a model system, she reported identification of 2 novel proteins involved in chromosomal rearrangement during meiosis, and discussed her future plans on determining their functional role. The fourth speaker, Dr. Hyoyoung Choo-Wosoba (NCI, NIH) described her work on applying computational models to identify tumor subclones. In particular, she reported that a modified hidden Markov model (HMM) can be successfully applied to renal cancer sample DNA sequence data to identify mutated subclone regions as well as regions containing altered chromosome copy number.

After a short coffee break, Scientific Session II continued, which was chaired by Dr. Yoo-Ah Kim (NCBI, NIH). The first speaker, Dr. SoGun Hong (NHLBI, NIH), presented her work using non-human primate animal models for developing pluripotent stem cells (iPSC). She reported her effort to incorporate sodium-iodine symporter (NIS) as a non-immunogenic marker for these iPSCs that can be compatible with non-invasive in vivo imaging methods. Such development will likely benefit clinical application of

iPSCs in human patients. The second speaker, Dr. Insuk Kook (NCI, NIH), gave a talk on Herpes virus infection that can normally be dormant in healthy individuals but generate cancer in immunosuppressed patients such as those undergoing chemotherapy. She identified a negative regulator of microRNA (miRNA) degradation that is suppressed by the Herpes virus, which may be the culprit for cancer development. The third speaker, Dr. Arang Rhie (NHGIR, NIH) gave a talk on her effort to develop new tools that can allow for longer reads of genome sequences. Longer sequence reads provide better picture of the genome organization, hence benefits phasing of haplotype information that can help with whole genome sequencing efforts. The last speaker of the session, Dr. Min-Jeong Kim (NIMH, NIH) updated on her development of novel PET radioligand for cyclooxygenase (COX) in non-human primates. Because COX expression is altered in various neurological disorders, including Alzheimer's disease, such development can lead to non-invasive detection of such disease progression. She reported exciting preliminary data that one of such radioligands shows reliability and stability when imaged in humans using PET scan.

After a group photo opportunity, members gathered for networking during the lunch session. Afternoon sessions were focused on career development, which opened with a Keynote speech from Dr. Anna Han (OH, NIH), who educated the members on implicit bias that unconsciously works in the brain to affect our decisions. She highlighted how even small implicit bias based on stereotypes can cause large scale skewing of decisions, which can negatively impact hiring and promotion of women and minorities in workforce. She suggested different strategies that can mitigate implicit bias set against women in science, such as proving yourself to others, drawing them to your accomplishments, finding advocates that can promote you, and actively breaking the gender/race stereotype. This was followed by a session that highlighted various careers in science, which was chaired by Dr. Younsung Kim (George Mason Univ.). The first speaker, Dr. Jinyoung Barnaby-Yang (USDA) provided information on how to format applications for academic positions versus government jobs. She stressed the need to tailor each application and gathering information before applying. This was followed by Dr. Eun Lee (Virginia Commonwealth Univ.), who highlighted career path in academia. She emphasized that not everyone's path is identical, and that it is possible to successfully pursue a career in academia even after maternity leave. The third speaker was Dr. Eun Chung Park (NIAID, NIH), who introduced career paths available at the NIH Extramural Division. She listed interest in public service, ability to look at the big picture, and skills in communication as key qualifications needed for the positions. The fourth speaker, Dr. YangMee Shin (FDA), introduced career options available at the FDA, and in particular described what it involves to be a Regulatory Scientist. She highlighted that one advantage is that one gets to make regulatory decisions that impacts public health. Last speaker of the session, Dr. Eun Hee Kim (Merck Research Labs), described her career path through academia, federal institute, and industry. She advised to have a role model/mentor and to play on your core strengths.

After a short coffee break, Dr. DoHwan Park (UMBC) introduced the second Keynote speaker of the career development session, Dr. Phyllis Robinson (Univ. Maryland Baltimore County). Dr. Robinson described her grass-root efforts at UMBC to implement policies for women faculty in STEM. She served as the co-chair of the National Science Foundation (NSF) funded ADVANCE grant, which enabled policy changes at UMBC to provide equal opportunities for women in STEM field and allow for efficient management of maternity leaves etc. Such development gave hope that when grass-root organization meets with institutional commitment, it can make a difference for women faculty in STEM. This was followed by a short discussion lead by Dr. Hey-Kyoung Lee (Johns Hopkins Univ.), which allowed members to ask questions to all the speakers in the career development session. The meeting was concluded by a closing remark from Dr. Myung Hee Park, and acknowledgement of Dr. Hee-Yong Kim's service as the President of KWiSE headquarter. Many of the mentors and mentees gathered for dinner at the Vit Goel Tofu & BBQ restaurant to network and continue the discussions on various topics related to career options and how to overcome difficulties facing women in science.



SE Chapter

The 8th annual conference of the KWise Southeast Chapter was held on Saturday, May 19, 2018 at the Gwinnett Convention and Visitors Bureau. Registration began at 9:30AM with coffee and light breakfast provided. Dr. Sung-Sil Moon, the president of the KWise Southeast Chapter, welcomed everyone and briefly introduced the purpose of the KWise annual conference. In order to promote effective networking, every attendee then had a chance to introduce themselves to the group before the program began.

As the program began, the Professor Sujin Lee of Emory University provided a keynote speech focusing on her ongoing research, "Development of Polyvalent Inactivated Rhinovirus Vaccine." While this common cold virus was known to be difficult to develop a vaccine, Prof. Lee presented some notable experiments and findings to overcome such challenge. As the next speaker, Ms. Terri Kim who works at Anthem as a director of consumer experience, provided her talk on "Design Thinking for solving Business Problems." Using real-world examples in the medical field, she presented the five steps of the design thinking process and best practices. After a short coffee break, Professor Chanju Lee of Georgia Gwinnett College presented on "Augmented Reality in Education." She discussed uses of virtual reality and augmented reality and circulated her textbook being developed using augmented reality in a mobile application setting.

The research session was recessed for a networking lunch and group photo time. The attendees gathered around based on their research/career interests and continued conversations during lunch. After lunch, Dr. Mihyeon Jeon who works at a civil engineering company, WSP, continued research discussion on "Future of Transportation Mobility: Connected/Automated Vehicles and Beyond." She introduced emerging concepts and technologies in transportation industry such as connected/automated vehicles, shared mobility, and electrification and how they might impact our lives and communities. Dr. Mikyong Shin at CDC then talked about "Tracking Environmental Hazards and Health Outcomes for the Healthy Informed Communities." She introduced a CDC-based website that readily tracks location-specific environmental hazards and health related concerns for a county or a

residential/business address. Lastly, Dr. Junghui Koo at Emory University presented her current research on “Targeting LKB1 in Non-Small Cell Lung Cancer.” Throughout extensive laboratory experiments, she shared some innovative ideas in treating non-small cell lung centers.

After the research session was concluded, Dr. Sung-Sil Moon reviewed the KWiSE SE Chapter 2017-2018 activities. She granted a Certificate of Appreciation along with a small gift to the speakers and expressed gratitude to the vice president and conference planning team. Dr. Moon then draw discussion on the appointment of the new president (Dr. Mihyeon Jeon, current vice president) and the officers for the year 2018-2019. Dr. Sohyun Park (CDC) and Professor Hyesung Park (Georgia Gwinnett College) were nominated for the officers for the coming years. The group then expressed gratitude and gave a big applause for Dr. Moon’s time and dedication during her tenure as the president and the officers in the preceding years. The conference was adjourned while groups of attendees actively continued their networking and conversations.



Texas Chapter

The third annual KWiSE Texas Chapter annual conference was held on May 12, 2018 at the University of Texas Health Science Center Houston in Houston, Texas. About 45 people from institutions in and around Houston area including University of Texas Health Science Center Houston, Baylor College of Medicine, MD Anderson Cancer Center and University of Texas Medical Branch in Galveston, TX attended the meeting. At the opening of the conference, Dr. Nayun Kim, the current chapter president of KWiSE Texas gave welcomed everyone. Dr. Jung Hwan Kim of Baylor College of Medicine gave opening remark as the representative of the KSEA-South Texas Chapter, which is the major sponsor of the conference. This was followed by Jae Hui Kim, the Consul of the Republic of Korean in Houston gave a brief remark on the commitment of the Korean Consulate toward building better environment for Korean-American Scientists.

This year, we also had a number of attendees from the Texas A&M located at College Station, TX and University of Texas Health Science Center at San Antonio. These institutions are 2 to 3 hrs drive away from the location of the conference in Houston and evidence of the effort by the KWiSE Texas members these past years invested in outreach. We expect that our outreach effort will continue to grow to include a strong contingency from these two areas. During the conference, the very important discussion about how KWiSE Texas Chapter based in Houston can better serve those located in College Station or San Antonio was carried out with a promise for further plans and commitment for support.

The conference began with the first scientific session of the day chaired by Dr. Jieun Kim of Baylor College of Medicine. Two invited speakers, Eun Hee Kim, PhD, and Hyun Eui Kim, PhD, both from UT HSC Houston talked about “Effect of comorbidity on ischemic stroke”, and “Lipid-mediated communication between mitochondria and cytosol in protein homeostasis”, respectively. This year, early-stage women faculty members in academic institutions were deliberately selected as the invited speakers in order to share their experience and philosophy toward the chosen career path in addition to their scientific interest. At the end of the first scientific session, each of the speakers were asked about the mentors they have had throughout their careers and gave brief and frank description of the help they have had from their mentors during graduate and postdoctoral work.

The second session of the conference was the keynote talk by Dr. Theresa Koehler who is the chair of the department of Microbiology and Molecular Genetics at UT HSC Houston. As one of very few women who has risen to the rank of department chair at her institution, she talked very frankly about the virtues that guided her throughout her career under the title “Seizing Serendipity for Success in Science”. Dr. Koehler emphasized that being prepared to take advantage of the fortunate chances that one encounter in life. She talked about how being bold and thinking out of the box helped her seize the opportunities that came around for her. She also shared her passion about the organism of her research focus, which is the very interesting microbe *Bacillus anthracis*, the pathogen responsible for anthrax.

After a break for group photo and lunch, the conference reconvened with the professional development session chaired by Dr. Yangjin Bae of Baylor College of Medicine and Dr. Gyuson Yun of Houston Methodist Research Institute. During this very spirited and popular session, Dr. Bae gave a quick introduction about how to give the best elevator talk and several brave volunteers tried it out in front of the conference attendees followed by some frank critiques and directions for improvement. Dr. Yun talked about the process of applying for the faculty position at academic institution in keeping with the theme of the conference and gave pointers on what the faculty recruit committees are looking for.

During the second scientific session chaired by Dr. Sukyeong Lee of Baylor College of Medicine, the invited speakers Dr. Hyun-kyoung Lee of Baylor College of Medicine and Dr. MinJae Lee, UT HSC Houston gave talks with titles “Developmental Gliogenesis: New Perspectives and Paradigms for Repairing the CNS” and “Application of Biostatistics in Biological/Medical Sciences and Researches”, respectively. They both also talked about what advice they would give to those seeking a similar career path.

The scientific session was followed by the poster session where 11 posters with the topics ranging from the RNA degradation pathway to the design of small molecules for the use in clinical studies were presented. Memers were seriously engaged in discussing with the poster presenters and critiquing them by providing a platform to vote for the best poster presenter. During the award session that followed the poster session, Dr. Jiyoen Kim of Baylor College of Medicine and Dr. Ohbet Cheon of Houston Methodist Research Institute received 2nd and 1st prize, respectively. All poster presenters were presented with a small token of appreciation.

Finally, the 3rd annual conference was a great success with the program consisting of not only scientific presentations but also other activities geared toward the professional development of the members. There were many with feedbacks that expressed appreciation for these activities making the conference more interactive and even entertaining. We reflect positively on the success of these phenomenal of these past three years of KWiSE Texas where we went from non-existence to the solid presence in the region. When we look to the future of KWiSE Texas, we will strive to include more engineering and physical science disciplines and also continue our effort to reach out to those in Texas A&M and UT HSC San Antonio.



NY/NJ Chapter

The 2018 KWiSE-NY/NJ Chapter Conference was held at Columbia University, New York on May 5, 2018. Under this year's theme of "Women in Science and Humanity-Balancing Life" we invited four excellent female scholars to share their research as well as their career journey. Dr. Alissa Park (Lanfest Chair, Columbia University) presented her benchmark research on towards sustainable energy and materials. Dr. Park shared her passion for conserving and reusing energy through capturing and conversion of carbons. Dr. Jung Lee (Professor, Stockton University) presented her current research on data graph interpretation and construction. Her presentation inspired audience all of whom were instructors in some capacity to design effective instructions to maximize students' learning. Dr. Meejung Chin (Seoul National University) shared her research on policy comparisons between the US and Korea in regards to work and family balance. The topic was not only scholastic but also practical to all women scientists who need to balance work, family, and life. The final presentation by Dr. Jeongran Lee (Nokia Bell Lab) introduced data science and its automation with various real-world examples and sparked the Artificial Intelligence discussions among members.

This year's conference was inspiring and educational. All members engaged in vibrant discussions on topics from basic science to clinical implications and consumer science. 2018 NY/NJ Chapter

conference marked another great success, and promised a long-lasting networking, mentoring, and sharing opportunity among members.



LA-SD Chapter

KWiSE 12th West Coast Annual Conference entitled, "Your Needs, Your Voice, Your Successful Career" was successfully held on May 19, 2018 at QUALCOMM Auditorium in San Diego. There were 54 participants including 26 members of SD chapter, 13 members of LA chapter and 15 non-KWiSE members. In particular, we recruited 12 new KWiSE members through this conference.

We invited Dr. Michael Shepard (Biopharma consultant, Biologics21) who first discovered Herceptin, a breast cancer drug approved in 1998, Professor Sang-Hee Lee (Associate Dean of Social Sciences, UCR), Dr. Judith Enns (Associate Dean, Human Resources, UCSD extension), Dr. SungHwan Cho (CTO, NanoCollect Biomedical, Inc), and Dr. Janet Hur (CEO, Millibatt, Inc) as plenary speakers. Professor Lee and Dr. Huh are KWiSE LA chapter members. Speakers shared inspiring stories about their career paths and gave us practical tips in various professional fields. The title of each speaker's seminar can be found in a meeting program (attached)

In addition, we had a session for Panel Discussion and Networking. We introduced 7 panelists including 2 our speakers, Drs. Lee and Hur in Science and Engineering fields to ~20 YG (younger generation including undergraduate and graduate students) and had panel discussion and networking according to each individual needs. This session was much appreciated by YG.

**KWiSE 12th West Coast
Annual Conference**

Your Needs,
Your Voice,
Your Successful Career

www.kwise.org

May 19, 2018
KWiSE SO Chapter

