



## Scientific Program of 11<sup>th</sup> ISSX

**Date: June 12-16**

- **Short Courses: June 12**
- **Symposia: June 13-16**
- **Social Activity: June 14**
- **Banquet: June 14 (Ticket holder)**
- **Farewell Dinner: June 15 (Invited only)**
- **Post congress tour: June 17**

**Venue: BEXCO, Busan, Korea**

**Website**

- <http://www.issx2016.co.kr>  
[info@issx2016.co.kr](mailto:info@issx2016.co.kr) for contact to local MOC, the information on the accommodation and social activity in Korea
- <http://issxbusan2016.org>  
[skemp@issx.org](mailto:skemp@issx.org) for contact to ISSX office, the information on meeting registration



Sunday, June 12, 2016

09:30 ~ 12:00 | BEXCO Convention hall 2F 201~202

**Short Course 1 (SC 1)**

***ADME Characterization of Biologics and Antibody Drug Conjugate (ADC)***

*Chair : Dr. Anthony J Lee, Abbvie, USA and Hea-Young Cho, Cha University, Korea*

- [SC1.1] **ADME of biologics** (Edit Tarcsa, Abbvie, USA)
- [SC1.2] **Screening and ADME Characterization of ADCs** (Young Shin, Chungnam National University, Korea)
- [SC1.3] **Radiolabeled ADME studies for development of ADCs** (Anthony Lee, Abbvie, USA)
- [SC1.4] **Model based drug development of protein therapeutics** (Dhaval K. Shah, University at Buffalo, USA)

09:30 ~ 12:00 | BEXCO Convention hall 2F 205

**Short Course 2 (SC 2)**

***Principles of in vitro – in vivo extrapolation in the application of PBPK Modelling***

*Chair : Amin Rostami, University of Manchester and Young Shin, Chungnam University, Korea*

- [SC2.1] **Principles in Incorporating IVIVE into PBPK** (Amin Rostami, University of Manchester, UK)
- [SC2.2] **Design and modeling of IVIVE for absorption studies** (Viera Lukacova, Simulations Plus, USA)
- [SC2.3] **Industrial applications of PBPK: Where we were, and where we are going to?** (Jan Snoeys, Janssen, Belgium)
- [SC2.4] **IVIVE of drug transporters and addressing challenges** (Manthana Varma, Pfizer Inc., USA)

12:00 ~ 13:30 Lunch

13:30 ~ 16:00 | BEXCO Convention hall 2F 201~202

**Short Course 3 (SC 3)**

***Drug induced liver injury – how mechanistic insights aid preclinical detection and prediction?***

*Chair : Yvonne Will, PhD Pfizer R&D, USA and Sang Ho Lee, PhD, Bridge Biotherapeutics Inc., Korea*

- [SC 3.1] **DILI: what is the problem?** (Gerry Kenna, Drug Safety Consultant, UK)
- [SC3.2] **Predicting Toxicities of Reactive Metabolite-Positive Drug Candidates** (Amit Kalgutkar, Pfizer, Inc., USA)
- [SC 3.3] **Expression and Function of Hepatobiliary Transporters are Key Determinants of Drug-Induced Hepatotoxicity** (Jose Manautou, University of Connecticut, USA)
- [SC3.4] **The role of mitochondria in DILI** (Yvonne Will, Pfizer, Inc., USA)
- [SC 3.5] **Integrating DILI hazards enables prediction, assessment and management of human risk** (Gerry Kenna, Drug Safety Consultant, UK)



# The 11<sup>th</sup> International ISSX Meeting

Science of Xenobiotics in the era of Personalized Medicine

**13:30 ~ 16:00 | BEXCO Convention hall 2F 205**

## **Short Course 4 (SC 4)**

### ***Modelling approaches to the prediction of drug-drug interactions***

*Chair : Geoff Tucker, University of Sheffield, UK and Hyun-Joo Shim, Donga-ST Research Institute, Korea*

[SC4.1] **Introduction** (Geoff Tucker, University Sheffield, UK)

[SC4.2] **Modelling methods and case studies** (Karen Rowland-Yeo, Certara, UK)

[SC4.3] **Drug interactions at transporters** (Kazuya Maeda, University of Tokyo, Japan)

[SC4.4] **A scientific view of the modelling of complex drug-drug interactions** (Shiew-Mei Huang, North Potomac, MD, USA)

**16:00 ~ 16:30 Break**

**16:50 ~ 17:40 | BEXCO Convention hall 1F 102~105 / 107~110**

## **Keynote Lecture**

*Chair : Jae-Gook Shin, Inje University College of Medicine, Korea and Geoff Tucker, University of Sheffield, UK*

### ***Drug Transporters: Starring roles in New Drug Discovery and Development***

(Yuichi Sugiyama, RIKEN, Japan)

**18:00 ~ 20:00 | BEXCO Convention hall 3F**

## ***Welcome Reception***



**Monday, June 13, 2016**

**09:00 ~ 09:50 | BEXCO Convention hall 1F 103~105 / 108~110**

**Plenary Lecture 1 (PL 1)**

*Chair : Sang-Goo Shin, CHA Health Systems, Korea and Greg Slatter, Acerta Pharma, USA*

***Drug Discovery and Development: Looking for Needles in a Hay Stack***

(Marcel Hop, Genentech, USA)

**09:50 ~ 10:10 Break**

**10:10 ~ 12:10 | BEXCO Convention hall 1F 102-105**

**Symposium 1 (SY 1)**

***Disposition of Antibody Drug Conjugate (ADC): Current Understanding and Challenges***

*Chair : Anthony J Lee, Abbvie, USA and Yong-Bok Lee, Chonnam National University, Korea*

[SY1.1] **PBPK Modeling as a tool to predict drug interactions for ADCs** (Yuan Chen, Genentech, USA)

[SY1.2] **Development of translational PK/PD models for ADCs** (Dhaval K. Shah, University at Buffalo, USA)

[SY1.3] **Current approaches for ADME characterization of ADCs: Industry perspectives** (Edit Tarcsa, AbbVie, USA)

[SY1.4] **Clinical Development of ADCs: Regulatory Perspectives** (Yow-Ming Wang, USA)

**10:10 ~ 12:10 | BEXCO Convention hall 2F 205**

**Symposium 2 (SY 2)**

***Redox Modulation of Xenobiotic Metabolism and Toxicity***

*Chair : Young-Joon Surh, Seoul National University, Korea and John D. Hayes, University of Dundee, UK*

[SY2.1] **Impact of Keap1-Nrf2 system for toxicology and drug development** (Masayuki Yamamoto, Tohoku University, Japan)

[SY2.2] **Redox sensitive transcription factors in adaptive cellular response to environmental stress** (Young-Joon Surh, Seoul National University, Korea)

[SY2.3] **Regulation of Nrf2 by redox and other cellular signalling pathways, and its influence on xenobiotic and lipid metabolism** (John D. Hayes, University of Dundee, UK)

[SY2.4] **Redox regulation of anti-inflammatory and antioxidative signaling by edible phytochemicals** (Hye-Kyung Na, Sungshin Women's University, Korea)

**12:10 ~ 13:40 Lunch, Poster presentation, Visit Exhibitors**



# The 11<sup>th</sup> International ISSX Meeting

Science of Xenobiotics in the era of Personalized Medicine

13:40 ~ 15:40 | BEXCO Convention hall 1F 102-105

## Symposium 3 (SY 3)

### ***Humanized or transgenic animal models in drug metabolism and toxicology studies***

*Chair : Hyunyoung Jeong, University of Illinois at Chicago, USA and Dong Hwan Kim, Konyang University, Korea*

[SY3.1] **Development of Advanced in vivo Human Liver Models for Medicinal Science** (Hiroshi Suemizu, Central Institute for Experimental Animals Biomedical Research, Japan)

[SY3.2] **In vivo approaches to identification of metabolism-mediated toxicological mechanisms** (Xinxin Ding, SUNY Polytechnic Institute, USA)

[SY3.3] **The application of knock out and humanised models to study human pathways of anti-cancer drug metabolism** (Roland Wolf, University of Dundee, UK)

[SY3.4] **CYP2D6-humanized mice as a model to study altered drug metabolism during pregnancy** (Hyunyoung Jeong, University of Illinois at Chicago, USA)

13:40 ~ 15:40 | BEXCO Convention hall 2F 205

## Symposium 4 (SY 4)

### ***Oncology-focused modelling and simulation in Drug R&D***

*Chair : Saeho Chong, Enzychem Inc., Korea and Gerald Fetterly, Athenex, USA,*

[SY4.1] **Introduction** (Saeho Chong, Enzychem Inc., Korea)

[SY4.2] **General PK/PD approach in oncology** (Gerald Fetterly, Athenex, USA)

[SY4.3] **Translational projection of the therapeutic window in oncology** (Arijit Chakravarty, Takeda, Japan)

[SY4.4] **Combination therapy is standard practice in oncology: Use of PBPK modeling for assessing and designing DDI studies** (Rangaraj Narayanan, Celgene, USA)

[SY4.5] **Translational modeling & simulation for molecularly targeted agents to guide discovery and development: the crizotinib story** (Shinji Yamazaki, Pfizer, Inc., USA)

15:40 ~ 16:00    **Break**

16:00 ~ 18:00 | BEXCO Convention hall 1F 102-105

## Symposium 5 (SY 5)

### ***Emerging Roles of CYP4 Family Enzymes in Endogenous Metabolism and Disease***

*Chair : Allan Rettie, University of Washington, USA and Young-Ran Yoon, Kyungpook National University, Korea*

[SY5.1] **The CYP4 family: overview and physiological importance** (Allan Rettie, University of Washington, USA)

[SY5.2] **Pharmacogenetics of CYP4 enzymes: from discovery to functional relevance of genetic variants** (Su-Jun Lee, Inje University College of Medicine, Korea)

[SY5.3] **The CYP4:20-HETE pathway in cancer progression** (J. Yang, Wuhan University, China)



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[SY5.4] **CYP4B1 as a novel suicide gene in cancer therapy** (Helmut Hanenberg, University of Duisburg-Essen, Germany)

**16:00 ~ 18:00 | BEXCO Convention hall 2F 205**

## **Symposium 6 (SY 6)**

***ITC symposium on drug transporters; Best practice in drug development***

*Chair : Yuichi Sugiyama, RIKEN, Japan and Shiew-Mei Huang, North Potomac, MD, USA*

[SY6.1] **Scientific perspective on the evaluation of transporter-based drug-drug interactions**  
(Shiew-Mei Huang , North Potomac, MD, USA)

[SY6.2] **Pharmacogenomics of Membrane Transporters** (Kathy Giacomini, UCSF, USA)

[SY6.3] **Exposure or Safety: Where do Transporter evaluations have the greater impact during drug development?** (Jasminder Sahi, Sanofi Co., China)

[SY 6.4] **Pharmacogenomics and Metabolomics Approaches of OCT transporter** (Im-Sook Song  
Kyungpook National University, Korea)

**18:30 – 19:30 / Paradise Hotel**

***New investigator's reception\_ By invitation***

**19:30 – 20:30 / Paradise Hotel**

***President's Reception\_ By invitation***

**The 11<sup>th</sup> International ISSX Meeting**  
**Science of Xenobiotics in the era of Personalized Medicine**



**Tuesday, June 14, 2016**

**09:00 ~ 09:50 | BEXCO Convention hall 1F 103~105 / 108~110**

**Plenary Lecture 2 (PL 2)**

*Chair : Jae-Gook Shin, Inje University College of Medicine, Korea and Ichiro Ieiri, Kyushu university, Japan*

***Pharmacogenomics: relevance to personalized medicine***

(Munir Pirmohamed, University of Liverpool, UK)

**09:50 ~ 10:10    Break**

**10:10 ~ 12:10 | BEXCO Convention hall 1F 102-105**

**Symposium 7 (SY 7)**

***The Regulation of Pharmacogenomics in Clinical Drug Development***

*Chair : Greg Slatter, Acerta Pharma, USA com and Seung Eun Choi, MFDS, Korea*

[SY7.1] **Pharmacogenomics in Korea ; a Regulatory Perspective** ( So Hee Kim, MFDS, Korea)

[SY7.2] **Biomarker regulation and regulatory sciences in Japan** ( Yoshiro Saito, National Institute of Health Sciences, Ministry of Health, Labour and Welfare, Japan)

[SY7.3] **Pharmacogenomics: EU Regulatory Perspective** (Krishna Prasad, MHRA, UK)

[SY7.4] **The role of pharmacogenomics in drug development, regulatory review and clinical practice** (Shiew-Mei Huang, North Potomac, MD, USA)

**10:10 ~ 12:10 | BEXCO Convention hall 2F 205**

**Symposium 8 (SY 8)**

***Non-HLA genetic risk factors in idiosyncratic adverse drug reactions***

*Chair: Ann Daly, Newcastle University, UK and In-Jin Jang, Seoul National University, Korea*

[SY8.1] **Statin-induced myotoxicity** (Munir Pirmohamed, University of Liverpool, UK)

[SY8.2] **Drug-induced liver injury-recent findings on non-HLA risk factors** (Ann Daly, Newcastle University, UK)

[SY8.3] **Animal models to predict human risk factors in drug-induced liver injury** (Tsuyoshi Yokoi, Nagoya University, Japan)

[SY8.4] **Pharmacogenomics of serious adverse drug reactions to cancer chemotherapy in children** (Colin Ross, University of British Columbia, Canada)

**12:10 ~ 13:40    Lunch, Poster presentation, Visit Exhibitors**



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**14:00 ~ 18:00 Social Activity**

**18:30 – 20:30 | The Bay 101**

***Banquet***





Wednesday, June 15, 2016

09:00 ~ 09:50 | BEXCO Convention hall 1F 103~105 / 108~110

**Plenary Lecture 3 (PL 3)**

*Chair : R. Scott Obach, Pfizer, USA and Chang-Koo Shim, Daewoong Life Science Research Institute Korea*

***The role of toxic lipids metabolic disease***

(Speaker: Frank J. Gonzalez, National Institute of Health, USA)

09:50 ~ 10:10    **Break**

10:10 ~ 12:10 | BEXCO Convention hall 1F 102-105

**Symposium 9 (SY 9)**

***Proteomic analysis of phase 1 and phase 2 drug biotransformation pathways and transporters***

*Chair : J. Steven Leeder, Children's Mercy Hospital and Clinic, USA and Sang Geon Kim, Seoul National University, Korea*

[SY9.1] **Quantitative expression of ADME proteins at the blood-brain barrier** (Tetsuya Terasaki, TOHOKU University, Japan)

[SY9.2] **Quantitative analysis of hepatic transporters and DMEs during growth and development** (Bhagwat Prasad, University of Washington, USA)

[SY9.3] **Proteomic assessment of intestinal transporters** (Stefan Oswald, Universitätsmedizin Greifswald, Germany)

[SY9.4] **Application of proteomic analysis of human CYP ontogeny: Creating "avatars" to individualize drug exposure in children** (J. Steven Leeder, Children's Mercy Hospitals and Clinics, USA)

10:10 ~ 12:10 | BEXCO Convention hall 2F 205

**Symposium 10 (SY 10)**

***Pharmaco-metabolomics as a biomarkers for the personalized medicine***

*Chair : Dong Hyun Kim, Inje University, Korea and Thomas Jönsson, Metabolon, Inc, USA*

[SY10.1] **Proteo-metabonomics in elucidating mechanisms of acetaminophen toxicity** (Eric Chun Yong Chan, National University of Singapore, Singapore)

[SY10.2] **Global metabolomics for precision medicine: gain insights on gene penetrance, early diagnosis, and drug responses** (Thomas Jönsson, Metabolon, Inc, USA)

[SY10.3] **Microbial determinants of biochemical individuality and their impact on toxicology and pharmacology** (Andrew D Patterson, Penn State, USA)

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[SY10.4] **Metabolomics for the phenotyping of hepatic CYP3A and its application** (Joo Youn Cho , Seoul National University Hospital, Korea)

**12:10 ~ 13:40 Lunch, Poster presentation, Visit Exhibitors**

**13:40 ~ 15:40 I BEXCO Convention hall 1F 102-105**

## **Symposium 11 (SY 11)**

***Analysis and mechanisms of disease-related transporters***

*Chair : Ikumi Tamai, Kanazawa University., Japan and Suk-Jae Chung, Seoul National University, Korea*

[SY11.1] **Cancer specific transporters for diagnosis and chemotherapy** (Wooing Lee, Seoul National University, Korea)

[SY11.2] **Unappreciated role of prostagandin transporter OATP2A1 in inflammatory diseases** (Takeo Nakanishi, Kanazawa University, Japan)

[SY11.3] **Human Proximal Tubule Cell Model for Drug Disposition and Safety Assessment in Kidney** (Colin Brown, Newcastle University, UK)

[SY11.4] **ABC-transporter related diseases** (John D. Schuetz, St. Jude Children's Research Hospital, USA)

**13:40 ~ 15:40 I BEXCO Convention hall 2F 205**

## **Symposium 12 (SY 12)**

***Pharmacogenomics for Personalized Pharmacotherapy: Update on clinical implementation***

*Chair : Uli Zanger, IKP Stuttgart, Germany and Min Goo Lee, Yonsei University College of Medicine ,Korea*

[SY12.1] **Introduction** (Uli Zanger, IKP Stuttgart, Germany)

[SY12.2] **Pharmacogenomics of ADME and personalized medicine – where do we stand?** (Matthias Schwab, IKP Stuttgart, Germany)

[SY12.3] **Pharmacogenomics of Anticancer Agent Toxicities: Discovery to Implementation** (Eileen Dolan, The University of Chicago, USA)

[SY12.4] **Personalized medicine moving forward to precision medicine** (Hong-Hao Zhou, Central South University, China)

[SY12.5] **The implementation of pharmacogenomics for personalized pharmacotherapy in Korea** (Eun-Young Kim, Inje University College of Medicine, Korea)

**15:40 ~ 16:00 Break**

**16:00 ~ 18:00 I BEXCO Convention hall 2F 205**

## ***S) Asia Pacific Regional Session***

***“Xenobiotic study: Significant contributions from Asia-Pacific Scientists”***

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## Science of Xenobiotics in the era of Personalized Medicine



Chair : Wichittra Tassaneeyakul, Khon Kaen University, Thailand, and JO Miners, Flinders University., Australia

- [AS 1.1] **Pharmacogenetics of drug induced severe cutaneous adverse drug reactions** (Wen-Hung Chung, Chang Gung Memorial Hospital, Taiwan)
- [AS 1.2] **Pharmacogenetic research and its clinical application in Thailand** (Wichittra Tassaneeyakul, Khon Kaen University, Thailand)
- [AS 1.3] **Investigation into the relevance of in vivo metabolites and pharmacodynamics of notoginsenosides** (Li Yang, Shanghai University of Traditional Chinese Medicine, China)
- [AS 1.4] **Mechanism-based biomarkers and the transformation of diagnosis and risk assessment of herbal hepatotoxicity** ( Ge Lin, The Chinese University of Hong Kong, Hong Kong)
- [AS 1.5] **Emerging roles of human CYP1B1 in cancer growth and metastasis** (Young-Jin Chun, Chung-Ang University, Korea)
- [AS 1.6] **Perspectives of xenobiotics science in Asia pacific community: xenobiotic metabolism and transporters-importance of translational and reverse-translation research** (Yuichi Sugiyama, RIKEN, Japan)

**16:00 ~ 18:00 | BEXCO Convention hall 1F 102-105**

***Poster Awardee Oral Presentation (New Investigators)***

**18:00 – 20:00 / Nurimaru**

***Farewell Dinner\_ By invitation***



**Thursday, June 16, 2016**

**09:00 ~ 09:50 | BEXCO Convention hall 1F 03~105 / 108~110**

**Award Session**

*Chair : Thomas Baillie, University of Washington, USA*

***R.T. Williams Distinguished Scientific Achievement Award / Frederick J. Di Carlo***

***Distinguished Service Award***

**09:50 ~ 10:10 Break**

**10:10 ~ 12:10 | BEXCO Convention hall 1F 102-105**

**Symposium 13 (SY 13)**

***Update on Drug Interaction Studies: from In Silico to Clinical***

*Chair : Jasminder Sahi, Sanofi Co., China and Hye Suk Lee, The Catholic University of Korea, Korea*

[SY13.1] **The use of cynomolgus monkeys in predicting enzyme induction and human drug-drug interactions** (Michael Sinz, Bristol Myers Squibb, USA)

[SY13.2] **Evaluation of CYP2B6 induction and prediction of clinical drug-drug interactions** (Odette Fahmi, Pfizer, Inc., USA)

[SY13.3] **Herb-Herb and Herb-Drug Interactions: Studies on Fufang-Danshen Formula, A Three-Herb Combination for Treatment of Angina Pectoris** (Chuan Li, Chinese Academy of Sciences, China)

[SY13.4] **Gut microbiota-mediated drug-drug interactions** (Dong-Hyun Kim, Kyung Hee University, Seoul, Korea)

**10:10 ~ 12:10 | BEXCO Convention hall 2F 205**

**Symposium 14 (SY 14)**

***Drug metabolism in the era of precision medicine***

*Chair : Urs A. Meyer, Universitt Basel, Switzerland and Hiroshi Yamazaki, Showa Pharmaceutical University, Japan*

[SY14.1] **Introduction** (Urs A. Meyer, Universitt Basel, Switzerland)

[SY14.2] **Prediction of human pharmacokinetics in drug discovery** (Yoichi Naritomi, Astellas Pharma Inc., Japan)

[SY14.3] **Challenges for human metabolite prediction in preclinical** (Takushi Kanazu, Shionogi & Co., Japan)

[SY14.4] **Identifying Active Metabolites and Prospectively Predicting Their Exposure in Humans** (R. Scott Obach, Pfizer, Inc., USA)

[SY14.5] **Human and monkey P450 metabolism for human-specific metabolite formation** (Hiroshi Yamazaki, Showa Pharmaceutical University, Japan)



**12:10 ~ 13:40      Lunch, Poster presentation, Visit Exhibitors**

**13:40 ~ 15:40 | BEXCO Convention hall 1F 102-105**

**Symposium 15 (SY 15)**

***UDP-Glucuronosyltransferase and drug glucuronidation***

*Chair : JO Miners, Flinders University, Australia and Young-Jin Chun, Chung-Ang University, Korea*

[SY15.1] **The inhibition selectivity of human UDP-glucuronosyltransferase enzymes: Implications for drug-drug interactions** (JO Miners, Flinders University, Australia)

[SY15.2] **UDP-Glucuronosyltransferase catalysed drug bioactivation: Mechanisms and clinical significance** (Janne Backman, University of Helsinki, Finland)

[SY15.3] **Mutual modulation of UDP-glucuronosyltransferases and cytochrome P450**

**3A4: domains involved in the functional and physical interactions** (Yujii Ishii, Kyushu University, Japan)

[SY15.4] **The regulation of UDP-glucuronosyltransferase expression** (Peter Ian Mackenzie, Flinders University, Australia)

**13:40 ~ 14:20 | BEXCO Convention hall 2F 205**

**Special lecture 1.**

*Chair : Thomas Baillie, University of Washington, USA*

***The Move of PBPK from Academic Nicety to Industrial Necessity***

(Amin Rostami, University of Manchester, UK)

**15:40 – 16:00 / BEXCO**

***Closing Ceremony***