

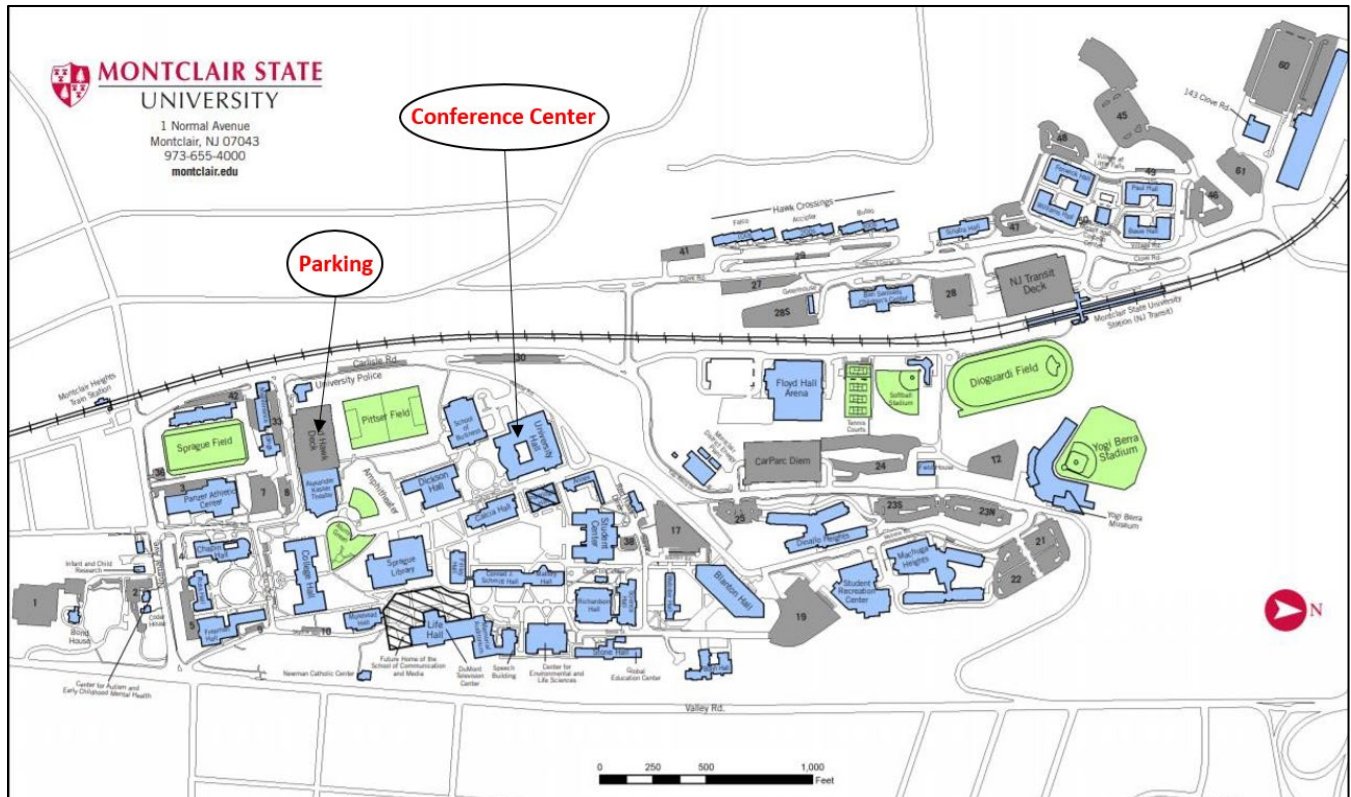


THE 28TH KSEA NORTHEAST REGIONAL CONFERENCE
NRC 2019

Diversity and Integration of
Science and
Technology

March 23, 2019
Conference Center of University Hall Building,
Montclair State University

Montclair State University CAMPUS MAP



* Parking for NRC 2019 should be allowed ONLY at Red Hawk Deck parking garage.

CONTENTS

Congratulatory Message	4
Welcoming Remark	5
NRC 2019 Organizing Committee	6
Introduction to Professional Association	7
NRC 2019 Annual Conference	
Program at a Glance	12
Conference Program	13
Keynote Session Abstracts	17
Keynote Session I	18
Keynote Session II	19
Keynote Session III	20
Keynote Session IV	21
Technical Session	22
Bio & Medical Science	22
Engineering & Pharma	24
IT	26
Non-Technical Session	29
Patent Law	29
Personal Finance	30
Panel Discussion	31
Andrew Kim Memorial Foundation Award	32



The 27th KSEA Northeast Regional Conference
Montclair State University, Montclair, NJ, March 24, 2018

CONGRATULATORY MESSAGE FROM THE KSEA PRESIDENT

Dear KSEA members, colleagues and friends,



As the 47th president of Korean-American Scientists and Engineers Association (KSEA), I want to express sincere appreciation to all of you for attending this 28th Northeast Regional Conference. This event brings together New Jersey, York Metropolitan and Philadelphia chapters and regional members. We are so grateful to organizers, members, contributing sponsors and students that are volunteering and donating countless hours for this event. KSEA will reach 50th year anniversary by 2021. We have come a long way since the inception of this organization in 1971. Since then, KSEA database registered over 30,000 scientists, engineers and technologists. We estimate that about 10,000 member and supporters are active at any time across the USA. All of us in 70 chapters, branches and 30 Affiliated Professional Societies (APS) are working hard to support cooperation of US-Korea, collaboration between KSEA members and promoting many community services. We, as KSEA and APS partners, continuously perform near 250 activities and events every year nationwide. We report some of these activities on our KSEA newsletters. As you may have noticed, KSEA grows stronger every year.

The Northeast region of KSEA performed an amazing job on our flagship event called US-Korea Conference (UKC) 2018. UKC and associated events were held in Saint John's University Conference Center, Queens, New York, USA during July 30th to August 4th, 2018. It was a spectacular event, and I sincerely want to thank all those participated in the UKC2018 on Science, Technology and Entrepreneurship and associated programs. We received many excellent feedback and comments from 1200 participants, representing scientists, engineers, government officials, industry executives, and policy-makers from both the US and Korea. With the public session and job seekers combined, we have reached approximately 3000 on-site and off-site (online) participants during 10days of the event. Associated events to UKC2018 were (1) Youth Science and Technology Leadership Camp (YSTLC), (2) a joint workshop with Korea Academy of Science and Technology (KAST), National Academy of Science of USA (NAS), (3) KSEA-KOFST Next Generation Leadership Workshop and (4) a Public Session- Job/Career Program.

KSEA cannot be in operation without many donations. I am so thankful to all our sponsors and supporters in the Northeast region. I want to sincerely thank Andrew Kim Foundation for scholarship and continue support from Korea-U.S. Science Cooperation Center (KUSCO). I want to congratulate all committees and volunteers that are involved in organizing this wonderful NRC. Because you are sacrificing your precious time and tireless efforts, many of us can enjoy the conference and programs. All of you showed dedication, extreme commitment and inspiring spirit for service to KSEA. We are proud of your young generation/professionals that are volunteering. NRC2019 is a success simply because what we witness today. I hope all of you thoroughly enjoy today's event.

Sincere thanks to all,

A handwritten signature in black ink that reads "K Stephen Suh". The signature is fluid and cursive.

K. Stephen Suh, KSEA 47th President

WELCOME TO THE 28TH KSEA NORTHEAST REGIONAL CONFERENCE

Distinguished Guests and Fellow KSEA Members,

Welcome to all of you to the Northeast Regional Conference (NRC) 2019 at Montclair State University, jointly organized by **New York Metropolitan, New Jersey, and Philadelphia Chapters of Korean-American Scientists and Engineers Association (KSEA)**.

The NRC 2019 is collaborated with KSEA affiliated professional societies (APSSs) including KASBP, KITEE, KWiSE, NYKB, and PKSA. The Theme of NRC 2019 is “Diversity and Integration of Science and Technology” and its goal is to promote the spirit of service in pursuing technical excellence by exemplifying those who have led such a life of service. The objective of this conference is to provide a forum in which scientists and engineers in major areas present their research findings and share ideas.

We are hoping that the NRC 2019 will also contribute greatly to the advancement of research and development in both US and Korea. In addition, the NRC 2019 will provide an opportunity for women and young generation professionals in science and engineering to establish professional networks, as well as to explore career opportunities. On behalf of the NRC organizing committees, we express sincere gratitude to all the distinguished guests and KSEA NY, NJ and Philadelphia members for their participation in NRC 2019.

On behalf of the NRC organizing committees, we express sincere gratitude to all the distinguished guests and KSEA NY, NJ and Philadelphia members for their participation in NRC 2019.

Thank you again for participating in the NRC 2019.



Ohbong Kwon, Ph.D.
KSEA New York Metropolitan
Conference Chair



Nakjung Choi, Ph.D.
KSEA New Jersey
Conference Chair



Albert Kim, Ph.D.
KSEA Philadelphia
Conference Chair

NRC 2019 ORGANIZING COMMITTEE

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	IT	Bongjun Ko	bongjun_ko@us.ibm.com
	Non-Technical (YG)	Kwangsu Park	pks0804@gmail.com
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	Jae Sik Lee		jaesiklee65@hotmail.com
Non-Technical Session Organizing Committee	Aria SoHyun Rhee, Jamie JiYoung Park, Jenny Jung, Jiwoon Park, Kevin Kim, Lang Yoo, Paul Shim, Stella Chun, Youngtaek Oh		

INTRODUCTION TO PROFESSIONAL ASSOCIATIONS

KASBP



Sean Kim, Ph.D.,
Blueprint Medicines

President of KASBP

KASBP (Korean American Society in Biotech and Pharmaceuticals) is a non-profit organization whose mission is to promote exchange of scientific findings and networking among Korean-American scientists in life science. Since its founding in 2001, KASBP has gone through a tremendous growth into a premiere professional organization that reaches >1000 members and seven regional chapters throughout US.

The current membership consists of industrial scientists who are working for ~100 pharmaceutical companies and biotech companies, faculties, post-docs, or graduate students in >60 premier academic institutions, government employees in FDA, NIH, or other local and federal government organizations, as well as researchers from both Korean universities or corporations. Our regional chapters are in Boston, Connecticut, Illinois, New Jersey, Philadelphia, San Francisco, and Washington DC. These locations represent major biotechnology hubs in US and our members are actively involved in discovering and developing new medicines for patients in unmet medical needs. Despite busy daily life at work, our members are also active in forming partnership with other Korean-American Organizations such as KSEA; co-hosting The National Math Competition, attending NRC or UKC events and co-hosting job fairs.

To promote its mission of scientific exchange, KASBP holds two national symposiums every year, one in spring and another in fall. The focus of symposiums is to discuss contemporary issues and emerging trends in drug discovery and development. Throughout years, we were honored by many prominent keynote speakers and scientific forum presenters who shared their cutting-edge research and experiences. The audience were also greatly benefitted from panel discussions, with invited experts from multiple disciplines including but not limited to entrepreneurs, lawyers, VC investors and scientific founders in US and Korea. KASBP also strive to bridge Korean pharmaceutical industry to US corporations or research institutions. With the remarkable growth of Korean biotechnology sector in the last 10 years, KASBP has been playing a seminal role in new drug discovery, technology transfer, drug development and commercialization by Korean companies. In addition, KASBP is actively connecting well-qualified candidates with potential employers.

Our bi-annual fellowship program also helps identifying and nurturing young researchers with Korean heritage and raise their profile to be future leaders in biotechnology and pharmaceutical industries both in Korean and US.

I encourage you to visit www.kasbp.org to learn more about the organization and its current activities.

KASBP Spring Symposium

May 31 – June 1, 2019

Sheraton Edison Hotel Raritan Center

125 Raritan Center Pkwy, Edison, NJ 08837

KITEE



Myung Jong Lee,
Ph.D., CUNY City
College and Graduate
Center

President of KITEE

KITEE (Korean-American Innovative Technology Engineers and Entrepreneurs) was established in May 2015 to become the center of startup ecosystem for Korean-Americans in the IT, BT, FT and other fields in the greater NY metropolitan area. The NY-NJ hub is the most favorable environment with strong growth in startups, IT, BT, FT research and development, and business. The KITEE's business ecosystem will have features essential to any startups: human capital in various innovative technologies, finance, business service, education, startup incubation, and collaboration with Korea. KITEE is meeting monthly on every third Thursday, carrying out the series of initiatives toward creating startups by offering seminars and sharing and supporting members' startup ideas. KITEE is open to anyone who is interested in the entrepreneurship. Current KITEE members comprise IT, BT, FT engineers and researchers, entrepreneurs, developers, designers, investors, marketing and business development, financial and legal service experts, and graduate students. I welcome you to join KITEE today and look forward to meeting you at the next monthly meeting.

Please send your inquiry to info@kitee.org.

Home page: www.kitee.org

Facebook: <https://www.facebook.com/kitee.org>

KWiSE



HeaYeon Lee, Ph.D.,
*Mara Nanotech NY,
inc.*

*KWiSE NY/NJ Chapter
President*

KWiSE (Korean Women in Science and Engineering) is a non-profit organization of Korean-American women professionals in the science and engineering fields. Our mission is: (1) To establish and strengthen the network of Korean-American women scientists and engineers, (2) To provide opportunity for collaboration and career development, and (3) To promote international cooperation especially between the United States and Korea. We assist members in realizing their full potential through professional activities and training such as scientific journal writing, grant proposal writing, and interviews. We also identify and acknowledge successful women scientists and engineers as role models for the young generation. KWiSE serves the community to promote close networking of Korean-American Women in Science and Engineering fields: technical excellence, US-Korea cooperation, professional networking, and career development.

Any inquiries or questions can be submitted to h.lee@mara-nanotech.com.

Home page: <https://www.kwise.org/>

NYKB



Kisa Sung, Ph.D.,
*Icahn School of
Medicine at Mount
Sinai*

President of NYKB

NYKB (New York Korean Biologists) is an independent non-profit scientific organization based in New York State. NYKB is dedicated to advancing science and developing scientific careers in academia and industry, in hopes to strengthen Korean American scientific communities. NYKB's current membership of over 250 scientists includes faculty members, postdoctoral fellows, graduate and undergraduate students at ten academic institutions (Albert Einstein College of Medicine, Stony Brook University, Cold Spring Harbor Laboratory, Columbia University, Weill Cornell Medical College, Memorial Sloan Kettering Cancer Center, Icahn School of Medicine at Mount Sinai, New York University, Rockefeller University, and Rutgers University) in New York. Since its re-establishment in 2008, NYKB's membership is growing each year through attraction of more scientists. NYKB organizes various events including an annual conference, career or Bio night, and social networking events.

For more information, please contact: nykb2008@gmail.com.

Home page: <http://nykb.org>

Facebook: <https://www.facebook.com/newyorkkoreanbiologists>

NYKB Annual Conference

April 27, 2019

Columbia University, Alfred Lerner Hall Rm 555

New York, NY 10027

PKSA



SungKyoung Lee
Ph.D., University of
Pennsylvania
Perelman School of
Medicine

President of PKSA

The Philadelphia Korean Scholars Association (PKSA) is aimed at promoting researches and networking among Korean scholars in the greater Philadelphia area. PKSA holds twice a monthly diverse seminar talk on Friday at 6 PM at the UPenn Smilow Translational research building (10th floor). PKSA warmly welcomes new Korean scholars in the region regardless of research fields and affiliations.

Any inquiries or questions can be submitted to pksa.scholar@gmail.com.

Please sign up at Facebook:

https://www.facebook.com/home.php?sk=group_169144909800932
for receiving seminars and other event information.

PROGRAM AT A GLANCE

NRC 2019 Program Schedule		
8:00AM-9:00AM	Registration/Breakfast	
9:00AM-9:20AM	Opening Ceremony / Congratulatory Remarks	
9:20AM-10:00AM	Plenary Session I (by Dr. Eun-Suk Seo)	
10:00AM-10:10AM	Coffee Break	
10:10AM-10:25AM	Welcoming Remarks	
10:25AM-11:05AM	Plenary Session II (by Dr. Kyu Rhee)	
11:05AM-11:45AM	Plenary Speaker III (by Dr. Chongwoo Yu)	
11:45AM-12:00PM	Group Photo	
12:00PM-1:00PM	Lunch	
1:00PM-1:40PM	Plenary Session IV (by Prof. Jihoon Rim)	
1:40PM-1:50PM	Coffee Break	
	Technical	Non-Technical (YG)
1:50PM-2:30PM	Bio & Medical Science Forum	Patent Law
2:30PM-2:40PM	Coffee Break	
2:40PM-3:20PM	Engineering & Pharma Forum	Personal Finance
3:20PM-3:30PM	Coffee Break	
3:30PM-4:30PM	IT Forum	The Next Big Move: Academia vs. Industry
4:30PM-5:40PM	Scholarship Award & Talks	
5:40PM-5:50PM	Closing Ceremony	
5:50PM-8:00PM	Networking Dinner	
8:00 PM	<i>- Have a Safe Trip Home and See You Next Year -</i>	

NRC 2019 PROGRAM

Registration & Breakfast Networking

Hall

8:00 AM - 9:00 AM

Coordinators:

Stella Chun, M.S., Thermo Fisher Scientific

Lang Yoo, Ph.D., NYU School of Medicine / Nathan S. Kline Institute

Opening Ceremony & Congratulatory Remarks

Main Ballroom

9:00 AM - 9:20 AM

Ohbong Kwon, Ph.D., KSEA New York Metropolitan President

Nakjung Choi, Ph.D., KSEA New Jersey President

MORNING SESSION

Plenary Session I

Main Ballroom

9:20 AM - 10:00 AM

Eun-Suk Seo, Ph.D., Professor, University of Maryland

“Cosmic Journey”

Coffee Break

Hall

10:00 AM - 10:10 AM

Welcoming Remarks

Main Ballroom

10:10 AM – 10:25 AM

Kenneth Sumner, Ph.D., Associate Provost, Montclair State University

Plenary Session II

Main Ballroom

10:25 AM - 11:05 AM

Kyu Rhee, MD, MPP, Vice President & CHO at IBM Corporation

“Inventing and Predicting a New Era of Health with AI”

Plenary Session III

Main Ballroom

11:05 AM - 11:45 AM

Chongwoo Yu, Ph.D., Senior Clinical Pharmacology Reviewer, FDA

“Clinical Pharmacology in Drug Development”

Group Photo

Main Ballroom

11:45 AM - 12:00 PM

Coordinator:

Kevin Kim, M.ENG., Vidaris, Inc.

Lunch

Main Ballroom

12:05 PM - 1:00 PM

Fresh Mex (beef, tofu and vegetable fajitas)

AFTERNOON SESSION

Plenary Session IV

Main Ballroom

1:00 PM - 1:40 PM

Moderator: Stella Chun, M.S., Thermo Fisher Scientific

Prof. Jihoon Rim, NYU Stern School of Business and former CEO of Kakao
“Conversational Session”

Coffee Break

Hall

1:40PM - 1:50 PM

TECHNICAL SESSION

Bio & Medical Science Forum

Room A

1:50 PM - 2:30 PM

Chair: Kisa Sung, Ph.D., Icahn School of Medicine at Mount Sinai

Seunghun Han, Ph.D., Albert Einstein College of medicine
“Cobll1 plays an important role in chronic myeloid leukemia”

Jae Gyun Oh, Ph.D., Icahn School of Medicine at Mount Sinai
“Regulatory mechanisms underlying upregulation of miR-146a in cardiomyocytes”

Coffee Break

Hall

2:30 PM - 2:40 PM

Engineering & Pharma Forum

Room A

2:40 PM - 3:20 PM

Chair: Byungchan Kim, Ph.D., Schrödinger

Inyoung Jung, Ph.D., University of Pennsylvania
“CRISPR-mediated CAR-T cell engineering strategy”

Eon Soo Lee, Ph.D., New Jersey Institute of Technology
“Microfluidics-based point-of-care nano biochip for disease diagnosis”

Coffee Break

Hall

3:20 PM - 3:30 PM

IT Forum

Room A

3:30 PM – 4:30 PM

Chair: Bongjun Ko, Ph.D., IBM Thomas J. Watson Research Center

Chang H. Kim, Ph.D., Consulting on 5G, wireless technology and strategy
“Wireless technology evolution: from 1G to 5G”

Mingoo Seok, Ph.D., Columbia University
“Recent advances in AI and ML hardware design”

Yeon-sup Lim, Ph.D., IBM Thomas J. Watson Research Center
“Continuous update composition in software defined networks”

NON-TECHNICAL SESSION

Organizing Committee Chair: Kwangsu Park
Organizing Committee Members: Aria SoHyun Rhee, Jamie JiYoung Park, Jenny Jung, Jiwoon Park, Kevin Kim, Lang Yoo, Paul Shim, Stella Chun, Youngtaek Oh

Patent Law Room B

1:50 PM - 2:30 PM Chair: **Kwangsu Park, Ph.D.**, Icahn School of Medicine at Mount Sinai

Choe Yun, Ph.D., J.D., Lucas & Mercanti LLP
“Patent; Knowing is Seeing”

Coffee Break Hall

2:30 PM - 2:40 PM

Personal Finance Room B

2:40 PM - 3:20 PM Chair: **Kwangsu Park, Ph.D.**, Icahn School of Medicine at Mount Sinai

“Investment Basics and Current Market Condition?”

Mr. Suhwan Steve Jeong, Citigold
Mr. Danny Kim, Citi Personal Wealth Management

Coffee Break Hall

3:20 PM - 3:30 PM

Panel Discussion Room B

3:30 PM - 4:30 PM Chair: **Kwangsu Park, Ph.D.**, Icahn School of Medicine at Mount Sinai

“The Next Big Move: Academia vs. Industry”

Eun-Suk Seo, Ph.D., University of Maryland
Prof. Jihoon Rim, New York University
Chongwoo Yu, Ph.D., FDA

Andrew Kim Memorial Foundation Scholarship Awardees (2019)

4:30 PM - 5:40 PM **Chair: Min Suk Kang, Ph.D.,** Columbia University Medical Center

- **Howook Hwang, Ph.D., Columbia University**
“Structure-based drug target prediction on a genome-wide scale”
- **Heuijoon Park, Ph.D., Fred Hutchinson Cancer Research Center**
“Bone marrow-derived epithelial cells and hair follicle bulge stem cells promote and initiate chronic inflammation-associated cutaneous neoplasms”
- **Yoonhee Lee, Ph.D., Columbia University**
“Massively parallel single-molecule detection platform using nano-electronics”
- **Taewan Kim, Ph.D., Memorial Sloan Kettering Cancer Center**
“Derivation of Enriched Engraftable Midbrain Dopamine Neurons from Human Pluripotent Stem Cells in a Clinical Relevant Condition for the Cell Replacement Therapy to Parkinson Patients”
- **Youngwan Kim, Ph.D. Candidate, Columbia University**
“Flexible and wearable optical imaging system using diffuse optical imaging technique for multiple biomedical applications”
- **Tae-Hyeon Shin, Ph.D. Candidate, University of Pennsylvania**
“Measurement of the Splashback Feature around SZ-selected Galaxy Clusters with DES, SPT and ACT”

Closing Ceremony

Main Ballroom

5:40 PM - 5:50 PM **Albert Kim, Ph.D.,** KSEA Philadelphia President

Networking Dinner

Main Ballroom

5:50 PM - 8:00 PM Little Italy

- Tortellini Primavera and Chicken Marsala
- Fresh baked garlic bread, caesar salad, homemade cookies

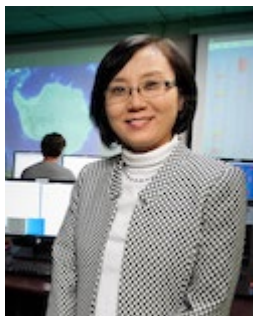
- Have a Safe Trip Home and See You Next Year -

Abstract and Biography

Cosmic Journey

Abstract

There has been quite an excitement recently as new results from various cosmic ray experiments became available. I will review some of results particularly from balloon borne and space based experiments and discuss their implications and prospects of future plans.



Eun-Suk Seo, Ph.D.,
Professor at University
of Maryland

Biography

Eun-Suk Seo earned her Ph.D. in 1991 from Louisiana State University. She joined UMD in 1991 and became a Fellow of the American Physical Society in 2010. Her research focuses on cosmic ray origin, acceleration, and propagation including searches for exotic matter, such as antimatter and dark matter using direct measurements of galactic cosmic rays by flying instruments on balloons or spacecraft. Professor Seo has worked on numerous projects for the detection and characterization of cosmic rays, including four major international collaborations: ATIC (the Advanced Thin Ionization Calorimeter), AMS (the Alpha Magnetic Spectrometer, intended for deployment on the International Space Station), BESS (the Balloon-borne Experiment with a Superconducting magnet Spectrometer) and CREAM (the Cosmic Ray Energetics and Mass program). She is the Principal Investigator for CREAM and Co-Investigator for the others.

She has received numerous awards, including the 1997 Presidential Early Career Award for Scientists and Engineers, 2006 and 2011 NASA Group Achievement Awards, 2015 Scientist of the Year Award, etc. She has served on numerous committees at the national and international levels. She is currently on the Americas Science Advisory Board for IOP Publishing. She is also serving as Guest Editor for the Advances in Space Research (Elsevier). She served as the 46th President of Korean-American Scientists and Engineers Association (KSEA), the 4th President of Korean-American Women in Science and Engineering (KWise), and the 29th President of the Association of Korean Physicists in America (AKPA).

Inventing and Predicting a New Era of Health with AI

Abstract



Kyu Rhee, MD., MPP,
Vice President & CHO
at IBM Corporation

IBM's Watson technology has come a long way since its debut on Jeopardy! In 2011 and has continued to invest in its moon shot mission to transform the healthcare space through technology with IBM Watson Health. Through data, analytics, consulting and artificial intelligence (AI), Watson Health is working with key stakeholders across the healthcare ecosystem to advance to a healthier future by overcoming today's most pressing health challenges. Dr. Rhee will share the IBM Watson Health story, discuss some of the most impactful solutions our clients are using today and highlight some of the scientific evidence demonstrating the impact our technology has on healthcare management, providers and, most importantly, patients.

Biography

Dr. Rhee serves as Chief Health Officer of IBM, where he has global responsibilities for Watson Health and assuring a Culture of Health at IBM. Prior to joining IBM, Dr. Rhee was Chief Public Health Officer at the Health Resources and Services Administration (HRSA), which is the primary federal agency for improving access to health care services for people who are uninsured, isolated, or medically vulnerable. Dr. Rhee also served as Director of the Office of Innovation and Program Coordination at the National Institutes of Health (NIH), which is the primary federal agency for research. Prior to his federal government service, he worked in community health settings as the Chief Medical Officer of Baltimore Medical System Inc., the largest network of Federally Qualified Health Centers in Maryland. In addition, Dr. Rhee served five years as a National Health Service Corps Scholar and Medical Director at Upper Cardozo Health Center, the largest community health center in Washington, DC. Dr. Rhee was a Chief Resident and performed his medical residency training in both internal medicine and pediatrics at Cedars-Sinai Medical Center in Los Angeles. He obtained his medical degree from the University of Southern California. Dr. Rhee also holds a master's degree in public policy from the John F. Kennedy School of Government, Harvard University with a concentration in Health Care Policy. He acquired his Bachelor in Science degree from Yale University in Molecular Biophysics and Biochemistry.

Clinical Pharmacology in Drug Development



Chongwoo Yu, Ph.D.,
Senior Clinical
Pharmacology Reviewer

U.S. Food and Drug
Administration (FDA)

Abstract

Clinical pharmacology plays an important role in drug development, especially in determining the optimal dosage regimen. This involves the evaluation of the drug's pharmacokinetics and pharmacodynamics, food effect, drug interaction potential, bioanalysis, exposure-response relationship for safety and efficacy, and considerations when being used in specific populations.

Case examples will be presented to highlight the utility and importance of clinical pharmacology in drug development to ensure that drug products are safe and effective and that they are delivered in the right dose, at the right time, to the right patient.

Biography

Dr. Yu is a Senior Clinical Pharmacology Reviewer in the Office of Clinical Pharmacology (OCP) at the U.S. Food and Drug Administration (FDA). Dr. Yu received his Ph.D. in Analytical Chemistry with the focus on Drug Metabolism and Mass Spectrometry from the University of Illinois at Chicago.

Subsequently, Dr. Yu has worked in the Department of Pharmacokinetics, Dynamics, and Metabolism (PDM) at Pfizer (Ann Arbor, MI) and the Drug Metabolism and Pharmacokinetics (DMPK) Department at Schering-Plough (currently Merck; Kenilworth, NJ) for several years. At both organizations, Dr. Yu has been heavily involved in carrying out various types of drug metabolism, pharmacokinetics, and drug-drug interaction studies using mass spectrometry.

Since 2007 when Dr. Yu first joined the Agency, Dr. Yu's work has been focused on the evaluation of bone, reproductive, and urologic drug products. Dr. Yu served as the Principal Investigator of FDA sponsored research projects including: (1) Effect of Body Mass Index / Body Weight on Effectiveness of Hormonal Contraceptive Products for Women, and (2) Investigation of Drug-Drug Interactions with Hormonal Contraceptives. Dr. Yu served as a member of FDA guidance working groups including those for the *Bioanalytical Method Validation Guidance*, *Clinical Combined Oral Contraceptive Drug Interaction Guidance*, and the *Labeling for Combined Oral Contraceptives Guidance*. Dr. Yu currently serves as the chair of the FDA OCP Bioanalytical Research (BAR) Scientific Interest Group (SIG).

Conversational Session



Prof. Jihoon Rim,
Professor at New York
University Stern School
of Business

Executive Advisor and
Former CEO of Kakao

Abstract

Fireside chat format with Professor Jihoon Rim about Kakao, Business success, personal stories etc.

Biography

Jihoon Rim is executive advisor and former CEO of Kakao (KRX:035720), a top-tier technology company in South Korea that is well known for its mobile messenger Kakao Talk, music streaming service Melon, and ride hailing service Kakao Taxi among many successful Internet products the company services. While he was leading the company, Kakao successfully expanded its business into finance, contents, and mobility: disrupting the market and delivering services praised by users. Jihoon also heavily invested in Artificial Intelligence and technology, making Kakao the best mobile platform in Korea. The company's revenue and operating profit doubled during his two and a half years term and acquisition of \$1.6B LOEN Entertainment was evaluated as one of the best M&As in Korean tech industry. In recognition of his stellar performance, Jihoon was ranked No.1 in "2017 Korea's Best CEO" survey, and was also selected as "2018 Korea's Top 10 Hero" by the biggest business media group, MBN. In academia, he received the "AIS leadership award", a prize presented to one person a year who demonstrated exemplary leadership and innovation by the Association for Information Systems.

Prior to Kakao, Jihoon founded an early stage venture capital, KCube Ventures in 2012. The firm quickly grew to become one of the most reputable VC firms in Korea and was also ranked #7 by CBInsights in the category of 2017. The most active corporate venture in the world. (KCube Ventures was acquired by Kakao in 2015 and became a CVC.)

Jihoon also worked at Softbank Ventures, The Boston Consulting Group, Naver, and Accenture. He has an engineering degree from KAIST.

TECHNICAL SESSION

BIO & MEDICAL SCIENCE FORUM

Session Chair: Kisa Sung, Ph.D., Icahn School of Medicine at Mount Sinai

Cobll1 plays an important role in chronic myeloid leukemia

Seunghun Han, Ph.D.

Department of cell biology, Albert Einstein College of medicine

Abstract

Although diverse molecular mechanisms regarding blast crisis (BC) progression have been suggested in chronic myeloid leukemia (CML), its exactly mechanisms are not clearly understood. Here, we identified Cordon-bleu protein-like 1 (Cobll1) acts as a distinct molecular marker and an oncoprotein in CML. Mechanistically, Cobll1 enhances NF- κ B activation through regulating the IKK γ stability. We also demonstrated that Cobll1 regulates nilotinib-induced apoptosis in CML cell lines and CML primary cells. Moreover, our studies showed that Cobll1 is highly expressed in BC, especially CD34+ primitive stem cell populations, and Cobll1 expression is regulated by miR-424 and miR-503 during BC progression. And we found that zebrafish paralog Cobll1b is important for normal hematopoiesis during embryonic development. In clinical, Cobll1 is significantly associated with blast percentage and overall survival after BC progression. But, it was not correlated with BCR-ABL1 point mutation. Our results suggested that Cobll1 function as an oncoprotein in CML. Based on these result, we propose that Cobll1 is a novel biomarker and potential therapeutic target for CML-BC.

Biography

Dr. Seunghun Han is postdoctoral fellow at the Albert Einstein College of medicine. He studied biological science at the Sungkyunkwan University, and received his Ph.D. in Molecular Biology from Sungkyunkwan University. During his Ph.D studies, he was focused on chronic myeloid leukemia (CML). He studied signaling pathway, resistance of tyrosine kinase inhibitor and transformation mechanism in CML. His study demonstrated the function of novel protein, Cobll1, in CML. He had found that Cobll1 is related with nilotinib resistance and blast crisis (BC) progression in CML. Mechanistically, he demonstrated that Cobll1 increases NF- κ B activation. Further, Cobll1 expression is highly increased in BC, especially CD34+ primitive stem cell populations, and Cobll1 expression is regulated by miR-424 and miR-503. Also, zebrafish paralog Cobll1b is important for normal hematopoiesis during embryonic development. In clinical, Cobll1 expression is significantly associated with survival duration. His results describe that Cobll1 is a novel biomarker and potential therapeutic target in CML progression. Now, his research focuses on understanding biological phenomena and development of drug in leukemia. In particular, he is interested in how the molecular mechanism can be controlled and changed in leukemia development and how this knowledge can be applied to leukemia therapy at the Albert Einstein College of medicine.

Regulatory mechanisms underlying upregulation of miR-146a in cardiomyocytes

Jae Gyun Oh, Ph.D.

Cardiovascular Research Center, Department of Cardiology
Icahn School of Medicine at Mt Sinai

Abstract

SUMO1 has been shown to be a critical player in heart failure (HF) pathophysiology. Recently, we have identified miR-146a as a SUMO1 targeting microRNA (miR). The expression of miR-146a showed an inverse correlation with SUMO1. Moreover, modulation of miR-146a altered SUMO1 expression in vitro and in vivo. However, the mechanisms underlying upregulation of miR-146a during HF remain unknown; therefore, we aimed to elucidate the regulatory mechanisms of the miR-146a. To determine which cell types contribute to miR-146a expression, isolated myocyte and non-myocyte fractions from normal and failing hearts were analyzed. During HF, upregulation of miR-146a and downregulation of SUMO1 was confirmed in CM. But, the amount of pri-mir-146a indicating transcription of miR-146a was increased only in non-myocyte fraction. Cells from failing hearts were then separated into CMs, endothelial cells, fibroblasts and leukocytes by FACS. As expected, miR-146a was upregulated in CMs predominantly. But, pri-mir-146a was mostly expressed in fibroblasts. We therefore tested the hypothesis that cell-to-cell transfer of mature miR-146a can explain the increase in miR-146a in CMs. To verify this hypothesis, we studied the secretion of miR-146a in vitro. miR-146 were mainly secreted from fibroblasts via exosome and the fibroblast exosomes were taken up by CMs. Next, cardiac exosomes from normal and failing hearts were isolated and analyzed. The exosomes from failing hearts had five times more miR-146a. The ACMs treated with exosomes from failing hearts showed negative inotropic effects. However, miR-146a-depleted exosomes, which have reduced miR-146a (by 80%), exhibited no functional deterioration. Therefore, fibroblasts are a major source of miR-146a during HF, and exosome-mediated miR-146a transfer is a critical mechanism of CM function.

Biography

Dr. Jaegyun Oh is a post-doctoral research fellow in Icahn School of Medicine at Mount Sinai. He obtained a Ph.D degree in 2013 in the Gwangju Institute of Science and Technology (GIST) under a mentorship of Dr. Woo Jin Park, and has been engaged in cardiovascular research in Icahn School of Medicine at Mount Sinai since 2013. He has been dedicated in translational cardiovascular research to develop therapeutic targets for the intervention of heart failure. Specifically, he contributed to understand the roles of several proteins (SERCA2a, SUMO1, Six1, I1-c, and stim1) and microRNAs (miR-25, miR-146a) and evaluate their therapeutic effects on heart failure. Recently, Dr. Oh identified the role of microRNA-146a as a SUMO1 regulator and his work has been published in *Circulation Research* in 2018.

ENGINEERING & PHARMA FORUM

Session Chair: Byungchan Kim, Ph.D., Schrödinger

CRISPR-mediated CAR-T cell engineering strategy

Inyoung Jung, Ph.D.

Department of Cell and Molecular Biology, Perelman School of Medicine
University of Pennsylvania

Abstract

Chimeric antigen receptor (CAR) T-cell therapy, an emerging immunotherapy, has demonstrated promising clinical results in hematological malignancies including B-cell malignancies. However, accessibility to this transformative medicine is highly limited due to the complex process of manufacturing and insufficient anti-tumor responses against solid tumors. Advances in gene-editing technologies, such as the development of Zinc Finger Nucleases (ZFNs), Transcription Activator-Like Effector Nucleases (TALENs), and Clustered Regularly Interspaced Short Palindromic Repeats (CRISPR/Cas9), have provided novel engineering strategies to address these limitations. Development of next-generation CAR-T cells using gene-editing technologies would make CAR-T therapy economically feasible and enhance the therapeutic potential in both hematologic and solid tumors. Here we summarize the unmet medical needs of current CAR-T cell therapies and gene-editing strategies to resolve these challenges.

Biography

Inyoung Jung is currently developing next-generation CAR-T therapy for prostate cancer treatment at University of Pennsylvania. He received his B.S. cum laude from Seoul National University. Before coming to Penn, he was a senior researcher at Toolgen, a leading CRISPR biotech company in South Korea. At Toolgen, Dr. Jung discovered role of novel inhibitory checkpoint, DGK, in T-cell dysfunction. He also developed CRISPR-mediated CAR-T engineering strategy which potentiates anti-tumor activity of CAR-T cells against glioblastoma, where current standard treatment has largely failed to demonstrate durable anti-tumor efficacy in the clinic. He has been acknowledged for his expertise in the immunotherapy field with the award for Expert Contribution to the CAR-T field from the National Onco Venture, a government agency, and the Korean Society of Gene and Cell Therapy. Currently, he is focusing on understanding immunological landscape in prostate cancer, and on developing CAR-T cell resistant to T-cell exhaustion at UPenn.

Microfluidics-based point-of-care nano biochip for disease diagnosis

Eon Soo Lee, Ph.D.

Department of Mechanical and Industrial Engineering
New Jersey Institute of Technology

Abstract

The current gold standard screening technologies of tumor biomarkers are highly expensive, and suffering from complex process including blood drawing, plasma separation process, macro sample volume requirement and prolonged duration of analysis to patients. Though the continuous monitoring of the levels of cancer biomarkers helps oncologists understand the cancer progression and make the decision for the next level of examination and the further required treatment for curing cancer more efficiently, there is no such simple device or process available to detect tumor markers yet. Also, when multiple biomarkers are targeted to detect from the whole blood without plasma separation to enhance the specificity of the detection, the existence of broad range of clinically relevant concentrations for different biomarkers presents a technical complication in the development of multiplexed electrochemical immune-assay. Furthermore, there are very rare studies on the understanding and development of the multiplexed assay for tumor markers with dynamic range of concentrations though in essential needs.

The innovative biochip with on-chip plasma self-separation for multiple biomarker detection with increased signal response for enhanced sensitivity and specificity is implemented as a point-of-care (POC) device. The biochip research is primarily focused on three sections: (i) self-separation of the plasma from whole blood during the self-driven flow in the microchannel, with the influence of the nano materials to detect the targeted biomolecules in the biofluid and the study of the shear effect on the biosensing during the microfluidic flow. (ii) Multiplex detection of the tumor biomarkers individually at the stationary condition on the sensing platform and Dynamic detection of tumor biomarkers in the plasma during the controlled flow of blood in surface treated microchannels and (iii) Synergistic integrations of multiplex sensing platform and self-separation mechanism in a single microchannel to detect the targeted tumor biomarkers simultaneously during the separation of plasma.

The ongoing results of the biochip research have shown successful detection of the single tumor biomarkers: cancer antigen-125 (CA-125) and of human epididymis protein-4 (HE-4) antigens individually, and demonstrated the existence of self-separation of the plasma in a microchannel. The microfluidic immuno-biosensing is implemented by immobilizing the antibodies with the nano particles such as gold nano particles and carbon nano tubes. The targeted tumor antigens are detected using the electrical signal response generated due to the antigens interaction with the antibodies immobilized on the sensing platform. Also, the sensitivity variation during the detection of the tumor biomarkers is studied between the static drop and dynamic microfluidic flow conditions.

Biography

Dr. Eon Soo Lee is an Assistant Professor and Principal Investigator in New Jersey Institute of Technology. He studied mechanical engineering in Yonsei University, and received his MS and Ph.D. in Mechanical Engineering from Stanford University in 2004 and 2007, respectively. He also worked at Hyundai H.I, as an Engineer (1999-2001) and Samsung E-M as a Principal/Senior Engineer (2007-2013).

IT FORUM

*Session Chair: Bongjun Ko, Ph.D.,
IBM Thomas J. Watson Research Center*

Wireless technology evolution: from 1G to 5G

Chang H. Kim, Ph.D.

Consulting on 5G, wireless technology and strategy

Abstract

Dr. Kim's presentation will include:

1. Some basics and fundamentals
 - Information theory
 - Multiple access technologies
2. Brief history of wireless technology
 - Wireless technology evolution: 1G to 5G
 - 5G Nirvana
3. Some words of thoughts

Biography

- BS, MS and Ph.D. in Electrical Engineering
- Senior Vice President, Samsung Electronics (Networks Unit) (2012-2017)
- Distinguished Member of Technical Staff, Lucent Technology (2000)
- Consulting Member of Technical Staff (2002)*, Lucent Technology
 - *highest technical level in Lucent/Bell Labs community
- Director of Engineering, Response Technologies Inc. (1989)
- 2 times Bell Labs President Gold award
- Currently consulting on 5G, wireless technology and strategy

Recent advances in AI and ML hardware design

Mingoo Seok, Ph.D.

Department of Electrical Engineering
Columbia University

Abstract

Computing technology has been a backbone of our society. Its importance is hard to overemphasize. Today, we again confirm its extreme importance with recent advances in artificial intelligence and deep learning. Those emerging workloads impose an unprecedented amount of arithmetic complexity and data access beyond our existing computing systems can barely handle. Across the computing systems from data centers, to mobile, and to extreme implants will face a major challenge in achieving short computational delay, energy-efficiency, and accuracy for truly enabling intelligent systems. In this seminar, we will outline the bottlenecks, notably the end of the Moore's Law and the memory wall problem. We will then discuss several approaches that our group has been working on, including in-memory computing, analog mixed-signal (AMS) feature extraction, and algorithm-hardware optimization. We will introduce several test-chip prototypes and their measurement results.

Biography

Mingoo Seok is an associate professor of Electrical Engineering at Columbia University. He received the BS from Seoul National University, South Korea, in 2005, and the MS and Ph.D. degree from the University of Michigan in 2007 and 2011, respectively, all in electrical engineering. His research interests are various aspects of VLSI circuits and architecture, including ultra-low-power integrated systems, cognitive and machine-learning computing, adaptive technique for the process, voltage, temperature variations, and transistor wear-out, event-driven controls, and hybrid continuous and discrete computing. He won the 2015 NSF CAREER award and the 2019 Qualcomm Faculty Award. He is the technical program committee members for multiple conferences including IEEE International Solid-State Circuits Conference (ISSCC). He has been as an associate editor for IEEE Transactions on Circuits and Systems Part I (TCAS-I) (2014-2016), IEEE Transactions on VLSI Systems (TVLSI) (2015-present) and for IEEE Solid-State Circuits Letter (SSCL) (2017-present).

Continuous update composition in software defined networks

Yeon-sup Lim, Ph.D.

AI Department in IBM T. J. Watson Research Center

Abstract

The ability to support continuous network configuration updates is an important ability for enabling Software Defined Networks (SDN) to handle frequent or bursty changes. Current solutions for updating SDN configurations focus on one single update at a time, leading to slow, sequential (i.e., blocking) update execution. In this paper, we develop update algebra, a novel, systematic, theoretical framework based on abstract algebra, to enable continuous, non-blocking, fast composition of multiple updates. Specifically, by modeling each data-plane operation in the set of data-plane operations to be executed by an update as a set-theoretical projection, update algebra defines novel operation composition so that the number of projections for the same match remains constant regardless of the number of updates to be composed, leading to substantial performance benefits. Specifying the dependencies of the data-plane operations in updates as a subset of a free monoid in the general case and as partial ordering for basic consistency, update algebra defines update composition that preserves consistency, even under partially-executed updates, to guarantee correctness.

Biography

Yeon-sup Lim is a research staff member at IBM T. J. Watson Research Center. He received a Ph.D. from College of Information and Computer Sciences at University of Massachusetts Amherst, and M.S. and B.S. from School of Computer Science and Engineering at Seoul National University. His research interests include the broad range of topics in the area of networks, with emphasis on multi-path transport protocol, Internet measurement, and complex networks.

NON-TECHNICAL SESSION

Organizing Committee Chair:

KwangSu Park

Organizing Committee Members:

Aria SoHyun Rhee, Jamie JiYoung Park, Jenny Jung, Jiwoon Park,
Kevin Kim, Lang Yoo, Paul Shim, Stella Chun, Youngtaek Oh

PATENT LAW

***Session Chair: Kwangsu Park, Ph.D.,
Icahn School of Medicine at Mount Sinai***

Patent; Knowing is Seeing

Choe Yun, Ph.D., J.D.

Lucas & Mercanti LLP

Dr. Yun H. Choe is a registered patent agent with the U.S. Patent and Trademark Office currently working as a Scientific Advisor/Patent Agent at Intellectual Property specialized law firm in New York. She is experienced in the preparation and prosecution of patent applications especially in chemical, pharmaceutical, and biotechnology areas. In addition, as a Scientific Advisor at Lucas & Mercanti, LLP, Dr. Choe is frequently called upon to provide technical/expert opinions regarding the validity and/or infringement of patents. Dr. Choe is extensively experienced in synthetic organic chemistry, nucleotide chemistry, carbohydrate chemistry, polymer chemistry, drug delivery medical devices and polymeric drug conjugates.

Dr. Choe received a Bachelor of Science in Manufacturing Pharmacy and a Master of Science in Medicinal Chemistry from College of Pharmacy of Seoul National University in Seoul, Korea in 1985 and 1987 respectively. She also received a Ph.D. in Synthetic Organic Chemistry from Rutgers, The State University of New Jersey in 1993 and J.D. from Fordham University Law School in 2015 and was also featured in the Fordham Lawyer while in Law School.

After her post-doctoral research at Hoffmann-La Roche, Inc. in Nutley, New Jersey, she worked approximately 15 years in research and development of Polymer Drugs and Polymeric Drug Delivery Systems at several companies including Enzon Pharmaceuticals, Inc. and Polymerix Corp. in New Jersey. She also has given numerous presentations in scientific conferences and has more than 40 publications, including more than 40 patents US and worldwide.

PERSONAL FINANCE

Investment Basics and Current Market Condition?

Mr. Suhwan Steve Jeong

Citigold

&

Mr. Danny Kim

Citi Personal Wealth Management

Mr. Suhwan Steve Jeong is a Relationship Manager for Citigold. He received his B.A. degree in Economics from Cornell University and has spent 10 years working in the finance industry. His expertise in the finance field comes from his extensive career in his field including 3 years as a Financial Advisor at Citi and 2 years as a Relationship Manager.

Mr. Jeong's partner, Mr. Danny Kim, is currently a Financial Advisor for Citi Personal Wealth Management (CPWM) with 10 years of experience in the finance industry under his belt. Mr. Kim has received his B.A. degree in Economics from UC Irvine and has become a financial expert. After working for 7 years as a Financial Advisor at Chase, Mr. Kim started his career at Citi 2 years ago.

PANEL DISCUSSION

The Next Big Move: Academia VS Industry

Eun-Suk Seo, Ph.D.

University of Maryland

Prof. Jihoon Rim

New York University

Chongwoo Yu, Ph.D.

FDA

Dr. Eun-Suk Seo earned her Ph.D. in 1991 from Louisiana State University. She joined UMD in 1991 and became a Fellow of the American Physical Society in 2010. Her research focuses on cosmic ray origin, acceleration, and propagation including searches for exotic matter, such as antimatter and dark matter using direct measurements of galactic cosmic rays by flying instruments on balloons or spacecraft. Dr. Seo has worked on numerous projects for the detection and characterization of cosmic rays, including four major international collaborations: ATIC (the Advanced Thin Ionization Calorimeter), AMS (the Alpha Magnetic Spectrometer, intended for deployment on the International Space Station), BESS (the Balloon-borne Experiment with a Superconducting magnet Spectrometer) and CREAM (the Cosmic Ray Energetics and Mass bioprogram). She is the Principal Investigator for CREAM and Co-Investigator for the others.

Professor Jihoon Rim is the former CEO and current executive advisor of Kakao, a top-tier technology company in South Korea that is well known for its mobile messenger Kakao Talk, music streaming service Melon, and ride hailing service Kakao Taxi among many successful Internet products the company services. While he was leading the company, Kakao successfully expanded its finance, contents and mobility - disrupting the standardized market by delivering services praised by its users. Professor Rim also heavily invested in artificial intelligence and technology, making Kakao one of the best mobile platforms in Korea. The company's revenue and operating profit doubled during his two and a half years term and acquisition of \$1.6B LOEN Entertainment was evaluated as one of the best M&As in Korean tech industry. In recognition of his stellar performance, he was ranked No.1 in "2017 Korea's Best CEO" survey, and also was selected as "2018 Korea's Top 10 Hero" by the biggest business media group, MBN. In academia, he received the "AIS leadership award", a prize presented yearly to a single person who demonstrated exemplary leadership and innovation by the Association for Information Systems.

Prior to Kakao, Professor Rim founded KCube Ventures, an early stage venture capital, in 2012. The firm quickly grew to become one of the most reputable VC firms in Korea and was also ranked #7 by CBInsights in the category of '2017, The most active corporate venture' in the world. Professor Rim also worked at Softbank Ventures, The Boston Consulting Group, Naver, and Accenture. He has an engineering degree from KAIST.

Dr. Yu is a Senior Clinical Pharmacology Reviewer in the Office of Clinical Pharmacology (OCP) at the U.S. Food and Drug Administration (FDA). Dr. Yu received his Ph.D. in Analytical Chemistry with the focus on Drug Metabolism and Mass Spectrometry from the University of Illinois at Chicago. Subsequently, Dr. Yu has worked in the Department of Pharmacokinetics, Dynamics, and Metabolism (PDM) at Pfizer (Ann Arbor, MI) and the Drug Metabolism and Pharmacokinetics (DMPK) Department at Schering-Plough (currently Merck; Kenilworth, NJ) for several years. At both organizations, Dr. Yu has been heavily involved in carrying out various types of drug metabolism, pharmacokinetics, and drug-drug interaction studies using mass spectrometry. Dr. Yu currently serves as the chair of the FDA OCP Bioanalytical Research (BAR) Scientific Interest Group (SIG).

Andrew Kim Memorial Foundation Awardees

Howook Hwang, Ph.D.

Columbia University

“Structure-based drug target prediction on a genome-wide scale”

Heuijoon Park, Ph.D.

Fred Hutchinson Cancer Research Center

“Bone marrow-derived epithelial cells and hair follicle bulge stem cells promote and initiate chronic inflammation-associated cutaneous neoplasms”

Yoonhee Lee, Ph.D.

Columbia University

“Massively parallel single-molecule detection platform using nano-electronics”

Taewan Kim, Ph.D.

Memorial Sloan Kettering Cancer Center

“Derivation of Enriched Engraftable Midbrain Dopamine Neurons from Human Pluripotent Stem Cells in a Clinical Relevant Condition for the Cell Replacement Therapy to Parkinson Patients”

Youngwan Kim, Ph.D. candidate

Columbia University

“Flexible and wearable optical imaging system using diffuse optical imaging technique for multiple biomedical applications”

Tae-Hyeon Shin, Ph.D. candidate

University of Pennsylvania

“Measurement of the Splashback Feature around SZ-selected Galaxy Clusters with DES, SPT and ACT”

Past Andrew Kim Memorial Foundation Awardees

Year	Awardee	Award	Affiliation
2018	Eunju Im	Science	Nathan S. Kline Institute/New York University
	Hojoon Lee	Science	Columbia University Medical Center
	Dahea You	Science	Rutgers, The State University of New Jersey
	Junhwan Alexander Bae	Engineering	Princeton University
	Chris Chaeha Lim	Engineering	NYU School of Medicine
	Ji Sun Park	Engineering	Columbia University



The 1st Andrew Kim Memorial Foundation Award
Montclair State University, Montclair, NJ, March 24, 2018



**Andrew Kim
Foundation**

Past NRC/KITEE Idea Pitch Competition Awardees

Year	Awardee	Award	Affiliation
2018	Kunho Kim	1 st Place (KOSEN Award)	Harvard College, Coconut
	Eon Soo Lee	2 nd Place (KITEE Award)	NJIT, Abonics
	Sun Ho Ro	3 rd Place (KITEE Award)	Rutgers University



The 1st NRC/KITEE Idea Pitch Competition
LG Electronics America in Englewood Cliffs, NJ, April 27, 2018



Call for Participation: The NRC 2019 Idea Pitch Competition

The KSEA Northeast Regional Conference (NRC) and KITEE jointly hold the second NRC Idea Pitch Competition on **April 25th, 2019** at LG Electronics USA in Englewood Cliffs, New Jersey. This competition aims to promote entrepreneurship of Korean-American scientists, engineers, and students studying engineering and science and encourage them to pursue building a promising startup. Of the many that apply, selected budding entrepreneurs will go head-to-head to compete individually or as a team to win an award of \$2,000 plus continuous assistance, upon requests, from KITEE Angel Committee in various areas including formation, business plan, fundraising, legal, accountant and financial, marketing & channel introduction, and related technologies until they grow to the next phase of business.

Scope & Eligibility

- Any compelling idea for business that has not been commercialized yet
- Any KSEA and KITEE member as of April 12th, 2019 (at least one KSEA or KITEE member)
- Has not received more than US\$300K in funding
- Is less than 3 years old as of April 25th, 2019

Winners (up to 3)

- 1st place: \$2,000 plus, upon requests, continuous assistance from KITEE
- 2nd place: \$500
- Idea Award: \$500



Timeline

- April 5th, 2019 Due of Notification of Intention (*optional*)
(*The Committee will provide support for preparation upon requests.*)
- April 12th, 2019 Application due (by email)
- April 15th, 2019 Finalists notification
- April 25th, 2019 Pitch!
- April 25th, 2019 Winner announcement

How To Apply

- **By April 12th, submit a one-page description** to event@kitee.org with the following:
 - Your startup's value proposition
 - Problem(s) your product and/or service is solving
- A one-page description template and an evaluation rubric are available at <http://www.kitee.org>.

Evaluation

- Finalists will showcase their innovative solution, idea, or technology and will be assessed by a panel of judges on site.
- Each will have a total of 10 minutes (6 minutes to pitch and 4 minutes for Q&A with the panel).
- Confidentiality: Protection of intellectual property (IP) is up to the contestant.

Updated information will be available at the KITEE website, <http://www.kitee.org>.



Smart Science, Engineering and Health for Livable Communities

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Invited Speakers

Dr. Se Hoon Choi, Harvard Medical School
Dr. Jinho Kim, Stevens Institute of Technology

Special Talk

Dr. Chin Ok Lee, Rockefeller University

Job Fair Recruitment

Networking Events

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Columbia University,
Alfred Lerner Hall, Room 555,
New York, NY, 10027

RSVP Required

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LG SIGNATURE



Mr. Hanul Park
Global Recruiter
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