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Yao Yuan Academy for Pharma Innovation

Presents

The 3rd Annual Chicago Biotech-Pharma International Symposium

Pharma R&D

A Tale of Success

Illinois Science & Technology Park, 8045 Lamon Avenue , Skokie, IL60077

May 12, 2012

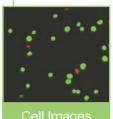


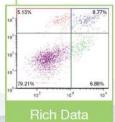
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TO ATTENDANTS

he 3rd Annual Chicago Biotech-Pharma Symposium will be held on May 12, 2012 in Skokie, north suburb of Chicago. This annual symposium is sponsored by Yaoyuan—Academy for Pharma Innovation, and organized by a group of scientists from pharmaceutical industry and academia in the great Chicago area. This year, we have chosen "**Pharma R & D, A Tale of Success**" as the theme of the conference to highlight the critical path and future horizons in drug discovery and development. Scientists and researchers who have played leading roles in the discovery and development of selected drugs or associated diagnostic kit will share their exciting stories. The prominent speakers include:

Dr. Peter Senter, VP of Seattle Genetics
Dr. Feng Xu, Sr. Investigator, Merck Inc.
Dr. Michael Michaelides, Sr. Research Fellow & Chemistry Head of Cancer Research, Abbott Laboratories
Dr. Alison Handley, Director of Clinical Science, Cardiovascular, Takeda Global Research and Development, Inc.
Dr. Jean Cui, Associate Research Fellow, Pfizer
Dr. Ekaterina Pestova, Manager R&D, Abbott Molecular

We welcome your participation, and look forward to an exciting symposium.

ACKNOWLEDGEMENT



ORGANIZING COMMITTE

of the 3rd Annual Chicago Biotech-Pharma International Symposium

Dr. Paul Mar (Chair)

Founder & CEO SynChem Co.

Dr. Xuesong Liu

Sr. Scientist III Abbott Laboratories

Dr. Liangjun Lu Sr. Scientist II

Abbott Laboratories

Dr. Zhi-Fu Tao Sr. Scientist III Abbott Laboratories

Dr. Hongwei Wang

Assistant Professor The University of Chicago

> **Xiangdong Xu** Sr. Scientist II Abbott Laboratories

Dr. Lin Zhao Associate Director Takeda Global R&D Center

Dr. Haiying Zhang Sr. Group Leader (former) Abbott Laboratories

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Pharma R&D: A Tale of Success Illinois Science & Technology Park

Agenda

- 8:00 9:00 AM Registration
- 9:00 9:10 AM Opening Remark Dr. Paul Mar, CEO and Founder of SynChem, Inc.
- 9:10 12:10 AM Session One Moderator: Dr. Zhi-Fu Tao, Sr. Scientist III, Abbott Laboratories
- 9:10 10:00 AM Empowered Antibodies for Cancer Therapy: From Early Stage Research to a Clinically Approved Drug Dr. Peter Senter, Vice President, Seattle Genetics, Inc.
- 10:00 10:20 AM Coffee Break
- 10:20 11:10 AM Chemistry Innovation & Process Evolution: The Search for the Green Manufac turing Processes for Sitagliptin Dr. Feng Xu, Sr. Investigator, Merck, Inc.
- 11:10 12:00 PM The Road to ABT-869, an Orally Active Multi-targeted Receptor Tyrosine Kinase Inhibitor
 Dr. Michael Michaelides, Sr. Research Fellow, Abbott Laboratories
- 12:00 1:00 PM Complementary Lunch

1:00 - 3:50 AM Session Two

Moderator: Dr. Lin Zhao, Associate Director of Clinical Science, Takeda Global Research and Development, Inc.

- 1:00 1:50 PM Edarbi and Edarbyclor for the treatment of hypertension Dr. Alison Handley, Director, Clinical Science, Cardiovascular, Takeda Global Research and Development, Inc.
- 1:50 2:10 PM Break (soft drink & cookie)

Conclusion

- 2:10 3:00 PM Invention of Xalkori[®](Crizotinib): from a Kinase Inhibitor to a Drug Dr. Jean Cui, Associate Research Fellow, Pfizer 3:00 - 3:50 PM Vysis ALK FISH Probe Kit: Development and Analytical Performance
- 3:00 3:50 PM Vysis ALK FISH Probe Kit: Development and Analytical Performance Dr. Ekaterina Pestova, Manager R&D, Abbott Molecular

3:50 PM

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BIOGRAPHICAL SKETCH (in alphabetic order)

J. Jean CUI

Dr. J. Jean Cui is currently an Associate Research Fellow and project leader at Pfizer La Jolla R&D Center. Jean has more than 16 years experience in drug discovery, especially in oncology field. Jean is the lead inventor of Crizotinib (brand name XALKORI), which was granted fast track approval by FDA on Aug. 26th, 2011 for ALK positive late stage non small cell lung cancer. The drug is a major breakthrough of personalized and genomic medicine. Jean worked on several other oncology projects, including SUTENT project. Another milestone clinic c-Met specific inhibitor PF-04217903 also came from Jean's creative design. Jean received Pfizer Global R&D Achievement Award for her significant contributions and leadership in generating two clinical candidates PF-02341066 (Crizotinib) and PF-04217903. Jean and her Crizotinib chemistry team were selected as the 38th National Inventor of the Year Award in 2011 by the Intellectual Property Owners Association. Jean is the author or co-author of more than 50 publications and patents. Jean conducted her postdoctoral research at Lawrence Berkeley National Laboratory/University of California Berkeley. She earned her Ph.D. in Organic Chemistry from Ohio State University under the direction of Professor Derek Horton. Jean received her B.S. and M.S. in Chemistry from University of Science and Technology of China.

Alison HANDLEY

Dr. Alison received her PhD in physiology (changes in protein metabolism in aging skeletal muscle) from the Pennsylvania State University and subsequently completed a postdoctoral research fellowship in medicine (skeletal muscle signaling pathways for glucose uptake) at the Joslin Diabetes Center and Harvard Medical School in Boston, MA. Alison completed her undergraduate training in Biology at Yale University.

Alison began her industry career with Bristol-Myers Squibb in 2002 in the cardiovascular Medical Affairs group, providing medical support to the field medical liaison team and the commercial organization for Plavix, Pravachol, and Avapro/Aavalide. In 2004, she was promoted to Senior Manager/Plavix Therapeutic Lead and in 2005, to Associate Director, Cardiovascular/Metabolics group. Alison joined Takeda Pharmaceuticals North America in 2007 as part of the Medical and Scientific Affairs organization, where she led or provided scientific support for multiple internal therapeutic area/product teams in support of the Cardiovascular/Metabolic and the GI disease areas. Alison then joined Takeda Global Research and Development in 2009 as an Associate Director in Clinical Science, and served as the clinical science lead on multiple phase 3 clinical trials for the Edarbi and Edarbyclor programs, and contributed to the development and submission of the NDA for both programs, which were approved in Feb 2011 and Dec 2011, respectively. In July 2011, Alison was named the Global Development Team lead for the Edarbi family and continues to work with the project team to achieve registration of Edarbi and Edarbyclor globally.

Michael MICHAELIDES

Dr. Michaelides is currently Senior Research Fellow, Head of Chemistry in Oncology and a member of the Medicinal Chemistry Leadership Team at Abbott Laboratories. During his tenure at Abbot he has carried out research in the areas of Neuroscience, Immunoscience and Oncology. He began his career as a research chemist in Neuroscience. In that position, he discovered adrogolide, the first dopamine D1 receptor agonist to demonstrate a full anti-Parkinsonian effect in patients with Parkinson's disease. He later on directed his research efforts to cancer chemotherapeutics and has since played a pivotal role in the discovery of seven discovery development candidates, three of which have entered clinical development. The most advanced of these, linifanib, is a multi-targeted receptor tyrosine kinase inhibitor currently in a phase III trial for treatment of hepatocellular carcinoma. His most recent contribution is ABT-348, a novel multi-targeted kinase inhibitor affecting both the tumor cell and the tumor micro-environment, currently in phase I trials.

Dr. Michaelides earned his bachelor's degree in chemistry at Stony Brook University in New York and his doctorate in organic chemistry from the Massachusetts Institute of Technology in Cambridge, under the direction of Professor William Roush, in 1988. He joined Abbott shortly after completing his graduate studies. He has over 30 issued or pending patents and 45 published articles to his name. 1-847-367-3680

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Ark Pharm, Inc. specializes in design and synthesis of medicinal building blocks, scaffolds and other advanced intermediates serving drug descovery research.

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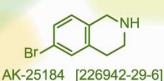
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BIOGRAPHICAL SKETCH (in alphabetic order)

Ekaterina PESTOVA

Ekaterina Pestova is currently a R&D Manager at Abbott Molecular division of Abbott Laboratories. She is responsible for the Solid Tumor *Fluorescence In Situ Hybridization* (FISH) program, coordinating multiple interrelated projects and activities targeted at development of new diagnostic and companion diagnostic FISH products. In her role, she plans and oversees projects from feasibility through product development and launch; and directs product and process improvement activities. Her major achievements during her tenure at Abbott include development, FDA approval and launch of the first-of-a-kind companion diagnostics test for Xalkori (crizotinib) treatment of patients with non-small cell lung cancer, launch of four oncology CE Mark products and multiple Analyte Specific Reagent (ASR) products. In her role, Ekaterina Pestova also supports industrial partnerships, and major academic collaborations, identifies new technologies and new product ideas.

Dr. Pestova earned her masters degree in microbiology at Moscow State University in Moscow, Russia, her doctorate in molecular biology from the University of Illinois in 1997, and an MBA in finance and entrepreneurship from DePaul University in 2007. Prior to joining Abbott in 2002, she worked at Vysis, Inc., Motorola Life Sciences, and Northwestern University, Feinberg School of Medicine.

Peter SENTER

Peter Senter joined Seattle Genetics in August 1998 and has served as Vice President, Chemistry since September 2002. In February 2009, Dr. Senter was recognized as the company's first Distinguished Fellow. He leads Seattle Genetics' chemistry department, which carries out researchin antibody-drug conjugate technologies, including the development of potent drug payloads, novel linker systems, conjugation methodology and mechanism of action studies. Prior to joining the company, Dr. Senter was with Cytokine Networks, Inc., the Bristol-Myers Squibb Pharmaceutical Research Institute and the Dana-Farber Cancer Institute, Harvard Medical School. Dr. Senter received a Ph.D. in Chemistry from the University of Illinois, and an B.A. in Biochemistry from the University of California, Berkeley. He is the Senior Editor of Bioconjugate Chemistry and serves on the Editorial Board of four scientific journals. Dr. Senter is an Affiliate Professor of Bioengineering at the University of Washington. His research interests include targeted drug delivery, protein chemistry and biochemistry, and anti-cancer drug design. Dr. Senter has authored more than 100 scientific publications and holds more than 20 patents.

Feng XU

Dr. Feng Xu obtained his Ph.D. at Shanghai Institute of Organic Chemistry (SIOC), Chinese Academy of Sciences in 1989 where he worked on the total synthesis of complex natural products. He joined SIOC before moving to the USA. After he undertook a postdoctoral fellow with Professors Martin Kuehne and James Dittami, and completed the total syntheses of several complex indole alkaloids, he joined Merck Process Research Department in 1996.



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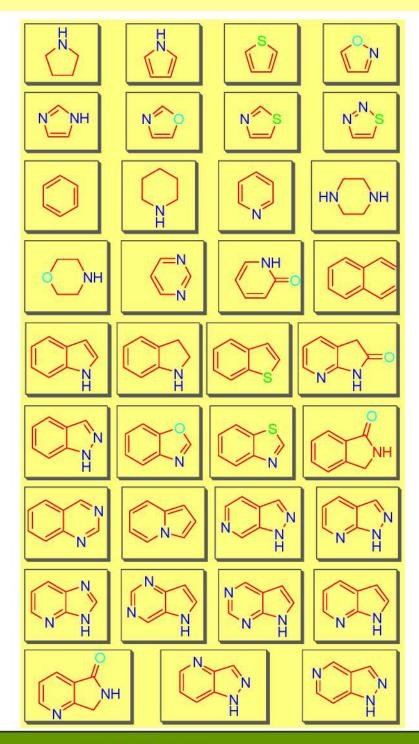
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ABSTRACTS (same order as presentations)

Empowered Antibodies for Cancer Therapy: From Early Stage Research to a Clinically Approved Drug

Peter Senter

Seattle Genetics, Inc. 21823 30th Dr. SE, Bothell, WA 98021

Monoclonal antibodies (mAbs) have played a major role in cancer medicine, with active drugs such as trastuzumab (Herceptin), cetuximab (Erbitux), bevacizumab (Avastin) and rituximab (Rituxan) in a wide range of therapeutic applications. The mechanism of activity of these agents involves cell signaling, effector functions through interactions with Fcg receptor positive cells, and complement fixation. In order to improve activity, attention has turned towards enhancing mAb ADCC activity by selecting stronger Fcg receptor binders. This has been accomplished using engineered cell lines that generate mAbs with optimized Fc regions designed for enhanced receptor binding (Xencor technology), or by changing the carbohydrate structures on the heavy chains of mAbs (Glycart and Biowa technologies). We have discovered an alternative approach involving the identification of biochemical inhibitors of the enzymes fucosyl transferase and GDP-d-mannose dehydratase (GMD). The inhibitors are fucose analogues, and can be added to cells that not only produce mAbs, but other proteins in which fucosylation is important for activity. Several applications of this technology will be discussed, both in vitro and in vivo.

mAb activity can also be enhanced by appending highly potent cytotoxic drugs to them. While this idea has been in existence for many years, it has only been recently that mAbdrug conjugates have the potential of playing a convincing role in cancer chemotherapy. The field has advanced significantly, with new insights gained into the roles that antigen target, normal tissue expression, drug potency, drug mechanism, linker stability, and mechanism of drug release play in generating active antibody drug conjugates (ADC) with acceptable safety profiles. ADCETRIS (Brentuximab vedotin, SGN-35) is an example of an ADC that has been designed with these parameters in mind. In August 2011, ADCETRIS was approved by the US Food and Drug Administration for use in relapsed or refractory Hodgkin lymphoma and relapsed or refractory systemic anaplastic large cell lymphoma, two diseases with significant unmet medical needs. An overview of how this drug was developed and how we are extending the technology will be provided.

Chemistry Innovation & Process Evolution: The Search for the Green Manufacturing Processes for Sitagliptin

Feng XU Merck Process Research

Sitagliptin, a potent DPP IV inhibitor, is the active ingredient in Januvia and Janumet, which are the leading drugs for the treatment of type 2 diabetes. Two commercial manufacturing routes are discussed. To set the stereochemistry of sitagliptin, the 1st gen route features an unprecedented, highly enantioselective hydrogenation , while the 2nd gen route relies on an engineered enzymatic transamination. Starting from the same raw materials, both routes prepare sitagliptin in two pots, respectively.

The Road to ABT-869, an Orally Active Multitargeted Receptor Tyrosine Kinase Inhibitor

Michael Michaelides Abbott Laboratories, Cancer Research

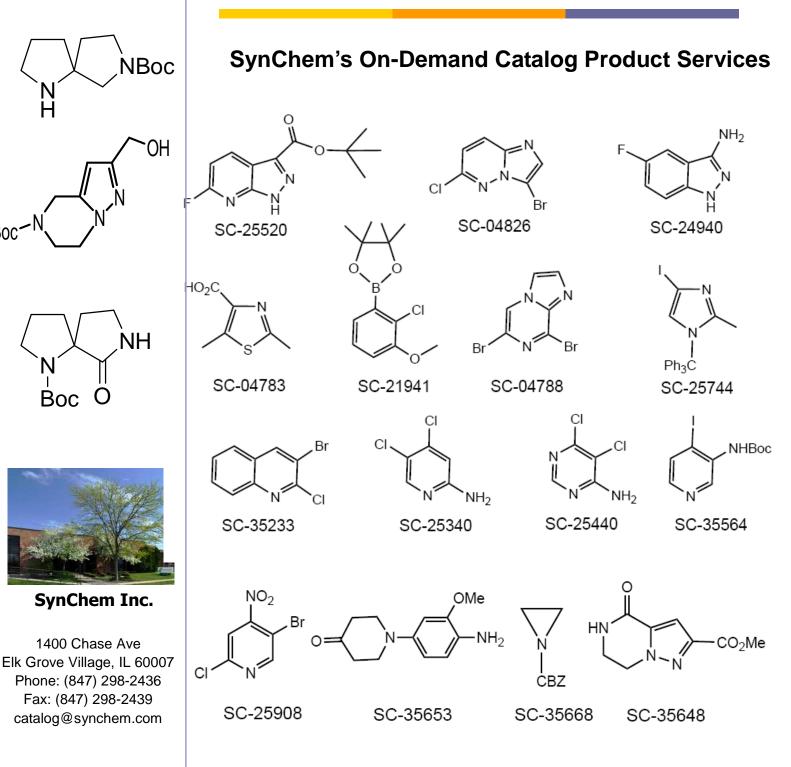
Receptor tyrosine kinases (RTKs), a family of transmembrane proteins, have been shown to be important mediators of signal transduction in cells. Dysregulation of RTK signaling pathways mediated by the VEGF and PDGFR receptor families in particular is associated with progression of human cancers. The vascular endothelial growth factor receptor tyrosine kinases (VEGFRs) family includes FLT1 (VEGFR1), KDR (VEGFR2), and FLT 4 (VEGFR3). VEGF-mediated KDR signaling plays a central role in angiogenesis, a process essential for tumor growth, through induction of proliferation, migration and survival of endothelial cells. The PDGFRs, consisting of PDGFR b, cKit, CSF1R and FLT3 modify the tumor microenvironment in a fashion beneficial to tumor growth and metastasis. Development of multi-targeted inhibitors, inhibiting both the VEGF and PDGF families is believed to be important in overcoming redundancies in signaling pathways and thus can more effectively inhibit tumor growth. The approval of the multi-targeted (MTK) agents sunitinib and sorafenib has demonstrated that clinical benefit with manageable side effects is possible with broad-acting kinase inhibitors. Research at Abbott Laboratories has identified ABT-869, Linifanib an orally administered, potent and specific inhibitor of all VEGF and



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ABSTRACTS (same order as presentations)

PDGF family tyrosine kinases currently in phase 3 clinical trials. This presentation will describe the medicinal chemistry research that led to the discovery of Linifanib, focusing on lessons learned.

Linifanib, ABT-869

Edarbi and Edarbyclor for the treatment of hypertension Alison Handley Takeda Global Research and Development, Inc.



Invention of Xalkori[®](Crizotinib): from a Kinase Inhibitor to a Drug

J. Jean Cui Oncology Medicinal Chemistry, Pfizer Worldwide Research and Development, Pfizer, Inc.

Crizotinib, a potent c-Met/ALK dual inhibitor, was fast

track approved in August 26, 2011 by FDA for late stage lung cancer patients with EML4-ALK fusion gene based on marked efficacy results from Phase I and II studies. The invention of crizotinib starts from a cocrystal structure of c-Met/PHA-665752 complex. The cocrystal structure of PHA-665752, bound to c-MET kinase domain, revealed a novel ATP site environment, which served as the target to guide parallel, multi -attribute drug design. А novel 2-amino-5-aryl-3benzyloxypyridine series was created to more effectively make the key interactions achieved with PHA-665752. In the novel series, the 2-aminopyridine core allowed a 3-benzyloxy group to reach into the same pocket as the 2,6-dichlorophenyl group of PHA-665752 via a more direct vector, and thus with a better ligand efficiency (LE). Further optimization of the lead series generated the clinical candidate crizotinib (PF-02341066), which demonstrated potent in vitro and in vivo c-MET kinase and ALK inhibition, effective tumor growth inhibition, and good pharmaceutical properties and safety profile.

> Vysis ALK FISH Probe Kit: Development and Analytical Performance Dr. Ekaterina Pestova Abbott Molecular



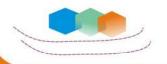


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YAOYUAN PHARMA & BIOTECH FORUM

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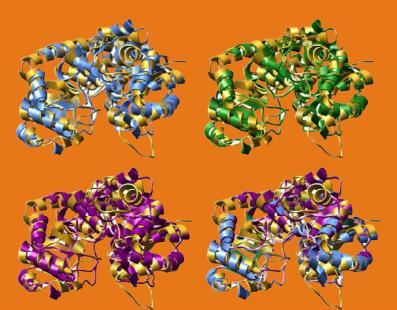
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The 4th Yao Yuan Biotech/Pharma International Symposium Global Coalition

A Synergistic Path to Biopharma Innovation

Changsha, China October 27-November 2, 2012

Sponsored by the City of Changsha, China and co-organized by Central South University and Yao Yuan-Academy for Pharma Innovation, Yao Yuan's 4th Biotech-Pharma International Symposium will be held between October 27 and November 2 in Changsha/Zhangjiajie, China. The theme of the conference is chosen to be "Global Coalition, A Synergistic Path to Biopharma Innovation" to highlight our goal in exploring a healthy, innovative, and rejuvenated model for future avenues of biotech and pharmaceutical development. This particular symposium tempts to diagnose the decline in current pharmaceutical R&D efficiency, emphasize the latest but successful pharmaceutical development, and propose feasible and effective solutions to the challenging environment facing pharmaceutical industry. The 1st day of the three-day event will be held in Changsha National High-Tech Industrial Development Zone, focusing on strategic diagnosis of the current pharmaceutical challenges, and discussing the potential solutions. The rest of the conference aims to provide the latest advances in personalized therapy and some successful stories in pharmaceutical development. An optional 3-day tour to Zhangjiajie, the most picturesque national park in China, as mayor's VIP guests is also planned following the main symposium. We look forward to another exciting conference and seeing you in Changsha, China.

Confirmed Speakers

Mark J. Ratain, MD, Leon O. Jacobson Professor, Director, Center for Personalized Therapeutics, The University of Chicago P. Mark Hogarth, MD, Distinguished Professor & Director, Burnet Institute, Australia; Senior Principal Research Fellow of the NHMRC

Kaixian Chen, Ph.D, Academician, Chinese Academia of Science; President & Professor, Shangai Pharmaceutical University Jian Ding, Ph.D, Academician, Chinese Academia of Engineer; Director and Professor, Shanghai Institute of Meteria Medica, Chinese Academia of Chinese

Songlin Xue, Ph.D, Sr. Vice President, Takeda Global Research & Development

Youssef L. Bennani, Ph.D, Vice President, Vertex Pharmaceutical Wenqing Yao, Ph.D, Sr. Vice President, Incyte Pharmaceutical Yang-Xin Fu, Ph.D, Professor of Pathology, The University of Chicago











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