Applied Pharmaceutical Chemistry

2019

Friday, April 5

BROAD INSTITUTE
Cambridge, MA

sponsored by:

cyprotex AN EVOTEC COMPANY

interchim®

Pfizer

VERTEX®

Organized by: The Boston Society

www.bostonsociety.org

2019 APC SPONSORS

CYPROTEX (www.cyprotex.com) was founded in 1999 and specialises in in vitro and in silico ADME-Tox. The company has sites in the UK and the US. In 2016, Cyprotex was acquired by Evotec AG (www.evotec.com). As a whole, the Group offer integrated and stand-alone drug discovery capabilities as well as full CMC and IND-enabling services, allowing the company to provide expert support across the value chain from early discovery through to preclinical development and beyond.

INTERCHIM manufactures chromatographic instruments to support Prep HPLC, MPLC and Flash. Enhanced detection includes MS, ELSD, pH, Conductivity and RI. The column product range is comprised of Prep HPLC, Flash, MPLC, SPE, and HPLC. Columns are available for normal and reverse phase, ion-exchange, affinity and chiral chromatography.

PFIZER INC.

At Pfizer, we apply science and our global resources to bring therapies to people that extend and significantly improve their lives. We strive to set the standard for quality, safety, and value in the discovery, development, and manufacture of health care products. Our global portfolio includes medicines and vaccines as well as many of the world's best-known consumer health care products. Every day, Pfizer colleagues work across developed and emerging markets to advance wellness, prevention, treatments, and cures that challenge the most feared diseases of our time. Consistent with our responsibility as one of the world's premier innovative biopharmaceutical companies, we collaborate with health care providers, governments, and local communities to support and expand access to reliable, affordable health care around the world. For more than 150 years, Pfizer has worked to make a difference for all who rely on us.

VERTEX is a global biotechnology company that invests in scientific innovation to create transformative medicines for people with serious and life-threatening diseases.

We discovered and developed the first medicines to treat the underlying cause of cystic fibrosis (CF), a rare, life-threatening genetic disease. In addition to clinical development programs in CF, Vertex has more than a dozen ongoing research programs focused on the underlying mechanisms of other serious diseases.

Founded in 1989 in Cambridge, Massachusetts, our corporate headquarters is now located in Boston's Innovation District, and our international headquarters is in London, United Kingdom. We currently employ approximately 2,500 people in the United States, Europe, Canada, Australia and Latin America with nearly two-thirds of our staff dedicated to research and development.

ORGANIZERS' WELCOME

Welcome to the 2019 Applied Pharmaceutical Chemistry Conference.

Our organizers have gathered another excellent group of speakers for the tenth annual APC conference. The program is arranged to incorporate extensive audience participation and discussion. We encourage attendees to take full advantage of the opportunity to engage in discussion in order to receive the maximum benefit from the APC experience.

Thank you for your participation.

ORGANIZING COMMITTEE

Presiding Officers

Conference Chair: Matt Hayward, Pfizer

Conference Chair Elect: Simon Giroux, Vertex

Committee Members

Susan Ashwell, Ra Pharma
Siva Dandapani, Biogen
Andreas Goutopoulos, EMD Serono
Benoit Moreau, Syros Pharmaceuticals
Louis Chupak, BMS
Jingqiang Wei, Silicon Therapeutics

APC 2019 CONFERENCE AGENDA

Friday, April 5

7:30 - 8:30 REGISTRATION & BREAKFAST

8:30 - 8:35 **Conference Opening**
Matt Hayward, Pfizer

8:35 - 8:40 **Plenary Speaker Introduction**
Siva Dandapani, Biogen

8:40 - 9:25 **Plenary Lecture**
Chemistry Towards Novel Mechanism-of-Action Compounds in Therapeutics Discovery
Stuart Schreiber, Harvard & Broad Institute

SESSION I: Tumor Metabolism & Immunometabolism

9:25 - 9:30 **Session Introduction**
Susan Ashwell, Ra Pharmaceuticals

9:30 - 10:00 **Novel STING Agonists for Immuno-oncology**
Wes Trotter, Merck

10:00 - 10:30 **Discovery of Clinical Candidate IDH305, a Mutant IDH1 Inhibitor**
Thomas Caferro, Novartis

10:30 - 10:45 Break

10:45 - 11:15 **SDX-7320: a Novel Polymer-Conjugated MetAP2 Inhibitor for Cancers Stimulated by Metabolic Hormones**
Peter Cornelius, SynDevRx

SESSION II: Recent Success Stories

11:15 - 11:20 **Session Introduction**
Louis Chupak, BMS & Andreas Goutopoulos, EMD Serono

11:20 - 11:50 **Inhibition of Autoimmune Pathways with Dual Inhibition of JAK1 and TYK2: Discovery of PF-0670084**
Andy Fensome, Pfizer

11:50 - 12:20 **Inhibition of TYK2 via the Pseudokinase: The Discovery of BMS-986165**
Ryan Moslin, BMS

12:20 - 1:20 Lunch

1:20 - 1:50 **Discovery of AMG986, a Potent, Selective and Orally Bioavailable APJ Agonist for the Treatment of Heart Disease**
Paul Dransfield, Amgen

1:50 - 2:20 **Discovery and Development of Macrocyclic Peptides for the Treatment of Complement-Mediated Disorders**
Susan Ashwell, Ra Pharmaceuticals

SESSION III: Strategies for Drugging Difficult Targets

2:20 - 2:25 **Session Introduction**
Benoit Moreau, Syros & Jingqiang Wei, Silicon Therapeutics

2:25 - 2:55 **Shining The Light on Small Molecule Inhibitors of MCT4**
Aarti Kawatkar, Astra Zeneca

2:55 - 3:25 **Targeting Intracellular Protein-Protein Interactions with Macrocyclic Peptides**
Dehua Pei, Ohio State University

3:25 - 3:40 Break

3:40 - 4:10 **Physics-Based Drug Discovery for Tackling Challenge Targets**
Woody Sherman, Silicon Therapeutics

4:10 - 4:40 **Scalable Combinatorial Screening of Microbes**
Paul Blainey, Broad & MIT

4:40 - 5:10 **Synthetic Macrocycles for the Inhibition of Challenging PPI Targets**
Adrian Whitty, Boston University

5:10 - 5:15 Closing Remarks
Simon Giroux, Vertex

5:15 - 6:30 **COCKTAIL RECEPTION sponsored by** The Boston Society

ABSTRACTS

SESSION II: Recent Success Stories

Inhibition of Autoimmune Pathways with Dual Inhibition of JAK1 and TYK2: Discovery of PF-06700841
Andrew Fensome, Pfizer

The Janus (JAK) kinases (JAK1, JAK2, JAK3 and TYK2) are a family of four non-receptor tyrosine kinases that modulate cytokine signaling through the Signal Transducer and Activator of Transcription (STAT) pathways. We describe the discovery of a series of selective JAK1/ TYK2 inhibitors for a range of inflammatory disorders. Balancing in-family kinase selectivity is important to optimize the inhibition of pathogenic cytokines while limiting immune suppression, as well as to limit effects driven by JAK2 signaling through EPO and other molecules important in hematopoietic cell differentiation.

We used PK:PD modelling developed from extensive experience with tofacitinib (Xeljanz ™) in the clinic and in preclinical animal models. This has been important in setting lab objectives for projecting efficacious target cover and dose. We identified a series of ATP competitive pyrimidines from an early library lead, and through a structurally enabled program drove the biological profile and property space to a point where we could advance the lead compound (PF-06700841) into the clinic. The role of primary cell assays has been key to understanding the properties of the lead molecules, corroborated by PK:PD evaluation in-vivo. PF-06700841 is currently in Phase 2 clinical study.

Inhibition of TYK2 via the Pseudokinase: The Discovery of BMS-986165
Ryan Moslin, BMS

A member of the Janus (JAK) family of non-receptor tyrosine kinases, TYK2 plays a critical role in mediating the signaling of the pro-inflammatory p40 subunit-containing cytokines (IL-12 and IL-23) and type 1 interferon. Owing to the high sequence homology within the JAK family catalytic (JH1) domains, achieving high inhibitor selectivity for TYK2 over other Janus family members has proved challenging. The pseudokinase (JH2) domains of the Janus kinases have been shown to regulate function of the JH1 domains in the cellular context, and we've shown that functional inhibition of TYK2 is possible via binding to the JH2 domain. The presentation is a high level summary of the story, from start to finish, of how we came to target the pseudokinase as a means to inhibit TYK2 and how we were able to translate this approach to the Phase III agent BMS-986165.

Discovery of AMG986, a Potent, Selective and Orally Bioavailable APJ Agonist for the Treatment of Heart Disease
Paul Dransfield, Amgen

The G protein-coupled receptor, APJ (APLNR), and its endogenous peptidic ligand (apelin) have been implicated in mediating multiple beneficial effects on cardiovascular function. Efforts to employ apelin peptides therapeutically have been hindered by their very short half-lives. This presentation will describe the small molecule drug discovery process from optimizing a small molecule high-throughput screening hit through to the identification of the APJ agonist AMG 986. A phase 1 clinical trial is currently underway evaluating AMG 986 in healthy volunteers and heart failure patients.

SESSION III: Strategies for Drugging Difficult Targets

Shining The Light on Small Molecule Inhibitors of MCT4
Aarti Kawatkar, Astra Zeneca

Monocarboxylate transporter 4 (MCT4) is a hypoxia regulated lactate transporter, which is upregulated across a range of solid tumors. Inhibition of MCT4 is predicted to result in glycolic shut down and thus MCT4 inhibitors are potential therapeutic agents for the treatment of cancers.

We have taken a phenotypic screening approach, in multiple cell lines, to identify selective inhibitors of MCT4, using cell assays that measure both efflux and influx of lactic acid. A subsequent medicinal chemistry program successfully optimized these phenotypic hits to lead compounds with excellent MCT4 potency (IC50 <10 nM), selectivity versus MCT1 (>100x), good physical properties and pharmacokinetics in mouse and rat.

In order to build confidence in the mechanism of action for MCT4 inhibitors and assess their selectivity, we have developed two assays to measure cellular target engagement. Multipass transmembrane receptors have been challenging to study because of complexities in isolation and detection. In order to overcome this problem, we synthesized a biologically active photoaffinity probe (IC50 <10 nM) for in-cell chemoproteomics. Competition studies reveled that MCT4 was selectively competed from the photoaffinity probe by the parent molecule. In addition, in-cell CETSA quantified binding to MCT4 in live cells. To our knowledge, this represents the first application of CETSA to multipass transmembrane proteins. Taken together, these data demonstrate the power of chemical biology methods to determine cellular target engagement, particularly for proteins not readily amenable to traditional methods.

Targeting Intracellular Protein-Protein Interactions with Macrocyclic Peptides
Dehua Pei, Ohio State University

We are exploring macrocyclic peptides (including mono- and bicyclic peptides) as a general modality for targeting intracellular protein-protein interactions (PPIs), by leveraging a novel class of highly active cyclic cell-penetrating peptides (CPPs). In the first approach, potent PPI inhibitors such as linear peptides, stapled peptides, cyclic peptides, and proteins, which are generally impermeable to the cell membrane, are rendered cell-permeable and biologically active by conjugating them to a cyclic CPP. In an alternative approach, macrocyclic peptide libraries containing cyclic CPPs are synthesized in the one bead-two compound format and screened for binding to PPI targets of interest, resulting in cell-permeable and biologically active hits directly from library screening. Potent, selective, proteolytically stable, and cell-permeable macrocyclic peptidyl inhibitors have been generated against several intracellular PPIs including calcineurin-NFAT, MDM2-p53, Ras-effector, and NEMO-IKK interactions.

Physics-Based Drug Discovery for Tackling Challenge Targets
Woody Sherman, Silicon Therapeutics

At Silicon Therapeutics, we have developed a physics-based simulation platform to address some of the critical bottlenecks associated with drugging challenging disease targets. Using a combination of quantum mechanics, molecular dynamics, and other simulation approaches, we can map the thermodynamic landscape of key protein motions involved in biological processes and understand the energetic origin of said processes at an atomic level. By using this platform, we were able to design and synthesize allosteric binders that were predicted to modulate the target biological function. In another example, we were able to use our molecular design tools to efficiently drive the SAR to lead molecules showing in vivo efficacy.

Scalable Combinatorial Screening of Microbes
Paul Blainey, Broad & MIT

Droplet microfluidics methods are dramatically increasing the throughput of single-cell genomics assays. However, droplet approaches have not yet impacted drug discovery due to small molecule crosstalk between droplets. I will describe a new platform for processing and tracking tens of thousands of droplets in parallel that prevents crosstalk of small hydrophobic solutes and report results from combination screens of 1) antibiotic potentiation and 2) microbial growth in a community context.

Synthetic Macrocycles for the Inhibition of Challenging PPI Targets
Adrian Whitty, Boston University

Protein-protein interactions (PPI) are ubiquitous in biology, and constitute a vast and largely unexploited class of drug targets. We are testing the hypothesis that synthetic macrocycles constitute a privileged chemotype for inhibiting PPI targets, while also having prospects for good pharmaceutical properties such as membrane permeability and potentially oral bioavailability. In this presentation we explore whether there are structural or physicochemical features specific to macrocycles, beyond those properties considered in traditional assessments of druglikeness, that influence the ADME properties of these non-traditional drug chemotypes, and thus can help inform the design of pharmaceutically useful macrocycles or macrocycle libraries. I will describe novel macrocycle-specific molecular descriptors we have developed, and our evaluation of the utility of these descriptors for assessing macrocycle chemotype diversity, and in predicting the key ADME property of membrane permeability.

BIOGRAPHIES

Susan Ashwell, PhD, Ra Pharmaceuticals: Prior to joining Ra Pharmaceuticals, Sue was a Senior Director at FORMA Therapeutics in Watertown. Previously she was a Director in the Boston-based Oncology group of AstraZeneca where she had multiple roles including line and project leadership. Before AZ, she was a medicinal chemist with Wyeth-Ayerst Research in the CNS area. During her career she has been involved with a number of programs that have resulted in clinical candidates in the Oncology, CNS disorders and Inflammation therapeutic areas. Sue received her Ph.D. the University of Newcastle upon Tyne, prior to conducting postdoctoral research at the University of Illinois at Chicago and Imperial College, London.

Paul Blainey, PhD, Broad Institute of MIT and Harvard: Paul Blainey is a core member of the Broad Institute of MIT and Harvard and an associate professor in the Department of Biological Engineering at MIT. An expert in microanalysis systems for studies of individual molecules and cells, Blainey is applying this technology to advance understanding of DNA-protein interaction, evolutionary processes, and functional differences between cells.

The Blainey group develops and translates microfluidic, chemical, imaging, and sequencing approaches to make high-throughput quantitative biology routine – including single-cell analysis. Such capabilities will allow scientists to determine the genomic sequences from organisms that have not been successfully cultured in the lab and examine genetic differences on a cell-to-cell basis, driving new insights into fundamental aspects of cell function and evolution. Blainey seeks to empower researchers to obtain new types of information about biological specimens and integrate different types of information, such as imaging data and next-generation sequencing-based data.

Blainey was awarded the Agilent Early Career Investigator Award in 2014, and was the recipient of a Burroughs Wellcome Fund Career Award at the Scientific Interface in 2011.

He holds a B.S. in chemistry and B.A. in mathematics from the University of Washington. He earned a Ph.D. in physical chemistry from Harvard University, where he studied how proteins interact with DNA with Xiaoliang Sunney Xie and Greg Verdine. He then completed postdoctoral research at Stanford University in the laboratory of Stephen Quake, where he pioneered novel optofluidic methods to perform single-cell microbial sequencing.

Thomas Caferro, Novartis: Tom is a medicinal chemist with over twenty years of experience in drug discovery. He has worked in the oncology area at Novartis in Cambridge since 2009. He was presented with a Technical Achievement in Organic Chemistry Award from the American Chemical Society for his contributions to the mutant IDH1 Inhibition project, which produced the clinical candidate IDH305. He has also worked on several other small molecule modulators of various targets in the oncology/immuno-oncology arena. Tom is also the inventor of the Chem-Spin laboratory tools, which are marketed by Chemglass. Prior to Novartis, Tom worked for Pfizer in Ann Arbor and the United Kingdom. He also worked for several years at GlaxoSmithKline in RTP, NC, where he was on the team that discovered lapatinib, an EGFR/HER2 dual inhibitor registered for the treatment of various solid tumors. Tom earned his M.A. in Organic Chemistry in 1997 in the laboratory of Prof. Gary Posner at Johns Hopkins University.

Peter Cornelius, PhD, SynDevRx: Dr. Cornelius obtained his BA in Biology from Skidmore College and his Ph.D. in Biochemistry from East Carolina University School of Medicine, where he studied the intersection of the innate immune system with metabolic systems in the regulation of carbohydrate and lipid metabolism. He then conducted post-doctoral research at Johns Hopkins University School of Medicine on the development and biological functions of adipose cells.

Dr. Cornelius then moved to the Department of Cardiovascular, Metabolic and Endocrine Diseases at Pfizer, where he led teams that identified clinical candidates targeting diverse pathways impacting dyslipidemia, obesity and type 2 diabetes.

Dr. Cornelius currently oversees the biology and translational research at SynDevRx and is responsible for managing the Company's outsourced experiments, (through CROs), analysis of clinical PK and PD data guiding clinical development strategy.

SynDevRx is a clinical stage company developing therapeutics to treat cancer and metabolic-related diseases. The Company's lead drug candidate, SDX-7320, is the first drug in clinical development that specifically targets cancer patients who also suffer from metabolic dysfunction. Dr. Cornelius has published extensively in peer-reviewed journals and has frequently presented at both national and international conferences.

Siva Dandapani, PhD, Biogen: Dr. Siva Dandapani is a medicinal chemist at Biogen working on developing drugs against neurodegenerative disorders. Prior to joining to Biogen, he was at the Broad Institute of MIT and Harvard where his work focused on utilizing the power of modern organic synthesis for accessing novel compounds for screening collections, developing small molecule probes for advancing chemical biology and conducting medicinal chemistry optimization towards several antimicrobial drugs. Dr. Dandapani received his Ph.D. in chemistry from University of Pittsburgh and conducted post-doctoral research at Boston University. He has published over 40 papers in the areas of diversity-oriented synthesis and development of small molecule probes and drugs.

Paul Dransfield, PhD, Amgen: Paul Dransfield is a principal scientist in Medicinal Chemistry within the Amgen Discovery Research group and has been the chemistry lead for a number of early and late stage programs, across a range of targets. Paul holds a MChem in Chemistry and Ph.D. in Organic Chemistry from The University of Exeter, UK. His academic research focused on the discovery of novel synthetic routes to imino sugars. After completing his Ph.D., Paul began his postdoctoral studies with Prof. Daniel Romo at Texas A&M University working on the total synthesis of oroidin natural products.

Andrew Fensome, PhD, Pfizer: Andrew Fensome received his BSc and PhD from the University of Manchester Institute of Science and Technology in the UK. After graduation, he joined Wyeth Pharmaceuticals in the Department of Medicinal Chemistry. After moving to the Philadelphia area with Wyeth, he worked in several therapeutic areas, most notably nuclear hormone receptor modulators in the Women's Health research unit. Following the merger with Pfizer, he relocated to New England, where he has worked in the Inflammation and Immunology research unit, focused on Janus Kinase (JAK) inhibitors. He served as the Project Leader for the discovery of the JAK1/TYK2 (PF-06700841) and TYK2 (PF-06826647) inhibitors which are currently in clinical development. His current position is Associate Research Fellow in the department of Oncology Medicinal Chemistry, in Cambridge Massachusetts.

Simon Giroux, PhD, Vertex Pharmaceuticals: Dr. Simon Giroux received his Ph.D from the Université de Montreal in 2006 under the guidance of Prof. Stephen Hanessian. In 2007, he joined the laboratory of Prof. E.J. Corey at Harvard University as an NSERC postdoctoral fellow, working on steroidal natural product total synthesis. Since 2009, he is part of the Medicinal Chemistry Department at Vertex Pharmaceuticals and has contributed to many drug discovery programs in infectious diseases, oncology, inflammation and more recently, pulmonary diseases. He is the author of more than 30 patents and publications.

Andreas Goutopoulos, PhD, EMD Serono: Andreas received his Ph.D. from the University of Connecticut in the area of cannabinoids in 2000. He joined Serono as Medicinal Chemist in the same year. He and his group have contributed to the discovery of more than ten compounds that have entered clinical trials in areas of oncology, autoimmunity, and neurodegeneration. He is currently Senior Scientific Director at EMD Serono.

Matthew Hayward, PhD, Pfizer: Matthew Hayward obtained his BA in Biochemistry from Connecticut College in 1989. During these formative years he worked in the labs of Dr. Bruce Branchini preparing novel analogues of firefly Luciferin. Inspired by his work there he continued his studies at Yale University, obtaining his Ph.D. under Prof. Alana Schepartz in 1995. At Yale Matt worked on several projects at the biology-chemistry interface. Following that, Matt joined the labs of Prof. Yoshito Kishi at Harvard as an NIH postdoctoral fellow. There he worked on and completed the first synthesis of Spongistatin A with fellow co-workers in the Kishi labs. He joined Pfizer in Groton in 1997. Since then he has been a medicinal chemist in the antibacterial, oncology, immunology, inflammation and neuroscience groups. Matt is currently an associate research fellow in the Design and Synthesis Sciences group and is working on platform approaches that address medicinal chemistry issues that span multiple therapeutic areas. Matt's research interests include structure based drug design and kinase medicinal chemistry.

Aarti Kawatkar, AstraZeneca: Aarti Kawatkar is a Senior Scientist at AstraZeneca in the Chemical Biology and Proteomics Group of Discovery Sciences since 2013. Before that she was a lead chemist in the fragment based lead generation group and medicinal chemist in Oncology at AstraZeneca. During this time she has contributed to several drug discovery projects making it to the clinic and developed assays such as CEllular Thermal Shift Assay (CETSA) and in-cell Chemoproteomics to measure cellular target engagement and target validation for multipass transmembrane protein receptors. For this work she was the recipient of "Emerging Scientist" award at AstraZeneca in 2016. She is a module leader for Proteomics course at Cold Spring Harbor Labs where participants get in-depth knowledge about chemoproteomics techniques routinely used in industry, with class lecture followed by lab work and deep dive into data analysis. Before joining AstraZeneca she worked at Vertex Pharmaceuticals as a medicinal chemist. She obtained her M.S. in Organic Chemistry from the University of Georgia at Athens in 2005 with Prof. Geert- Jan Boons.

Benoît Moreau, PhD, Syros Pharmaceuticals: Benoit Moreau is Associate Director in medicinal chemistry at Syros Pharmaceuticals, focused on drugging targets that control gene expression. He has extensive experience in oncology, rare genetic diseases and virology, culminating in the identification of five clinical candidates, including two currently in clinical trials. Formerly, he worked at Tarveda Therapeutics and Boehringer Ingelheim, where he assumed growing responsibilities leading medicinal chemistry efforts and multidisciplinary teams. He received his Ph.D. in chemistry from Université de Montréal and completed a postdoctoral fellowship at Harvard University. He is a contributing author in over thirty five scientific publications and patents.

Ryan Moslin, BMS: Ryan Thomas McLeod Moslin was born and raised in Grand Forks, British Columbia (Canada). He completed his undergraduate studies in 2001, after research stints with Professor Edward Piers and Professor Gregory Dake at the University of British Columbia (UBC). He then moved to Boston to pursue graduate studies at the Massachusetts Institute of Technology (MIT), completing his PhD work with Timothy Jamison, including the total synthesis of (+)-acutiphycin, in 2006. He stayed in Boston, completing post-doctoral studies under Professor Timothy Swager (MIT) in 2010 where he worked on new synthetic techniques for assembling conducting polymers, notably a technique that they termed anionic oxidative polymerization.

Ryan joined Bristol-Myers Squibb (BMS) in 2010 where he was given a quirky side project looking at inhibiting TYK2 via the pseudokinase by his boss and eventual mentor David Weinstein. Said project culminated in their synthesis, alongside researcher Yanlei Zhang, of the first ever clinical agent to target the pseudokinase (BMS-986165). Since then Ryan has proposed and/or led various early phase programs in immunology and immuno-oncology.

Dehua Pei, PhD, Ohio State University: Dr. Pei is the Charles H. Kimberly Professor of Chemistry and Biochemistry at The Ohio State University. He received his PhD degree in organic chemistry from University of California, Berkeley, and was a Damon Runyon-Winchell Walter Cancer Fund postdoctoral fellow at Harvard Medical School before joining the faculty at The Ohio State University. His research group is currently developing new methodologies for combinatorial synthesis and screening of macrocyclic peptides/peptidomimetcis, cyclic cell-penetrating peptides for drug delivery, and macrocyclic inhibitors against previously undruggable targets, such as intracellular

protein-protein interactions. He is a co-Founder and the Chief Scientific Advisor of Entrada Therapeutics (Boston, MA).

Woody Sherman, PhD, Silicon Therapeutics: Dr. Sherman is a leader in molecular simulations and computer-aided drug design, with over 80 publications covering novel methods and applications. Prior to joining Silicon Therapeutics he was vice president and global head of the Applications Science team at Schrodinger, working with pharmaceutical companies to apply computational chemistry tools to challenging targets. He completed his Ph.D. at MIT with Professor Bruce Tidor where he examined the role of electrostatics and dynamics in protein-ligand binding, and developed a novel method for optimizing ligand binding specificity across a panel of (desirable and undesirable) targets. Dr. Sherman has published on a broad range of topics, including free energy simulations, molecular dynamics, induced-fit docking, virtual screening, lead optimization, selectivity design, cheminformatics, and protein design.

Wes Trotter, PhD, Merck: Wes Trotter is currently a Director in the Discovery Chemistry group at Merck Boston. Born in Asheville, North Carolina, USA, he completed a B.S. in Chemistry at the University of North Carolina before earning an M. Phil. at Cambridge University in the laboratory of Dudley Williams and Ph.D. at Harvard University under direction of David Evans. Wes joined Merck, West Point, PA, in 1999 and moved to the Merck Boston site in 2009. Wes and his teams have discovered and advanced molecules into clinical development in therapeutic areas spanning oncology, cardiovascular, neuroscience, and immunology targets. His current research interests include approaches to eliciting and enhancing anti-tumor immune responses.

Jingqiang Wei, PhD, Silicon Therapeutics: Dr. Jingqiang Wei is Senior Investigator of Medicinal Chemistry Department at Silicon Therapeutics. He joined STX from GSK where he worked on DNA-encoded library technology and related medicinal chemistry projects. Before that, he was a research chemist at Broad Institute, played a major role to establish the large-scale production of diversity-oriented synthesis (DOS) libraries, and participated in medicinal chemistry efforts covering multiple therapeutic areas including infectious disease, cardiovascular disease, and cancer. Dr. Wei obtained Ph.D. from Iowa State University and finished his postdoc at Harvard University and Broad Institute.

Adrian Whitty, PhD, Boston University: Dr. Whitty received a B.Sc. in Chemistry from King's College London in 1985, followed by M.S. and Ph.D. degrees in Chemistry from the University of Illinois at Chicago. After completing postdoctoral work with William P. Jencks FRS at Brandeis University, he joined the biopharmaceutical company Biogen, where he worked in the Department of Drug Discovery, rising to the position of Director of Physical Biochemistry. In 2008 he moved to Boston University, where he is an Associate Professor in the Departments of Chemistry and of Pharmacology and Experimental Therapeutics. His research interests include protein-protein and protein-ligand binding, especially as related to the discovery of small molecule inhibitors of protein-protein interactions, and the quantitative, mechanistic analysis of growth factor receptor activation and signaling.

Thank you to all of our Organizers, Speakers, Sponsors and Delegates! Without your dedication, support and participation APC 2019 would not be possible. We greatly value your comments regarding APC 2019 as well as thoughts or suggestions for improving future conferences. Please take the time to fill out our survey when we send it to you next week.

Sincerely,

The Boston Society