The North American Meeting in Providence, Rhode Island at the end of September attracted 630 attendees, and Meeting Chairs Jash Unadkat and Alan Rettie are to be congratulated on their excellent organization of a well-balanced program. For me, a highlight of the meeting was the outstanding presentations by the recipients of the North American Scientific Achievement Awards, Kathy Giacomin and Namandje Bumpus.

A face-to-face meeting of Council in Providence allowed time for a reflective and productive discussion on strategic issues, with focus particularly on membership benefits, conference programming, and Council structure and function. Expect to see outcomes in terms of action over the next year. A specific issue that was discussed was the disappointing fact that no nominations for new Council members from the Asia Pacific or European regions were successful in the last round of elections. This may reflect the current make-up of ISSX membership, being 61% from North America and 19% from both Asia Pacific and Europe, and is clearly not sustainable for an international society. Accordingly, Council agreed that the by-laws should be modified to rectify the situation. How exactly to assure global representation is under discussion and, in due course, members will be asked to ratify a proposed change to the statutes.

Meanwhile, programming plans for the upcoming 2018 meetings in Montreal and China are proceeding apace, and further webinars are planned. The most recent webinar was presented on October 26 by Phil Smith and was titled ‘Quantitative targeted absolute proteomics (QTAP): Methods and applications for studies of proteins that modulate xenobiotic disposition.’

Finally, the time for me to step down as President is approaching rapidly. In Providence I already passed the chain of office (a rather attractive accessory engraved with the names of all previous Presidents that Steve Kemp keeps under lock and key) to my successor, Tom Baillie. Serving ISSX in the role of President over the last two years has been an interesting and enjoyable experience. For that I have to thank my fellow Council members for their continued support and, of course, Steve and the management team for their awesome efficiency, without which the job would have been infinitely harder. My best wishes to Tom as the incoming captain in steering ISSX to new horizons.
Natural products have been exploited by mankind for aeons as potential medicinal aids, albeit typically as crude mixtures. Recently such bioactive molecules have been isolated, purified and examined for their usage within the field of therapeutics. Usually results are confusing with many molecules having a ‘significant effect’ but the underlying reasoning has been evasive. This book collects together and presents information on enzyme systems that are known to be targeted by natural products and seeks to integrate and understand probable mechanisms of action. As explained in the promotion, ‘this volume serves as a companion for the medicinal chemist looking for innovative small molecule compounds as well as for pharmacologist interested in the clinical effects and mode of action of herbal and traditional medicines.’

Some 50 or so authors have collectively presented the text as twelve chapters that are copiously subdivided into many sections. The major chapter headings are; ‘Natural products as enzyme inhibitors,’ ‘Molecular Targets of Clinically Relevant Natural Products from Filamentous Marine Cyanobacteria,’ ‘Natural Angiotensin Converting Enzyme (ACE) Inhibitors with Antihypertensive Properties,’ ‘Phospholipase A2 Inhibitors of Marine Origin,’ ‘β-Secretase (BACE1) Inhibitors from Natural Products,’ ‘Hypoglycaemic Effects of Plants Food Constituents via Inhibition of Carbohydrate-Hydrolysing Enzymes: From Chemistry to Future Applications,’ ‘Natural Products Targeting Clinically Relevant Enzymes of Eicosanoid Biosynthesis Implicated in Inflammation and Cancer,’ ‘Anti-HIV Natural Products,’ ‘Natural Inhibitors of Mitochondrial Respiratory Chain: Therapeutic and


As well as containing a wealth of information, each chapter has its own reference section citing more detailed texts and original observations and a lengthy index allows easy searching and cross referencing. As usual, these books are well-made and pleasing to read. Recommended for those whose interests lie within field or are slanting towards the area of natural product medicines. The wide coverage also provides a useful ‘entry’ into the topic.

Reviewed by
Steve Mitchell
Faculty of Medicine
Imperial College London
London SW7 2AZ, UK

Book Ordering Information:
John Wiley and Sons
Corporate Headquarters
111 River Street
Hoboken, NJ 07030-5774
United States of America
Telephone: 201.748.6000
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West Sussex PO19 8SQ
England
Telephone: 44.1243.779777
Facsimile: 44.1243.775878
6th Asia Pacific ISSX Meeting
Zhejiang University • Hangzhou, China • May 11–14, 2018

Make plans to attend the 6th Asia Pacific ISSX Meeting in exciting Hangzhou—the capital of China’s Zhejiang province. Zhejiang University is the home of the 6th Asia Pacific ISSX Meeting. Sometimes referred to as Zheda, Zhejiang University was founded in 1897. It is one of China’s oldest, most selective, and most prestigious institutions of higher education. Called a splendid city by visitor Marco Polo, you will agree that Hangzhou is a beautiful part of China not to be missed.


Scientific Program
(Preliminary and subject to change)

Friday, May 11, 2018

Short Courses/Workshops:

- Integrated DMPK IND Enabling Studies
- Mechanistic PK/PD Modeling and Simulation: Steps to Become a PBPK/QSP Modeler
  Chair: Yanyan Zhang
- Application of PBPK Modeling in Drug Discovery and Development: Case Studies
  Chair: Houfu Liu

Career Development

Career Development Session

Saturday, May 12, 2018

Opening Ceremony

Keynote Lectures:

- Targeted Covalent Drugs and the Promise of Personalized Medicine
  Tom Baillie, University of Washington
- Cellular Pharmacokinetics
  Guangji Wang, China Pharmaceutical University

Poster Sessions

Industry-Sponsored Sessions

Parallel Sessions:

In Vivo Function and Regulation of Drug Transporters
Chairs: Yuichi Sugiyama and Wooin Lee, and Hua Li

Use of “Extended Clearance Concept” to Predict Clinical Outcomes from In Vitro Metabolism and Transport Data; Focusing on the Transporters in the Liver
Yuichi Sugiyama, RIKEN Institute

The Use and Abuse of Extended Clearance Concept
Ayman El-Kattan, Pfizer, USA

Time-dependent and Long-lasting Inhibition of OATP Transporters
Yuichi Sugiyama, RIKEN Institute

Complexity and Diversity in SLCO Transporters, via Epigenetic and Splicing Regulation
Wooin Lee, Seoul National University

Role of P-glycoprotein in BBB Penetration and Respiratory Toxicity of Opioid Drugs
Hua Li, Academy of Military Medical Sciences

ADMET of Drugs and Chemicals
Chairs: Bill Smith, Sylvia Zhao, and Genfu Chen

Implications of Human P450 Structures for Drug Design
James Halpert, University of Connecticut

Utility of Transgenic Mice for Identification of Biomarkers and Metabolism-Mediated Toxicological Mechanisms
Xinxin Ding, University of Albany

From Enzymology to Human ADME: Case study of a Disproportionate Metabolite
Bill Smith, Gilead Sciences, Inc.

Unraveling the Contribution of Aldehyde Oxidase to Drug Clearance: Getting Closer to an Elusive Parameter
Mike Zientek, Takeda

Continued on next page
Panel Discussion and Q&A
Poster Session
Welcome Reception

Sunday, May 13, 2018

Keynote Lecture:
- Role of Transporters in Pharmacokinetics (PK)/Pharmacodynamics (PD)/Toxicodynamics (TD)
  Professor Yuichi Sugiyama, RIKEN Institute

Parallel Symposia:

**Personalized Medicine—Roles of Omics and Disease States**
*Chairs: John Miners & Min Huang*

- Predictive Pharmacogenomic Biomarkers for Personalized Medicine Tomorrow
  *Magnus Ingelman-Sundberg, Karolinska Institute*

- Pharmacogenomic of Drug-induced SCARs
  *Wichittra Tassaneeyakul, Khon Kaen University*

- Omics-based Personalized Medicine
  *Min Huang, Sun Yat Sen University*

- The Role of the Kidney in Drug Metabolic Clearance: Renal Drug Metabolism and the Effects of Impaired Renal Function on Non-Renal Drug Metabolic Clearance
  *John O. Miners, Flinders University*

**Drug Interactions and Liver Injury**
*Chairs: Mike Sinz & Eric Chan*

- Drug-Drug Interactions: Enzyme Induction
  *Mike Sinz, Bristol-Myers Squibb*

- PBPK-modeling of Complex DDIs between Rivaroxaban and Amiodarone
  *Eric Chan, National University of Singapore*

- Disease Effect on Liver Drug Metabolism
  *Wen Xie, University of Pittsburgh*

- Disruption of Mitochondria Glucose Oxidation Pathway Sensitizes Liver to Acute Injury
  *Li Wang, University of Connecticut*

**Drug Interactions and Regulatory Guidance**
*Chairs: Dafang Zhong and Chuang Lu*

- Comparative Evaluation of Coproporphyrins I and III with other Endogenous Compounds as Markers of OATP Inhibition in Healthy Subjects
  *Hong Shen, Bristol-Myers Squibb*

- Clinical Trials Using Radiolabeled Drugs
  *Dafang Zhong, Chinese Academy of Sciences*

- How PBPK Modeling Can be Leveraged for Drug-drug Interactions
  *Lu Chuang, Sanofi*

**ADMET of Herbal Medicine**
*Chairs: Ge Lin and Chuan Li*

- CYP-mediated Metabolic Activation and Pyrrole-Protein Adduct Formation—The Cause and Biomarker of Pyrrolizidine Alkaloid N-Oxide Induced Herbal Hepatotoxicity
  *Ge Lin, Shanghai Institute of Materia Medica*

- Metabolism-mediated Toxicities of Terpene Furanoids
  *Jian Zheng*

- Role of the Herbal Medicine in Drug Interactions: Perpetrator and Victim
  *Chuan Li, Chinese Academy of Sciences*

Awards for Best Abstracts and Young Speakers
Banquet

Monday, May 14, 2018—Sunrise Forum Session

**Hot Topics in Drug Metabolism**

- Development of Natural Products via Uncommon CYP Reactions
  *Li Sy, Quindao Institute of Bioenergy and Bioprocess Technology, Chinese Academy of Sciences*

- Role of Gut Microbiota in Drug Metabolism
  *Yan Ru, University of Macau*

- Epigenetic Activation of the Drug Transporters in Cancer Cell
  *Prof. Yu, Zhejiang University*

Continued on next page
Emerging Field of DMPK Mediated Efficacy and Toxicity

Drug Interaction of Metformin and Scutellariae Radix in Mice
Young Hee Choi, Dongguk University

Application of PBPK in Patient Treatment with Co-administered Drugs
XQ Xiang, Fudan University

Regulation of Metabolizing Enzymes and Transporters via P53 and its Effect on Liver Injury
Bihui Zhong, Sun Yat Sen University

Application of Advanced Drug Metabolism Models

Characterization and Application of Novel P450 Knockout Rat Models
X. Wang, East China Normal University

Animal Models in the Prediction of Drug-Drug Interaction

Meeting Organizing Committee Chairs:
Su Zeng, Zhejiang University
Jasminder Sahi, Sanofi, China

Committee Members:
Eric Chan, National University of Singapore, Singapore
Haiping Hao, China Pharmaceutical University, Nanjing
Hiroyuki Kusuhara, University of Tokyo, Japan
Zuohan Hu, Research Institute for Liver Disease, Shanghai
Min Huang, Sun Yat-sen University, Guangzhou
Huidi Jiang, Zhejiang University, Hangzhou
John O. Miners, Flinders University, Australia
Hua Li, Institute of Pharmacology and Toxicology, Beijing
Ge Lin, Hong Kong Chinese University, Hong Kong
Houfu Liu, GlaxoSmithKline, Shanghai
Michael Sinz, Bristol-Myers Squibb, India
Wichittra Tassaneeyakul, Khon Kaen University, Thailand
Young Jin Chun, Chungang University, South Korea
Lushan Yu, Zhejiang University, Hangzhou
Zahurin Mohamed, University of Malaya, Malaysia
Jiang Zheng, Shenyang Pharmaceutical University, Shenyang
Dafang Zhong, Shanghai Institute of Materia Medica, Shanghai
Mingshe Zhu, MassDefect Technologies, United States

Interaction Potential of New Chemical Entities
Sandhya Mandlekar, Bristol-Myers Squibb

Development and Application of Specific Probes and Biosensors of Metabolizing Enzymes
G. Ge, Shanghai University of Chinese Medicine

DMPK in Drug Discovery and Development

Disposition of Cell Therapeutics
HF Song, Beijing National Proteomics Research Center

Direct Quantification of Drugs in Organelles from Living Cell by Mass Spectrometry
Kenji Yahata, Sanofi

New DMPK Approach to Botanical Drug Development
Mingshe Zhu, MassDefect Technologies

Closing Ceremony

Hangzhou has direct and frequent flights with major cities in China and also some international destinations, including Paris, Tokyo, Seoul, Singapore, and Bangkok. It is within the fast transport network of east China, and enjoys convenient high-speed rail and highway connection with popular tourist cities in this area, like Shanghai, Suzhou and Nanjing.

Submit an abstract today at www.issx.org/apabstract.

Information regarding meeting registration will be posted soon.
Make plans to join us at the must attend event of 2018—the 22nd North American ISSX Meeting. With a broad range of highly relevant short courses, symposia, and poster presentations; new investigator and ISSX Focus Group sessions, social events, save the dates of July 15–19, 2018 for an exciting scientific program in one of Canada’s best meeting venues.

This meeting will bring together individuals who are actively working on drug/xenobiotic research in diverse fields including basic and clinical pharmacology and therapeutics, toxicology, oncology, endocrinology, physiology, biochemistry, medicinal chemistry, molecular and structural biology, and genetics. If you work in the fields of toxicology, pharmacology, or molecular biology or if you study xenobiotics, you will want to attend the 22nd North American ISSX Meeting where you can:

- Participate in your choice of multiple short courses designed to deliver a broad-based educational experience
- Attend outstanding lectures delivered by leading scientists who will share the latest developments in their areas of research
- Gain recognition and feedback on your research by submitting an abstract and presenting a poster
- Avail yourself of the many opportunities for substantive conversation and networking with scientists worldwide
- Learn more about and participate in one or more of our Focus Group sessions
- Meet with our exhibitors who will showcase the products and services that could be helpful solutions for you in your research and development
- Engage with other new investigators in a special session designed just for you
- Compete for prizes in the student and postdoc poster competition
- Enjoy informal social interactions with fellow researchers, and also enjoy exploring Montreal and its historical sites, trendy shops, modern galleries, and exceptional restaurants.

A striking union of European charm and North American attitude, Montréal provides visitors with a harmonious pairing of the historic and the new, from exquisite architecture to fine dining. We’ll have great science, time to meet with vendors offering the latest products and services important to aid in your research, and plenty of opportunity for making new acquaintances and rekindling friendships in the heart of beautiful Montréal!

Meeting Organizing Committee

Jack Uetrecht, Chairman
University of Toronto

Ahmed Almousa
University of Saskatchewan

Tom Baillie
University of Washington

Rachel Tyndale
University of Toronto

Scott Obach
Pfizer Inc.

Chantalle Guillemette
Laval University

Sonia de Morais

Shinya Ito
Hospital for Sick Children

Tom Massey
Queen’s University

Rommel Tirona
University of Toronto

Leanne Bedard
Bedard ADME-Tox Solutions

William (Griff) Humphreys
Bristol-Myers Squibb

Continued on next page
## 22nd North American ISSX Meeting

### Scientific Program

*(Subject to Change. Speakers to be Invited.)*

#### Sunday, July 15, 2018

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
<th>Speaker/Institution</th>
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<tbody>
<tr>
<td>09:00–12:15</td>
<td>Short Courses 1 and 2</td>
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<tr>
<td></td>
<td><strong>Short Course 1: Model Systems and Methods for Assessing Uptake and Efflux of Small Molecules</strong></td>
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<td></td>
<td>Co-chairs: Yurong Lai, Gilead Sciences, and Sonia de Morais</td>
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<tr>
<td>09:00–09:45</td>
<td>Novel <em>in vitro</em> Models to Study Transporters</td>
<td>Yurong Lai, Gilead</td>
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<tr>
<td>09:45–10:30</td>
<td>Animal Models for Drug Transporters (Genetically Modified Mice, Monkeys, etc.)</td>
<td>Dan Bow, AbbVie</td>
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<td>10:30–10:45</td>
<td>Refreshment Break</td>
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<tr>
<td>10:45–11:30</td>
<td>PET imaging to Understand Hepatobiliary Transporters</td>
<td>Yuichi Sugiyama, RIKEN</td>
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<td>11:30–12:15</td>
<td>Probe Drugs for Transporter Phenotyping</td>
<td>Mitch Taub, Boehringer Ingelheim</td>
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<td><strong>Short Course 2: Enzyme Induction and Regulatory Guidance</strong></td>
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<td>Co-chairs: Niresh Hariparsad, Vertex Pharmaceuticals, and Eva Gil Berglund, European Medicines Agency</td>
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<tr>
<td>09:00–09:35</td>
<td>Introduction to the Fundamentals of Induction</td>
<td>Michael Sinz, BMS</td>
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<tr>
<td>09:35–10:10</td>
<td>Gene Regulation (Transcription Factor, Non-nuclear Receptor and miRNA)</td>
<td>Masahiko Negishi, National Institute of Environmental Health Sciences</td>
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<td>10:10–10:45</td>
<td>Technical Aspects Related to <em>in vitro</em> Induction Assessment</td>
<td>Steve Ferguson, National Institute of Environmental Health Sciences</td>
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<td>10:45–11:00</td>
<td>Refreshment Break</td>
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<tr>
<td>11:00–11:35</td>
<td>Data Fitting/Interpretation</td>
<td>Jane Kenny, Genentech</td>
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<td>11:35–12:15</td>
<td>PBPK Modeling</td>
<td>Ping Zhao, Bill &amp; Melinda Gates Foundation</td>
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<td>13:30–16:45</td>
<td><strong>Short Courses 3 and 4</strong></td>
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<td><strong>Short Course 3: Modeling: Incorporating Quantitative Proteomic Data from both Drug Metabolizing Enzyme and Transporter Tissue Expression into Models to Improve Prediction of DDI, Drug-disease Interaction, Relevance of Pharmacogenetics and Drug Response</strong></td>
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<td>Chair: Iain Gardner, Certara</td>
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<tr>
<td>13:50–14:10</td>
<td>Experimental Approaches to Understand Intracellular Based Drug Bioavailability</td>
<td>Per Artursson, Uppsala</td>
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<tr>
<td>14:10–14:30</td>
<td><em>In silico</em> Approaches to Modeling Transporter Data</td>
<td>Manthena Varma, Pfizer</td>
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<tr>
<td>14:30–14:50</td>
<td>Mechanistic Modeling of <em>in vitro</em> Assays to Improve <em>in vitro/in vivo</em> Extrapolation</td>
<td>Viera Lukacova, Simulations Plus</td>
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<tr>
<td>14:50–15:05</td>
<td>Refreshment Break</td>
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<tr>
<td>15:05–15:25</td>
<td>Simultaneous Modeling of Metabolism, Competitive and Mechanism Based Inhibition</td>
<td>Howard Burt, Certara</td>
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<tr>
<td>15:25–15:55</td>
<td>Hands on Exercise Modeling <em>in vitro</em> Metabolism Data</td>
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<tr>
<td>15:55–16:45</td>
<td>Virtual Cell Models to Predict Binding and Distribution of Chemicals in <em>in vitro</em> Toxicity Assays</td>
<td>Ciaran Fisher, Certara</td>
</tr>
</tbody>
</table>

*Continued on next page*
22nd North American ISSX Meeting

Short Course 4: Immunotoxicology
Chair: Jinze (Robert) Li, Genentech

13:30–14:10 Developmental Immunotoxicology
Mark Collinge, Pfizer

14:10–14:50 On-target related Immunotoxicity
Lee Dong, Genentech

14:50–15:05 Refreshment Break

15:05–15:45 Immunological Components of Liver Injury
Cynthia Ju, McGovern Medical School

15:45–16:15 Nonclinical Immunotoxicity Testing Assessment
Jennifer Wheeler, BMS

17:00–18:00 | New Investigators Meet Up

18:00–18:15 | Opening and Welcome Remarks
ISSX President, Tom Baillie, University of Washington, and Meeting Chair Jack Uetrecht, University of Toronto

18:15–19:00 | Opening Keynote Lecture

19:00–21:00 | Opening Welcome Reception in Exhibit Hall

Monday, July 16, 2018

08:30 - 09:30 | Parallel ISSX Focus Group Sessions

FG 1: Biotransformation Mechanisms & Pathways
Co-chairs: Amit S. Kalgutkar, Pfizer, and Barry Jones, AstraZeneca

FG 2: Modeling & Simulations
Co-chairs: Hartmut Derendorf, University of Florida, and Yusuke Tanigawara, Keio University

09:45–10:30 | Plenary Lecture 1
Novel Approaches for Measurement of Intracellular Drug Concentrations: Utility in Clinical Translation
Dennis Smith, University of Capetown

11:00–12:30 | Society Awards Presentations and Lectures

12:30–14:00 | Lunch on Own, Visit with Exhibitors, Posters Attended by Authors

14:00–15:45 Symposium 1: Transporters as Determinants of Target Organ Toxicities and Regulation of Drug Transporters and Metabolizing Enzymes by Nuclear Receptors: Implications in Clinical Drug Disposition and Therapeutics
Chair: Rommel Tirona, University of Toronto

14:00–14:30 Kidney Transporters and Nephrotoxicity
Rosalinde Masereeuw, Utrecht University

14:30–15:00 Transporters and DILI
Kim Brouwer, UNC

15:00–15:30 Transporters and Heavy Metal Toxicity
Elaine Leslie, University of Alberta

15:30–16:00 Unconventional ABC Efflux Transporters and Drug Toxicity
John Schuetz, St. Jude Children’s Research Hospital

16:30–18:30 | Oral Presentation of Selected Abstracts from New Investigators

Continued on next page
18:30–20:00 | New Investigators Session and Reception

Tuesday, July 17, 2018

07:30–08:30 | Parallel Industry Symposia

08:45–09:30 | Plenary Lecture 2

Novel Synthetic and Computational Approaches to the Discovery of Drugs Targeting Nonalcoholic Fatty Liver Disease
Wes Westlin, Nimbus Therapeutics

10:00–12:00 | Parallel Symposia 3 and 4

Symposium 3: The Impact of Pregnancy on Xenobiotic Disposition
Chair: Shinya Ito, Hospital for Sick Children

10:30–11:00 Dysregulation of Transporters in Maternal Disease; Potential Impact on Fetal Drug Exposure
Micheline Piquette-Miller, University of Toronto

11:00–11:30 Predicting and Verifying Maternal-Fetal Exposure to Drugs During Pregnancy
Jashvant Unadkat, University of Washington

Symposium 4: Genomic Approaches for Revealing Mechanisms of Cancer Drug Efficacy and Toxicity
Co-chairs: Chantal Guillemette, Université Laval, and Tom Massey, Queen’s University

10:00–10:30 Genetic Predictors and Underlying Mechanism of Treatment-Related Complications in Childhood Acute Lymphoblastic Leukemia
Maja Krajnovic, University of Montreal

10:30–11:00 Genome-guided Medications for Safer and More Effective Treatment of Disease
Colin Ross, University of British Columbia

11:00–11:30 Newest Approaches to Safety Assessment in Drug Development
Jeffrey Willy, Lilly

11:30–12:00 Selected Abstract Presentations

12:00–13:30 | Lunch Break, Visit with Exhibitors, Posters Attended by Authors

13:30–14:30 | Debate

14:30–18:00 | Free Afternoon to Explore Montréal

Wednesday, July 18, 2018

07:30–08:30 | Parallel Industry Symposia

08:45–09:30 | Plenary Lecture 3

Site-specific Deuterium Labeling: A Viable Approach in Drug Discovery and Development
Margaret Bradbury, Teva Pharmaceuticals

10:00–12:00 | Parallel Symposia 5 and 6

Symposium 5: Revisiting the Regulatory Guidelines (FDA, EMA) for Drug Interaction Studies and Regulatory DMPK
Chair: Niresh Hariparsad, Vertex or Donald Tweedie, Merck

10:00–10:30 In vitro to in vivo Extrapolation
Ken Grime, AstraZeneca

10:30–11:00 Regulatory Requirements to Assess Induction
Eva Gil Berglund, European Medicines Agency

11:00–11:30 Considerations from the IQ Induction Working Group in Response to Drug-Drug Interaction Guidances from Regulatory Agencies
Niresh Hariparsad, Vertex

11:30–12:00 Future Perspectives Related to Induction
Ed LeCluyse, LifeNet Health

Symposium 6: Microphysiological Systems/Organs on a Chip
Co-chairs: Jinping Gan, BMS, and Sonia de Morais

10:00–10:30 A Human Liver Microphysiology System for Drug Discovery and Development
Lansing Taylor, University of Pittsburgh

Continued on next page
10:30–11:00  Linked Organs-on-Chips for Probing Xenobiotic Bioactivation, Transport and Toxicity
Ed Kelly, University of Washington

11:00–11:30  The Utility of Liver Spheroids in Addressing Current Issues in Drug Metabolism and Liver Toxicity Evaluations
Jinping Gan, BMS

11:30–12:00  Microphysiological Systems in Pharma: Evolving a Paradigm
Brian Berridge, GSK

12:00–13:30 Lunch on Own, Visit with Exhibitors, Posters Attended by Authors

13:30–15:30 Plenary Session
The Role of the Microbiome in Drug Metabolism and How this Influences Drug Toxicity
Chair: Tom Baillie, University of Washington
Peter Turnbaugh, UCSF

Symposium 7: Antibody Drug Conjugates (ADCs) Disposition and Modeling
Chair: Ilaria Badagnani, Theravance Biopharma US, Inc.

16:00–16:30 Systems Pharmacokinetic Modeling of ADCs
Dhaval Shah, SUNY Buffalo

16:30–17:00 Intra-tissue Catabolite Characterization is a Missing Link in Discovery of ADCs
Donglu Zhang, Genentech

17:00–17:30 In vitro and in vivo Mechanisms of ADCs Disposition and Activity
Colin Philips, AbbVie

17:30–18:00 Characterization and ADME Properties of a Novel Auristatin Payload-based ADC
Mauricio Leal, Pfizer

Symposium 8: Endogenous Biomarkers for Drug Metabolism and Transporter Activity. Predicting Drug Interactions in Clinical Development and for Application in Precision Medicine
Chair: Griff Humphreys, BMS

16:00–16:30 Development of Endogenous Biomarkers for CYP3A to be Used in Drug Interaction Studies
Tommy B. Andersson, Astra Zeneca

16:30–17:00 Lecture Title Pending
Kathy Giacomini, UCSF

17:00–17:30 Lecture Title Pending
Hiroyuki Kusuhara, University of Tokyo

17:30–18:00 Lecture Title Pending
Hong Shen, BMS

Thursday, July 19, 2018

07:30–08:30 Parallel Industry Symposia

08:45–09:30 Plenary Lecture 4
Opportunities and Challenges in the Discovery of Novel Agents for the Treatment of Malaria
Jeremy Burrows, Medicines for Malaria Venture

09:30–10:00 Presentation of the ISSX Poster Awards
Presentation of 1st - 3rd Place Poster Awards for Predoctoral/Graduate Posters and for Postdoctoral Posters

10:15–12:15 Parallel Symposia 9 and 10
Symposium 9: Analytical Technology Session Based Around New Methods for Bioanalysis Metabolite Identification, etc.
Co-chairs: Mingshe Zhu, BMS, and Kevin Bateman, Merck

10:15–10:45 Peptides as Drugs - Challenges in Bioanalysis, Metabolism, Permeability, etc.
Mark Cancilla, Merck

10:45–11:15 Drug Target Quantitation, Translational PK/PD
Hendrik Neubert, Pfizer

11:15–11:45 Biotransformation of ADCs
Donglu Zhang, Genentech

Continued on next page
Symposium 10: Designed Covalent Inhibitors, ADME Aspects of Design, Characterization and Risk Assessment  
Chair: Tom Baillie, University of Washington

<table>
<thead>
<tr>
<th>Time</th>
<th>Session Title</th>
<th>Speaker(s)</th>
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</thead>
<tbody>
<tr>
<td>10:15–10:45</td>
<td>Targeted Covalent Inhibitors for Drug Design</td>
<td>Tom Baillie, University of Washington</td>
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<tr>
<td>10:45–11:15</td>
<td>Activity-based Proteomics—Protein and Ligand Discovery on a Global Scale</td>
<td>Ben Cravatt, Scripps</td>
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<tr>
<td>11:15–11:45</td>
<td>How to be Selectively Promiscuous</td>
<td>Jack Taunton, UCSF</td>
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<tr>
<td>11:45–12:15</td>
<td>Covalent Binding—From 20th Century Liability to 21st Century Targeted Therapies</td>
<td>Greg Slatter, Acerta Pharma</td>
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</tbody>
</table>

12:15–12:30 | Closing Session

Submit an Abstract
Poster presentations are an integral component of ISSX meetings. We encourage all those involved in the fields of metabolism, pharmacology, toxicology, molecular biology and other related disciplines to consider submitting an abstract for a poster presentation at the 22nd North American ISSX Meeting. We have some slots for poster authors to present from the podium too. The abstract submission site opens soon! Visit [www.issx2018.com](http://www.issx2018.com) for details.

Hotel Lodging
ISSX has reserved a block of rooms at four hotels, each within walking distance to the convention center. Review the lodging options and make your reservation via the meeting web site: [www.issx2018.com](http://www.issx2018.com).

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ISSX Welcomes New Members

The International Society for the Study of Xenobiotics proudly welcomes the following new members. We greatly appreciate their support and hope that each remains aligned and affiliated with ISSX for many years to come.

- **Benjamin Barlock**
- **Yashpal Singh Chhonker**, UNMC
- **Taylor Choi**, Achaogen
- **Kevin Colizza**, University of Rhode Island
- **Shanal De Silva**, University of Saskatchewan
- **Sara Eyal**, The Hebrew University of Jerusalem
- **Ryan Hitzman**
- **Md Amin Hossain**, Tufts University
- **Karen Houseknecht**, University of New England
- **Licong Jiang**, Vertex
- **Amin Kamel**, Takeda
- **Rui Li**, Pfizer Inc.
- **Bo Liu**, Novartis
- **Enrique Martinez**, Oxford Biomedical Research, Inc.
- **Jane McGuffog**, Proximagen
- **Chandrasekhar Natarajan**, Tufts School of Medicine
- **Natalie Nguyen**, Takeda California Inc.
- **Adrian Sheldon**, Charles River Labs
- **Edwin Squirewell**, University of Florida
- **Archie Thurston**, ADME Solutions, Inc.
- **Leon van Haandel**, Childrens Mercy Hospital
- **Pengcheng Wang**, University of Pittsburgh
- **Jeff Weber**, Q2 Solutions
- **Sucha Zhang**, Enanta Pharmaceuticals, Inc.
Save the Dates for Future ISSX Meetings

The scientific meetings organized by ISSX provide exceptional opportunities for members of the scientific community to exchange ideas and expertise, to develop a common vision, and to create and nurture collaborations in fields related to the study of chemicals that are foreign to the human body.

We offer the chance to present your research via multiple formats at our meetings that we hold in North America, Asia, and in Europe.

Short courses at our meetings on a variety of important topics are a popular way to gain invaluable training. Scientific symposia tracks offer a multitude of options and forums for attendees to learn the most recent developments incorporating the newest ideas and the most current evidence. The chance to view the latest product lines and learn about the services of the companies participating in the trade exhibitions drive even more value to your investment. Moreover, the people that you will meet at our meetings are extraordinary. They are contributing to the expanding base of knowledge crucial to broadening the understanding of the effects of drugs, the mechanism of their actions, and the movement of drugs throughout organisms.

Please be sure to include funds in your training budget for you as well as your scientific team and participate in our very high quality meetings that are organized by teams of leading educators and investigators worldwide:

6th Asia Pacific ISSX Meeting
Zhejiang University
Hangzhou, China
May 11–14, 2018
Meeting Chairs: Su Zeng, Ph.D., Jasminder Sahi, PhD., and Zhuohan Hu, Ph.D.

22nd North American ISSX Meeting
Palais des congrès de Montréal
Montreal, QC Canada
July 15–19, 2018
Meeting Chair: Jack Uetrecht, M.D., Ph.D.

12th International ISSX Meeting
Portland Convention Center
Portland, Oregon, USA
July 29–August 1, 2019
Meeting Chairs: Aleksandra Galetin, Ph.D., Hiroyuki Kusuhara, Ph.D., and Deepak Dalvi, Ph.D.

ISSX Joint Scientific Meeting with The European Association for Clinical Pharmacology and Therapeutics
Centre International de Conférences Genève
June 7–11, 2020
Meeting Chairs: Jules Desmeultes, Ph.D. and Caroline Samer, Ph.D.

23rd ISSX North American and 35th JSSX Meeting
Hilton Waikoloa Village
Waikoloa, Hawaii, USA
October 4–8, 2020
Meeting Chairs: Allen Rettie, Ph.D. and Hiroshi Yamazaki, Ph.D.

ISSX seeks proposals from members who may wish to organize scientific meetings. Individuals who wish to organize an ISSX meeting are welcome to submit a proposal and contact the Scientific Affairs Committee via ISSX Headquarters at least 4-5 years in advance of the contemplated date of the meeting. For more information, go to www.issx.org/submit.
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