



華美化學學會
Chinese American Chemical Society

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2018 Tri-State CACS Annual Symposium

The Changing Face of Chemistry: Meeting Future Challenges

Co-sponsored by
The Department of Medicinal Chemistry
Ernest Mario School of Pharmacy, Rutgers University

8:30 am – 4:30 pm
Saturday, June 23, 2018

Lecture Hall 131
Ernest Mario School of Pharmacy
Rutgers University
160 Frelinghuysen Road, Piscataway, NJ 08854

www.tristatecacs.org



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Foreword

Welcome to the 2018 Tri-State CACS Symposium!

On behalf of the Tri-State CACS Board, we would like to express our sincerest appreciation to our sponsors, vendors and volunteers for their support and contributions to our symposium and to our organization.

Today, chemical and pharmaceutical enterprises are facing ever-increasing challenges due to technology advances, regulatory pressures and increasing competitions in the global business environments. As a result, merge, acquisition and reorganization have become the norm that has impacted companies and employees alike. To address these changes and challenges, organizations across the globe are devising R&D and business strategies and processes that are focusing on innovation and sustainability to accelerate the research, development and commercialization of new products. These and other key issues will be the topics of our symposium this year.

Over the years, Tri-State CACS has been bringing its members the opportunity to network, to expand their skills, and to be amazed through its annual symposium. This year, we are very pleased to have another group of prominent speakers from various industries and educational and non-profit organizations to join us at our symposium. These leaders will share their perspectives on “**The Changing Face of Chemistry: Meeting Future Challenges**”. We thank all the speakers for sharing their visions concerning future growth drivers in their respective disciplines and their leadership experience and advice on professional growth.

The presentations will be accompanied by vendor exhibitions and a job fair. In addition, our symposium will serve as an excellent venue for chemical and pharmaceutical professionals to interact with colleagues from diverse background. Registration for the symposium is free and breakfast and lunch are complimentary. There will be ample job opportunities for job seekers.

We thank you for making this symposium part of your weekend and for making CACS a more valuable professional organization to all of us.

We wish each and every one of you get the most out of this annual symposium.

Yabin Lei, Ph.D.
Immediate Past-President
Tri-State CACS

Li Xu, Ph.D.
2018 President
Tri-State CACS

Yingchun Lu, Ph.D.
President-Elect
Tri-State CACS



Program Schedule

8:30 Registration / Breakfast & Coffee

Morning Session

(Session Chairs: Drs. Lijuan Wang and Dachao Li)

9:00 Opening Remarks, **Li Xu**, Ph.D., President, Tri-State CACS

9:05 Welcoming Speech, **Longqin Hu**, Ph.D., Professor and Chair, Medicinal Chemistry, Rutgers University

9:10 **Peter K. Dorhout**, Ph.D., ACS President, “Congratulating Speech via Video”

9:15 **Nilesh Shah**, Ph.D., Global R&D Director, Home and Personal Care, The Dow Chemical Company, “Consumer Products: Doing more with less”

9:50 **Ping Zhuang**, Ph.D., Director, Analytical Research & Development, Merck & Co., Inc., “Analytical chemistry at Merck: the value of measurements”

10:25 Vendor Show, Coffee Break & Networking

10:55 **Walter Korfmacher**, Ph.D., Director of Bioanalysis, Sanofi, “Meeting Pharmaceutical Industry Challenges with Mass Spectrometry Solutions: Three Examples”

11:30 **Jin Zhu**, Ph.D., Attorney at Law, Fox Rothschild LLP, “Keep Your Friends Close and Your Enemies Closer – Battle on the IP Front”

11:55 Lunch Break and Vendor Show (on site)

Afternoon Session

(Session Chairs: Drs. Mingxiang Lin and Chii-Fen Wang)

1:30 **Percy H. Carter**, Ph.D., Vice President, Discovery Chemistry & Molecular Technologies, Bristol-Myers Squibb, “Case Studies on ‘Undruggable’ Targets”

2:15 **David Liu**, Ph.D., Director, Analytical Development, Celgene, “Controlling Trace-level Pharmaceutical Impurities: Current Regulatory Expectations and Their Impacts on Process and Analytical Chemistry”

2:50 Prize Drawing, Vendor Show, Coffee / Ice Cream Break / Networking

3:25 **Gurmil Gendeh**, Ph.D., Pharmaceuticals Marketing Manager, Shimadzu Scientific Instruments, “Changing Trends in Analytical Technologies to Meet Future Challenges in the Life Science”

3:45 **Nancy Williams**, VP for US R&I Communication and Sustainability, L’Oreal, “Sharing Beauty with All”

4:25 Closing Remarks, **Yingchun Lu**, Ph.D., 2018 President-Elect, Tri-State CACS

4:30 Prize Drawing

4:45 End



Vendor Show **9:00AM – 4:00PM**

(Session Chairs: Drs. Mingxiang Lin, Chii-Fen Wang)

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Job Fair and Career Consultation

9:00AM – 4:00PM

(Coordinators: Drs. Wenmei Xue, and Zhiqiang Yang)

The job fair will help job seekers connect with perspective employers in the US and China. Several companies with job openings will be at the symposium collecting resumes.

Please direct any inquiries to info@tristatecacs.org.

Website: <http://www.tristatecacs.org/>

Email: info@tristatecacs.org



Acknowledgement

Symposium Co-Chairs	Yabin Lei, Yingchun Lu and Li Xu
Programs	Shel Zhang, Dachao Li, Yuan Cheng, Yingchun Lu, Shuji Luo, Yunlong Zhang, Chii-Fen Wang, Li Xu, Longqin Hu, Baoqing Ma, Xiaobo Zhu, Wenmei Xue, Lijuan Wang, Wendy Zhong, and Kaijiang Zhang
Vendor Show	Mingxiang Lin & Chii-Fen Wang
Job Fair/ Career Consultation	Wenmei Xue & Zhigiang Yang
Registrations	Xiaobo Zhu, Chunping Wu, Zhiqiang Yang, Eric Zhao, Xue Li, Pei-Hsuan Hsieh & volunteers
Food/Beverage Services	Longqin Hu, Yingchun Lu and Li Xu
Photography	Fanwen Zeng & Matthew Zhao
Communications	Li Xu, Yingchun Lu, Honghong Li, Baoqing Ma and Yabin Lei
Prizes	Zhiqiang Yang, Mingxiang Lin, Xiaoqiu Wu and Lijuan Wang



Abstracts & Speaker Biography

Morning Session

Peter K. Dorhout, Ph.D., ACS President

Congratulating Speech via Video



Bio: Dr. Peter K. Dorhout is the President of the American Chemical Society. He is a recognized expert in solid state and nuclear materials science and environmental chemistry. He serves as Professor of Chemistry and Vice President for Research at Kansas State University. His list of professional awards includes Fellow of the American Chemical Society, Fellow of the American Association for the Advancement of Science, Research Corporation Cottrell Scholar, Camille Dreyfus Teacher-Scholar, A. P. Sloan Foundation Fellow, National Science Foundation CAREER Fellow, and the ACS-ExxonMobil Faculty Award in Solid State Chemistry.

Nilesh Shah, Ph.D., Global R&D Director, Home and Personal Care, The Dow Chemical Company
“Consumer Products: Doing More with Less”

Abstract: The fast moving consumer goods industry is engaged in a relentless drive to improve the sustainability profile of its products. Although sustainability is yet to be defined in a consistent way in this industry, there has never been a stronger initiative to make progress in this dimension. As a leading supplier of technology and products to this marketplace, Dow is engaged with the industry stakeholders to change the profile of consumer products such that they deliver leading-edge performance with minimal environmental impact and increasingly lower amounts of water and energy. This talk will provide some concrete examples of innovations that illustrate the efforts underway in this industry.



Bio: Nilesh Shah is the Global R&D Director for the Home and Personal Care business of The Dow Chemical Company. After joining the Rohm and Haas Company in 1985 as a research scientist for the Plastics business, he held positions of increasing responsibility in research management, leading Polymer Synthesis and Exploratory Polymer Research. From 1999 to 2002, Shah held commercial roles in the Architectural and Functional Coatings business, with responsibility for strategic planning and marketing before returning to research in 2003 as a global technology director. In this role, he led research and regulatory affairs for the Consumer and Industrial Specialties, Biocides and Process Chemicals businesses. He has been the Research and Development Director for Home and Personal Care since The Dow Chemical Company acquired Rohm and Haas in April 2009. In 2014,



he added the R&D responsibility for Dow India and in 2015, he joined the Dow R&D Leadership Team.

Shah graduated with a Bachelor in Chemical Engineering in 1979 from Jadavpur University in Calcutta, India. He went on to receive his doctorate in chemical engineering from the University of Massachusetts at Amherst in 1985. Shah is a member of the Tau Beta Pi and the American Chemical Society. He serves on the Chemical Engineering Advisory Board of the University of Massachusetts at Amherst and on the Materials Research Institute Advisory Board at Pennsylvania State University.

Ping Zhuang, Ph.D., Director in Analytical Research & Development at Merck & Co., Inc.

“Analytical chemistry at Merck: the value of measurements”



Bio: Dr. Zhuang is a Director in Analytical Research & Development at Merck & Co., Inc., in Rahway, New Jersey, U.S.A. Her team is responsible for providing analytical support to assist process development of small molecule and synthetic peptide/oligonucleotide drug candidates, which includes analytical method development, drug substance batch release, and source documents preparation in support of regulatory filings and correspondences. Dr. Zhuang joined Merck in 2001 as a Senior Research Chemist. Prior to joining Merck, Dr. Zhuang received her B.S. degree in Chemistry from Zhejiang University in P.R. China, M.S. degree in Physical Chemistry from Tsinghua University in P.R. China and Ph.D. degree in Chemistry from New York University in the U.S.A

Walter Korfmacher, Ph.D., Director of Bioanalysis, Sanofi

“Meeting Pharmaceutical Industry Challenges with Mass Spectrometry Solutions: Three Examples”

Abstract: Mass spectrometry (MS) has been used as an analytical tool for the pharmaceutical industry for decades. Recently, improvements in MS technology have allowed it to be used in new ways that either increase the speed or efficiency of common parts of the drug discovery process or provide new ways to obtain information in the drug discovery process. This talk will describe three examples of how MS is being used today in the drug discovery arena.

One challenge is to follow the 3R's by reducing the number of laboratory animals needed in the new drug discovery process. One solution is to take smaller blood samples (microsampling) so fewer laboratory animals are needed. Mass spectrometry systems are now able to be used in methods for these microsamples.

A second challenge is the understanding of drug and metabolite distribution in the early drug discovery stage. Mass spectrometry imaging (MSI) has now become an important tool for understanding the distribution of a drug as well as its metabolites in laboratory animals. MSI can also be utilized for identifying disease and toxicity biomarkers as part of new drug discovery.

Finally, biologics, specifically therapeutic antibodies, provide new challenges for mass spectrometry bioanalysis. New MS instrumentation has allowed scientists to develop LC-MS methods that are able to be used in some early PK studies for therapeutic proteins.



Bio: Dr. Korfmacher has over 25 years of experience in the pharmaceutical industry, including working for the FDA (at the NCTR), as well as nearly two decades at Schering-Plough/Merck. Dr. Korfmacher is currently Director of Bioanalysis at Sanofi in Waltham MA. His group is responsible for the bioanalysis of small molecules and biologicals in preclinical samples as part of new drug discovery. Dr. Korfmacher has served as the chairperson of the North Jersey Mass Spectrometry Discussion Group. He is a member of three editorial boards: Rapid Communications in Mass Spectrometry; Current Drug Metabolism; and Drug Metabolism Letters and serves as an Associate

Editor, pharmaceutical sciences, for the Journal of Mass Spectrometry. He has also edited three books on mass spectrometry and its use in the drug discovery and drug metabolism arenas. He has written chapters in five additional books and has over 150 publications in scientific literature and has made over 80 presentations at various scientific forums. Walter received his MS and PhD in Analytical Chemistry from the U of Illinois (Urbana) and his BSCh from St. Louis U.

Jin Zhu, Ph.D., Attorney at Law, Fox Rothschild LLP

“Keep Your Friends Close and Your Enemies Closer – Battle on th IP Front”

The competition in marketplace begins with the contest in intellectual property (IP). A comprehensive IP portfolio is important for establishing market exclusivity and enhancing brand recognition. Meanwhile, any R&D initiative and market exploration should be guided by a thorough understanding of competitors’ IP landscape.



Bio: Jin Zhu is a registered patent attorney whose work involves evaluating and building market exclusivity for pharmaceutical and chemical companies. With expertise in chemistry and drug discovery, Jin’s practice at Fox Rothschild focuses on freedom to operate study, IP exclusivity analysis, validity evaluation, as well as patent preparation and prosecution. Prior to joining the firm, Jin was a Ph.D. medicinal chemist for several pharmaceutical companies, including PTC Therapeutics, Johnson & Johnson Pharmaceutical Research and Development, and Aventis Pharmaceuticals.

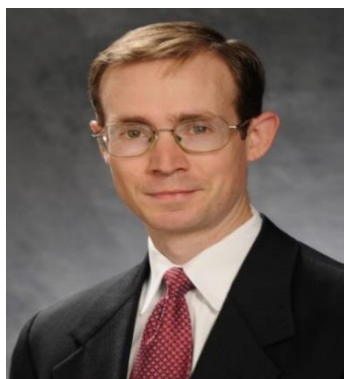


Afternoon Session

Percy H. Carter, Ph.D., Vice President, Discovery Chemistry & Molecular Technologies, Bristol-Myers Squibb

“Case Studies on ‘Undruggable’ Targets”

Abstract: The concept of “druggability” has evolved markedly since it was first introduced. Indeed, as medicinal chemists and allied scientists have deployed increasingly sophisticated approaches in hit-finding and lead-optimization strategies, drug candidates have been identified for targets that were previously viewed as “undruggable.” This lecture will cover several such examples from our own research efforts.



Bio: In his 19 years at Bristol-Myers Squibb he has worked primarily in the immunosciences field. More recently, Percy has also been deeply involved in developing approaches to the "undruggable genome," specifically through millamolecules and also more generally by building BMS' capabilities in non-traditional modalities.

Percy obtained his A.B. in Chemistry from Dartmouth College and his Ph.D. in Chemistry from Harvard University. He also completed postdoctoral studies in molecular biology at Harvard Medical School and earned an MBA from the MIT Sloan School of Management.

David Liu, Ph.D., Director, Analytical Development, Celgene

Controlling Trace-level Pharmaceutical Impurities: Current Regulatory Expectations and Their Impacts on Process and Analytical Chemistry



Bio: Dr. David Liu is currently a Director at Celgene Corporation since 2017. He leads the Trace Analysis and Spectroscopy Center of Excellence in Analytical Development. His team is responsible for the analysis and control of trace level genotoxic impurities, elemental impurities, structural characterizations, and degradation chemistry of small molecule development programs.

Prior to Celgene, David was an Associate Director in CMC Regulatory Dossier Development at Johnson & Johnson (Spring House PA), responsible for developing regulatory CMC dossier for marketing and clinical trial submissions. Prior to joining J&J in 2015, David was a Team Leader in Analytical Sciences at GlaxoSmithKline (King of Prussia PA) since 2003 and a Research Fellow in Drug Metabolism at Merck (Rahway NJ) since 1999. He started his early industrial career in the drug discovery space with a focus on natural product chemistry. David has more than 50 publications in the field of natural product chemistry, drug metabolism, mass spectrometry, and pharmaceutical analysis.

David holds a Ph.D. degree in Biological Sciences from the University of Texas at Austin and a master degree in Natural Product Chemistry from Chinese Academy of Medical Sciences (Beijing China).

Gurmil Gendeh, Ph.D., Pharmaceuticals Marketing Manager, Shimadzu Scientific Instruments

“Changing Trends in Analytical Technologies to Meet Future Challenges in the Life Science”



Bio: Dr. Gurmil Gendeh obtained his Ph.D. in Biochemistry and Molecular Biology from the National University of Singapore (NUS) and did his Post-Doctoral work in Cancer Biology at the Stanford University in Palo Alto, California. He has 20 years of experience supporting the Life Science and Biopharmaceutical industries at companies like GE Healthcare, Thermo Fisher Scientific, Agilent Technologies, and now at Shimadzu Scientific Instruments.

Nancy Williams, VP for US R&I Communication and Sustainability, L’Oreal

“Sharing Beauty with All”



Bio: A 34 year veteran of L’Oreal Research, Nancy has spent time working in Hair Care and Hair Color before taking leadership of the Fragrance team where she spent the bulk of her career. In this transversal role, she had the opportunity to work with all the scientific disciplines within R&I, with all of L’Oreal’s brands, with suppliers, and with contract manufacturers. In 2001, she and her family relocated to France, where she took responsibility for the worldwide fragrance métier, and extended her network to include the French teams.

In 2016, L’Oreal asked Nancy to step into a new role – VP of Sustainability and Communications – a position that would benefit greatly from her experience and network.



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