



# GPEN 2018

National University of Singapore  
26<sup>th</sup> – 29<sup>th</sup> September 2018

Conference booklet  
& proceedings

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# WELCOME FROM THE COMMITTEE

Dear GPEN2018 Attendees,

It is our great honor to host the Globalization of Pharmaceuticals Education Network's (GPEN's) 12<sup>th</sup> biennial meeting (GPEN2018). This is the first time the meeting is held at the National University of Singapore, and the very first time in Southeast Asia. At GPEN2018, we have more than 300 participants and representatives from over 50 universities and industrial partners. We wholeheartedly welcome all of you coming from different parts of the World.

GPEN was established at the University of Kansas with the noble vision of the founders to provide an international platform for young pharmaceutical scientists to have scientific, professional and personal interactions. Recognizing the global nature of the pharmaceutical and biotechnological industry that hire many of their graduates, Professor Ronald T. Borhardt, one of the founders of GPEN, sought to give these young scientists at the early stage of their careers, an exposure to the educational, scientific and cultural characteristics of the host countries. At its inception, GPEN membership included 13 universities spread across North America, Europe, Japan and Australia. We can proudly say that at present, GPEN membership has grown to 52 universities from six continents including North America, South America, Europe, Asia, Southeast Asia and Australia. Over the past 22 years, GPEN has helped inspire many young pharmaceutical scientists to become prominent academic and industrial scientists as well as senior executives and/or entrepreneurs. Many of them, in return, have provided contributions that continue to support GPEN. We believe that the legacy of GPEN will continue at GPEN2018.



Many of our Organizing Committee members have had the pleasure of experiencing past GPEN meetings. To us, GPEN meetings are "PHARMILY" events. The unique atmosphere not often associated with conventional scientific meetings has allowed us to benefit both scientifically and socially from these meetings. At GPEN2018, we have endeavored to give you the same feeling of hospitality here in Singapore.

GPEN2018 scientific sessions will be held on the campus of the National University of Singapore. We have evening events planned at popular attractions including the Marina Barrage, Satay by the Bay, and the Singapore Flyer. The GPEN2018 Organizing Committee wishes you a pleasant stay and a fruitful meeting. We also hope that GPEN2018 can inspire you to be "Scientists of the World" as GPEN has done for thousands of young pharmaceutical scientists for the past 22 years.

On behalf of the Organizing Committee,

Sze-Han LEE, Hongyi OUYANG, Cheryl Xin-Yi WONG  
*Student Chairs*

Hong-May SIM, Wai-Ping YAU  
*Faculty members*

Eng-Hui CHEW, Paul Chi-Lui HO  
*Faculty Co-Chairs*

*Organized by:*

*Held in:*

*Supported by:*



Department of Pharmacy  
Faculty of Science



# ACKNOWLEDGEMENT

The GPEN2018 Organizing Committee would like to thank the National University of Singapore (NUS) Department of Pharmacy for their support for this event, as well as our department colleagues and graduate friends in NUS Pharmacy.

The GPEN2018 Organizing Committee would like to publicly thank the following companies for funding approx. 95 housing and registration grants that were awarded to graduate students and postdoctoral fellows from GPEN member institutions: Absorption Systems; Allergan, Plc; Bristol-Myers Squibb Company; Captisol, A Ligand Technology; Daiichi Sankyo Co., Ltd, Japan; Eli Lilly and Company; FPTIJ; Genentech, Inc.; Hyphens Pharma Pte Ltd; MSD; Mitsubishi Tanabe Pharma Co., Japan; Molecular Pharmaceutics; Nagai Foundation Tokyo; Novo Nordisk A/S; Pfizer, Inc.; Sanofi; Takeda Pharmaceutical International Co.; Teikoku Seiyaku Co. Ltd; and Chong Yuan and Xiaohong Yu.

The Organizing Committee is exceedingly grateful to all those who have provided support and guidance while organizing GPEN2018. We would like to especially thank:

- ❖ GPEN Founder and Treasurer Ronald T. BORCHARDT, the GPEN Board of Directors (Kenneth AUDUS, Teruna SIAHAAN, and Yoshi TAKAKURA) and the GPEN Executive Committee members
- ❖ Ms. Nancy HELM, A/Prof. Jeffrey KRISE, and Prof. Teruna SIAHAAN from University of Kansas, who were instrumental in the organizing and planning of the meeting
- ❖ Ms. Ying-Ying CHEW (NUS Department of Pharmacy), who was our important liaison with various key contacts within the campus
- ❖ Prof. Freddy BOEY, our Guest-of-Honor
- ❖ Prof. Patrick CASEY, our keynote speaker
- ❖ All GPEN2018 sponsors
- ❖ All judges of podium and poster presentations
- ❖ All short course coordinators
- ❖ All faculty and industrial short course speakers
- ❖ All industry observers
- ❖ All podium chairs of podium presentations
- ❖ All student leaders from the NUS Pharmacy Graduate Committee
- ❖ Mr. Wenjie FAN from the NUS Department of Pharmacy
- ❖ All student ambassadors from the NUS Department of Pharmacy
- ❖ The GPEN2016 Organizing Committee, especially Ms. Samantha PACE who guided the setup of the website

# RONALD T. BORCHARDT KEYNOTE ADDRESS



## Patrick J. CASEY, PhD

*Professor and Senior Vice Dean, Research  
Duke-NUS Medical School*

### **Getting G Proteins and Lipids Together: Opportunities to Decipher Biology and Make New Drugs**

Time: 5:30 PM – 6:30 PM

Date: 26<sup>th</sup> Sep 2018 (Wednesday)

Venue: Kent Ridge Guild House

Dr Patrick Casey, PhD, is the Senior Vice Dean of Research at the Duke-NUS Medical School. He holds a James B. Duke Professorship of Pharmacology and Cancer Biology at Duke University.

Dr Casey received his PhD in Biochemistry from the Brandeis University in 1986 and did postdoctoral work at the University of Texas Southwestern Medical Center in Dallas. He joined the Duke University Medical Center as an Assistant Professor of Molecular Cancer Biology and Biochemistry in 1990. A recognized authority in the fields of lipid modifications of proteins and in G protein signaling, Dr Casey has received numerous awards for his work including the Established Investigator Award from the American Heart Association in 1992 and the Amgen Award from the American Society of Biochemistry and Molecular Biology in 2000. Dr Casey was the founding Director of the Duke Center for Chemical Biology, established to spearhead interdisciplinary research and training in the application of fundamental chemical principles to the study of biology and the basis of disease and therapies. For his contribution to science, Dr. Casey was elected a Fellow of the American Association for the Advancement of Science in 2012.

In 2005, Dr. Casey added an additional element to his career when he relocated to Singapore to spearhead the development of the Duke-NUS Medical School. As Senior Vice Dean of Research at Duke-NUS, Dr. Casey was the chief architect of the five Signature Research Programs at Duke-NUS: Cancer and Stem Cell Biology, Cardiovascular and Metabolic Disorders, Neuroscience and Behavioral Disorders, Emerging Infectious Diseases, and Health Services and Systems Research. Investigators in these Programs have collectively published more than 3,000 papers, garnered >US\$350M in competitive funding, and founded 11 biotechnology companies. Dr. Casey has also played a major role in the Singapore Biomedical Sciences Initiative, serving on advisory committees for the initiative as well as for programs at the Agency for Science, Technology and Research (A\*STAR), National Medical Research Council (NMRC) and National Research Foundation (NRF).

Dedicated to training the next generation of scientists and clinician-scientists, Dr. Casey has trained numerous PhD, MD/PhD students and research fellows in his own lab, who occupy positions in academia and biopharma in many continents. Extending his personal experience as a mentor, Dr, Casey has been involved in the development of numerous training programs. He was a founding member, and served as Director for 10 years, of Duke University's Graduate Program in Molecular Cancer Biology. In Singapore, Dr. Casey led the development of a unique PhD Program in Integrated Biology and Medicine (IBM) at Duke-NUS, an integral component of Duke-NUS' mission of training translationally-savvy clinicians and scientists.

This year, Dr. Casey received the 2018 Distinguished Faculty Award by the Duke University Medical Alumni Association to recognize his leadership in establishing the Duke-NUS Medical School and his role in mentoring the doctors, researchers and educators of tomorrow.

# PROGRAM OVERVIEW

## Wednesday, September 26<sup>th</sup> (Kent Ridge Guild House)

<b>2:00 PM to 4:30 PM</b>	Registration
<b>5:00 PM to 5:15 PM</b>	Welcome address by Prof. Kenneth AUDUS
<b>5:15 PM to 5:30 PM</b>	Opening address by Prof. Freddy BOEY
<b>5:30 PM to 6:30 PM</b>	Keynote address by Prof. Patrick CASEY
<b>6:30 PM to 8:00 PM</b>	Welcome Reception

## Thursday, September 27<sup>th</sup> (Shaw Foundation Alumni House)

<b>8:00 AM to 9:20 AM</b>	Podium session 1
<b>9:20 AM to 10:10 AM</b>	Coffee break and poster viewing
<b>10:10 AM to 11:50 AM</b>	Podium session 2
<b>11:50 AM to 1:10 PM</b>	Lunch
<b>1:10 PM to 2:50 PM</b>	Podium session 3
<b>2:50 PM to 3:40 PM</b>	Coffee break and poster viewing
<b>3:40 PM to 5:00 PM</b>	Podium session 4
<b>5:00 PM to 6:00 PM</b>	Bus transfer to Marina Barrage
<b>6:00 PM to 8:30 PM</b>	Cultural Night at Marina Barrage and Satay by the Bay

## Friday, September 28<sup>th</sup> (Shaw Foundation Alumni House)

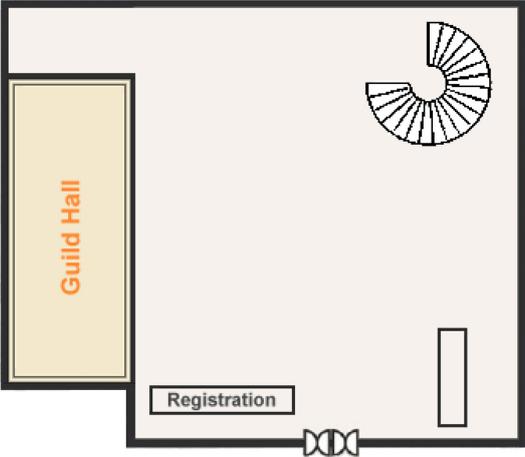
<b>8:00 AM to 9:40 AM</b>	Podium session 5
<b>9:40 AM to 10:30 AM</b>	Coffee break and poster viewing
<b>10:30 AM to 12:10 PM</b>	Podium session 6
<b>12:10 PM to 1:30 PM</b>	Lunch
<b>1:30 PM to 2:50 PM</b>	Podium session 7
<b>2:50 PM to 3:40 PM</b>	Coffee break and poster viewing
<b>3:40 PM to 4:40 PM</b>	Podium session 8
<b>4:40 PM to 6:30 PM</b>	Bus transfer to Flyer Event Hall, Singapore Flyer
<b>6:30 PM to 8:30 PM</b>	Gala Dinner at Flyer Event Hall, Singapore Flyer

## Saturday, September 29<sup>th</sup> (Faculty of Science, Block S16)

<b>8:00 AM to 8:20 AM</b>	Arrival and luggage storage
<b>8:30 AM to 12:10 PM</b>	Short courses 1 to 6
<b>12:10 PM to 1:30 PM</b>	Lunch
<b>1:30 PM to 2:00 PM</b>	Closing and award ceremony

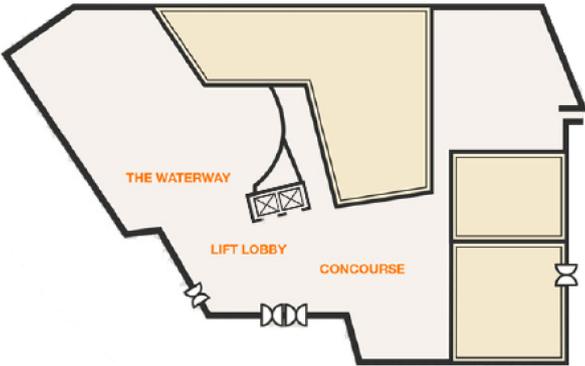
# EVENT MAP

## Kent Ridge Guild House

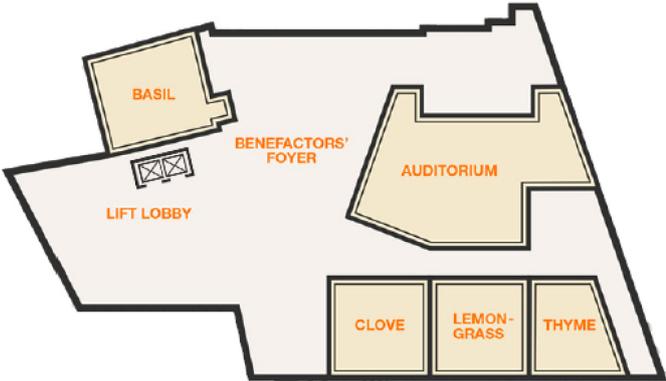


LEVEL 1

## Shaw Foundation Alumni House

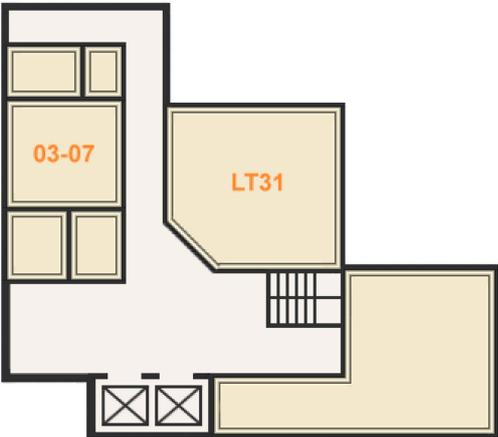


LEVEL 1

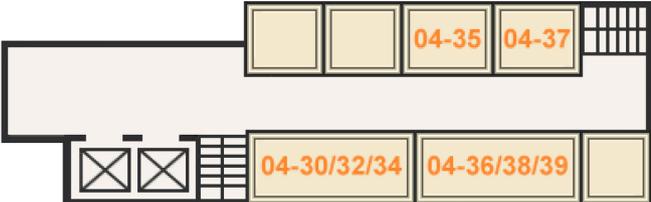


LEVEL 2

## Faculty of Science, Block S16



LEVEL 3



LEVEL 4

# EVENT HIGHLIGHTS

## Welcome, Opening, and Keynote Address

**Venue: Kent Ridge Guild House**

**Date & Time: 26<sup>th</sup> Sep, 5:00 PM – 6:30 PM**

Prof. Kenneth Audus (GPEN Chair; Professor and Dean, School of Pharmacy, University of Kansas) welcomes everyone to GPEN2018, and will present on the organization, objectives, and history of GPEN. Our Guest-of-Honor, Prof. Freddy BOEY (Senior Vice President, Graduate Education & Research Translation, NUS) will deliver the opening address. This will be followed by the Keynote Lecture by Prof. Patrick J. CASEY (Professor and Senior Vice Dean, Research, Duke-NUS Medical School).

## Welcome Reception

**Venue: Kent Ridge Guild House**

**Date & Time: 26<sup>th</sup> Sep, 6:30 PM – 8:00 PM**

*Sponsored by National University of Singapore*

Enjoy dinner at the comfort of the National University of Singapore Society (NUSS) Kent Ridge Guild House, while marveling at the Lion Dance troupe prancing around to the beat of the drums. They will show off their dexterity and skill as they welcome all participants to Singapore.



## Cultural Night

**Venue: Marina Barrage and Satay by the Bay**

**Date & Time: 27<sup>th</sup> Sep, 6:00 PM – 8:30 PM**

*Sponsored by Ronald T. and Pamela K. Borchardt*

Join us at the iconic Marina Barrage, Singapore's 15<sup>th</sup> freshwater reservoir and the first in the heart of the city. At an area of 10,000 hectares, the Barrage is the nation's largest and most urbanized catchment area. Experience the activities and games that are uniquely Singapore, and stand a chance to win tickets to the Singapore Flyer! After that, rest your legs and mind with a gastronomical treat at the Satay by the Bay.



## Gala Dinner

**Venue: Flyer Event Hall, Singapore Flyer**

**Date & Time: 28<sup>th</sup> Sep, 6:30 PM – 8:30 PM**

*Sponsored by Gilead Sciences, Inc.*

Feast under the Singapore Flyer, one of the world's largest Giant Observation Wheel at a height of 165m. Enjoy the city skyline of Singapore, snap lots of pictures of Marina Bay Sands across the waters, as well as the F1 pit paddocks and grandstands of the recently concluded Formula 1 Singapore Grand Prix.



# PODIUM PRESENTATIONS

**Thursday, 27<sup>th</sup> Sep**

**Venue: Shaw Foundation Alumni House**

## Podium session 1: Nanoparticles in drug delivery

Podium Chairs:

Sofia BISSO, ETH Zurich

Leah WRIGHT, University of South Australia

*Sponsored by Amgen*

Code	Time	Title	Presenter
S1	8:00 AM	Young's moduli of gelatin nanoparticles and how their mechanical properties influence the <i>in vitro</i> fate	Agnes-Valencia WEIß
S2	8:20 AM	Isolation of exosomes for drug delivery applications	Britta HETTICH
S3	8:40 AM	Synthesis, characterization, and <i>in vitro</i> and <i>in vivo</i> evaluation of biodegradable silica nanoparticles	Pouya HADIPOUR
S4	9:00 AM	The application of light scattering techniques to investigate surface distribution of cell-penetrating peptides on polymeric nanoparticles	Sarah STRECK

## Coffee break and poster session

**9:20 AM – 10:10 AM**

*Sponsored by AB SCIEX (Distribution)*

## Podium session 2: Lipid-based drug delivery

Podium Chairs:

Romain LÉBOUX, Leiden University

Sajedehsadat MAGHREBI, University of South Australia

*Sponsored by Amgen*

Code	Time	Title	Presenter
S5	10:10 AM	Tetraether liposomes loaded with hypericin for photodynamic therapy of ovarian cancer cells	Nikola PLENAGL
S6	10:30 AM	Improved oral bioavailability by supersaturated silica-lipid hybrid formulations	Hayley SCHULTZ
S7	10:50 AM	A digestion/permeation model based on artificial membranes for studies of performance of lipid-based formulations	Oliver HEDGE
S8	11:10 AM	Cyclodextrin complexation as a tool to allow repurposing of chlorpromazine for treatment of acute myeloid leukemia	Zhiqiang WANG
S9	11:30 AM	Fabrication of 3D-printed biocompatible hydrogel patch for the local delivery of pegylated liposomal doxorubicin	Jin LIU

## Lunch

**11:50 AM – 1:10 PM**

*Sponsored by Allergan Plc*

### Podium session 3: Drug delivery and formulation

Podium Chairs:

Julie CALAHAN, University of Kentucky

Darsheen Kotak, Institute of Chemical Technology

*Sponsored by Boehringer-Ingelheim Pharmaceuticals, Inc.*

Code	Time	Title	Presenter
S10	1:10 PM	Hydrogels releasing nucleic acid-loaded polyplexes	Lies FLIERVOET
S11	1:30 PM	Bioresponsive self-assembled DNA hydrogels for antimicrobial peptide loading and therapy	Sybil OBUOBI
S12	1:50 PM	Inkjet-based 3D printing of solid oral dosage manufacturing	Koyel SEN
S13	2:10 PM	Triple HIV drug combination and lipid excipients form stable solid state interactions leading to an ordered matrix for enhanced drug delivery	Jesse YU
S14	2:30 PM	Treatment with vernix caseosa based formulation alters the skin lipid composition of regenerated stratum corneum	Walter BOITEN

### Coffee break and poster session

**2:50 PM – 3:40 PM**

*Sponsored by Blackmores (Singapore) Pte Ltd*

### Podium session 4: Drug delivery and formulation

Podium Chairs:

Caroline ALVEBRATT, Uppsala University

Janki ANDHARIYA, University of Connecticut

*Sponsored by Boehringer-Ingelheim Pharmaceuticals, Inc.*

Code	Time	Title	Presenter
S15	3:40 PM	Probing compression and storage induced surface crystallization with rapid multi-modal nonlinear optical imaging	Dunja NOVAKOVIC
S16	4:00 PM	Probing miscibility and mobility in lyophilized protein formulations using solid-state nuclear magnetic resonance spectroscopy	Ashley LAY
S17	4:20 PM	Investigation of drug dissolution and absorption from low-density inhalation budesonide formulations in a cell culture integrating impactor system	Ursula THORMANN
S18	4:40 PM	Impact of amorphization strategy and drug loading on dissolution rate of spray dried indomethacin	Yongquan LI

### GPEN networking event: Cultural Night

*Sponsored by Ronald T. and Pamela K. Borchardt*

Time	Event
5:00 PM	Bus transfer to Marina Barrage
6:00 PM	Cultural Night at Marina Barrage and Satay by the Bay

# Friday, 28<sup>th</sup> Sep

## Venue: Shaw Foundation Alumni House

### Podium session 5: Targeted drug delivery and pharmacogenomics

Podium Chairs:

Montira TANGSANGASAKSRI, University of Wisconsin-Madison

Akihiro MATSUMOTO, Kyoto University

*Sponsored by GlaxoSmithKline*

Code	Time	Title	Presenter
S20	8:00 AM	Development of a nanostructured RNA/DNA adjuvant targeting Toll-like receptor 7/8	Fusae KOMURA
S21	8:20 AM	Tumor microenvironment sub-type immune cells precise delivery by extravasation-oriented targeting-ligand reemerge strategy: the first step on the way to effective cancer immunotherapy	Tianqi WANG
S22	8:40 AM	Characterizing patient-derived induced neural stem cells as a drug delivery platform for glioblastoma	Shaye HAGLER
S23	9:00 AM	Genome-wide analyses associate variants in Rho GTPase signaling pathways with microtubule targeting agent-induced sensory peripheral neuropathy	Katherina CHUA
S24	9:20 AM	Effect of ABCB1 haplotypes on tacrolimus disposition in heart transplant recipients	Kris ORESCHAK

### Coffee break and poster session

**9:40 AM – 10:30 AM**

*Sponsored by Silvergate Pharmaceuticals, Inc.*

### Podium session 6: Pharmacokinetics

Podium Chairs:

Surabhi TALELE, University of Minnesota

Tianjing REN, The Chinese University of Hong Kong

*Sponsored by GlaxoSmithKline*

Code	Time	Title	Presenter
S25	10:30 AM	Metabolomic/proteomic analysis of orphan transporter monocarboxylate transporter 6 (MCT6): evidence of a role in lipid metabolism	Robert JONES
S26	10:50 AM	Quantification of postmenopausal osteoporosis population: a system pharmacology approach using bisphosphonates	Yi Ting (Kayla) LIEN
S27	11:10 AM	Investigation of endogenous substrates of OCT2 as surrogate biomarker for the prediction of transporter-mediated drug-drug interaction	Takeshi MIYAKE
S28	11:30 AM	Quantification of 2-hydroxypropyl- $\beta$ -cyclodextrin in human intestinal fluids helps to understand the intraluminal drug behavior following the oral intake of Sporanox®	Philippe BERBEN
S29	11:50 AM	A co-perfused <i>in vivo</i> absorption model to probe the simultaneous digestion and drug absorption process from lipid-based formulations	Estelle SUYS

## Lunch

12:10 PM – 1:30 PM

Sponsored by Bristol-Myers Squibb Company

## Podium session 7: Proteomics and biomarkers

Podium Chairs:

Naehwan BAEK, Chungnam National University

Sun Jin KIM, University of Utah

Sponsored by Pfizer, Inc.

Code	Time	Title	Presenter
S30	1:30 PM	Quantitative proteomics-based characterization of apical and basolateral membrane protein localization in human retinal pigmental epithelial cells	Kazuki SATO
S31	1:50 PM	Isolation and characterization of liver-derived exosomes by liver marker protein asialoglycoprotein-1 (ASGR1) and proteomic analysis	Laura DRBOHLAV
S32	2:10 PM	Fibrillation kinetics of therapeutic peptides by hydrogen/deuterium exchange mass spectrometry (HDX-MS)	Harshil RENAWALA
S33	2:30 PM	Evaluation of paraoxonase-1 activity in the synovial fluid of osteoarthritis patients	Daniel AKATWIJUKA

## Coffee Break and Poster Session

2:50 PM – 3:40 PM

Sponsored by Roche

## Podium session 8: Signaling pathways

Podium Chairs:

Jie Kai TEE, National University of Singapore

Ebehiremen AYEWOH, University of Maryland

Sponsored by Pfizer, Inc.

Code	Time	Title	Presenter
S34	3:40 PM	HSPG2/Perlecan as a therapeutic target in metastatic cancers	Vidhi KHANNA
S35	4:00 PM	Reversal of fatty liver by peripheral CB1 receptor blockade is SIRT1/PPAR $\alpha$ dependent	Shahar AZAR
S36	4:20 PM	Impact of the canonical Wnt signaling pathway on blood-brain barrier (BBB) phenotype	Marlyn LAKSITORINI

## GPEN networking event: Gala Dinner

Sponsored by Gilead Sciences, Inc.

Time	Event
4:40 PM	Bus transfer to Flyer Event Hall, Singapore Flyer
6:30 PM	Gala Dinner at Flyer Event Hall, Singapore Flyer

# SHORT COURSES

**Saturday, 29<sup>th</sup> Sep**

**Venue: Faculty of Science, Block S16**

*Short courses are sponsored by Absorption Systems LP*

**Short course 1: Challenges and progress in drug delivery: Prodrugs and macromolecules**

**Location: LT31 (Level 3)**

Leaders:

Prof. Teruna SIAHAAN, University of Kansas

Prof. Donald MILLER, University of Manitoba

Code	Time	Title	Presenter	Affiliation
C11	8:30 AM	General overview of approaches for prodrug and macromolecule delivery across biological barriers	Teruna SIAHAAN	University of Kansas
C12	9:05 AM	Prodrug approaches for oral absorption	Patrick AUGUSTIJNS	KU Leuven
C13	9:40 AM	Nanocage therapeutics mediating immune checkpoint blockade awakens immunity against cancer with an immunogenic cell death (ICD)-inducing doxorubicin prodrug	Na Kyeong LEE (Student)	Seoul National University
	10:00 AM	Tea break (foyer outside LT31, Level 3)		
C14	10:20 AM	Prodrug and macromolecule approaches for delivering drugs to the brain	Donald MILLER	University of Manitoba
C15	10:55 AM	Using exosomes as natural carriers for nucleic acid transfer: an activity-composition analysis	Juliane NGUYEN	University at Buffalo
C16	11:30 AM	Reprogrammed exosomes as a novel immunotherapy for breast cancer	Xiaojing SHI (Student)	University of Southern California
C17	11:50 AM	Design and <i>in vitro/in vivo</i> evaluation of LyP-1 containing SMEDDS for active targeting in breast cancer therapy	Selin Seda TIMUR (Postdoc)	Hacettepe University

**Short course 2: Optimizing drug-like properties in discovery and development****Location: Room 04-30 / 04-32 / 04-34 (Level 4)**

Leader: Prof. Michael HAGEMAN, University of Kansas

Code	Time	Title	Presenter	Affiliation
C21	8:30 AM	Effect of protein binding on hepatic clearance, intracellular concentration and IC <sub>50</sub> predictions	Kenneth BROUWER	BioIVT
C22	9:05 AM	Solubility, biopharmaceutical profiling and formulate-ability: computational tools for assessment during the drug discovery stage	Christel BERGSTRÖM	Uppsala University
C23	9:40 AM	Dodecylated and non-dodecylated polycations as promising siRNA complexing agents for skin diseases treatment	Marcelo KRAVICZ (Student)	University of São Paulo
	10:00 AM	Tea break (foyer outside LT31, Level 3)		
C24	10:20 AM	Optimizing for developability and maximizing oral exposure in discovery	Michael HAGEMAN	University of Kansas
C25	10:55 AM	Processing-induced phase transformations	Raj SURYANARAYANAN	University of Minnesota
C26	11:30 AM	Characterization of the PEGylated-functional upstream domain peptide (PEG-FUD): a potent fibronectin assembly inhibitor with potential as an anti-fibrotic therapeutic	Pawel ZBYSZYNSKI (Student)	University of Wisconsin-Madison
C27	11:50 AM	Chloroquine nanoparticles improve biodistribution and sensitize pancreatic cancer to oxaliplatin and radiation therapy	Richard SLEIGHTHOLM (Student)	University of Nebraska Medical Center

**Short course 3: Stability and formulation of biomolecules: Proteins and vaccines****Location: Room 03-07 (Level 3)**

Leader: Prof. Christian SCHÖNEICH, University of Kansas

Code	Time	Title	Presenter	Affiliation
C31	8:30 AM	The ever increasing complexity of protein degradation pathways	Christian SCHÖNEICH	University of Kansas
C32	9:05 AM	Forced degradation of biologicals: why, how and wow	Wim JISKOOT	Leiden University
C33	9:40 AM	Cationic microparticle carrier system as adjuvant approach for pandemic influenza vaccines; proof-of-principle with adsorbed whole inactivated H5N1 influenza	Celine LEMOINE (Student)	University of Geneva
	10:00 AM	Tea break (foyer outside LT31, Level 3)		
C34	10:20 AM	Biosimilarity under stress: a forced degradation study of Remicade and Remsima	Anna SCHWENDEMAN	University of Michigan
C35	10:55 AM	Synthetic high-density lipoprotein nanodiscs for personalized vaccination against glioblastoma multiforme	Lindsay SCHEETZ (Student)	University of Michigan
C36	11:15 AM	Functional evaluation of mucoadhesive liposome aiming oral delivery of peptide drugs	Keiko MINAMI (Student)	Setsunan University
C37	11:35 AM	Synthesis of functionalised dendritic silica nanoparticles for delivery of anti-diabetic peptide	Muhammad Mustafa ABEER (Student)	University of Queensland

**Short course 4: Application of computational analysis in drug discovery and development****Location: Room 04-37 (Level 4)**

Leader: Prof. Yu-Zong CHEN, National University of Singapore

Code	Time	Title	Presenter	Affiliation
C41	8:30 AM	Artificial intelligence and drug discovery	Yu-Zong CHEN	National University of Singapore
C42	9:15 AM	Computational strategies in search for drug design scaffolds from natural products	Habibah A WAHAB	Universiti Sains Malaysia
	10:00 AM	Tea break (foyer outside LT31, Level 3)		
C43	10:20 AM	High-content analysis of constitutive androstane receptor nuclear translocation accurately identifies physiologically-relevant activators	Bryan MACKOWIAK (Student)	University of Maryland

Code	Time	Title	Presenter	Affiliation
C44	10:40 AM	Computational modelling of protein-ligand interactions, applied to ligand discovery and function mechanism studies	Hao FAN	Bioinformatics Institute, A*STAR
C45	11:25 AM	Development of novel method to analyze transcriptome profile data	Tadahaya MIZUNO	University of Tokyo

### Short course 5: Population pharmacokinetic modeling and its clinical application

Location: Room 04-35 (Level 4)

Leader: Prof. Paul Chi-Lui HO, National University of Singapore

Code	Time	Title	Presenter	Affiliation
C51	8:30 AM	Full covariates modelling using random effects to overcome the bias of covariate selection	Hwi-Yeol YUN	Chungnam National University
C52	9:05 AM	Population pharmacokinetic (PK) - pharmacogenomic (PG) - pharmacodynamic (PD) modeling of inhaled budesonide/formoterol combination in Korean asthmatics	Junyeong KIM (Student)	Chungnam National University
C53	9:25 AM	R for PK simulation	Cheng-Cai TANG	Lilly Centre for Clinical Pharmacology Pte Ltd
	10:00 AM	Tea break (foyer outside LT31, Level 3)		
C54	10:20 AM	Modern tools to enhance clinical utility of modelling and simulation	Lai-San THAM	Lily Centre for Clinical Pharmacology Pte Ltd
C55	10:55 AM	Identifying clinically relevant sources of variability: The clopidogrel challenge	Stephan SCHMIDT	University of Florida
C56	11:30 AM	Dried blood spots for population pharmacokinetic studies of antiepileptic drugs and phenotyping drug resistant epilepsy	Paul Chi-Lui HO	National University of Singapore

## Short course 6: Mechanistic and quantitative modeling in pharmacology and toxicology

Location: Room 04-36 / 04-38 / 04-39 (Level 4)

Leader: Prof. Eric Chun Yong CHAN, National University of Singapore

Code	Time	Title	Presenter	Affiliation
C61	8:30 AM	Introduction on mechanistic and quantitative modeling in pharmacology and toxicology	Eric CHAN	National University of Singapore
C62	9:00 AM	Development, validation and application of model to guide complex injectable drug-combination products	Rodney HO	University of Washington
C63	9:40 AM	A comparison of two biorelevant <i>in vitro</i> drug release methods for nanotherapeutics based on advanced physiologically-based pharmacokinetic modelling	Fabian JUNG (Student)	Goethe University Frankfurt
	10:00 AM	Tea break (foyer outside LT31, Level 3)		
C64	10:20 AM	Mechanistic modeling to evaluate bile acid-mediated drug-induced liver injury and hepatic transporter interactions	Kim BROUWER	University of North Carolina at Chapel Hill
C66	11:00 AM	Extended pharmacokinetic model of the rabbit eye for intravitreal and intracameral injections of macromolecules: quantitative analysis of anterior and posterior elimination pathways	Marko LAMMINSALO (Student)	University of Eastern Finland
C67	11:20 AM	Integrating host-pathogen interactions: A systems-based approach to address antimicrobial resistance	Gauri RAO	University of North Carolina at Chapel Hill

### Lunch

12:10 PM – 1:30 PM

Sponsored by Dhiren and Kailas Thakker

### Closing and award ceremony

1:30 PM – 2:00 PM

Sponsored by Journal of Pharmaceutical Sciences-Published by the American Pharmacists Association

# POSTER PRESENTATIONS

Thursday, September 27<sup>th</sup>

Poster	Title, author, and affiliation
A1	Development of iRGD conjugated semifluorinated nanoassemblies for targeted drug delivery to solid tumors Montira TANGSANGASAKSRI, University of Wisconsin-Madison
A2	Developing Chitosan nanoparticles loaded with scutellarin/ 2-hydroxypropyl-beta-cyclodextrin inclusion complexes for treatment of Alzheimer's Disease Li ZHANG, National University of Singapore
A3	Photochemical internalization of targeted nanoparticles for the intracellular delivery of a cytotoxic protein Lucia Amine MARTÍNEZ JOTHAR, Utrecht University
A4	Formation and investigation of high-aspect ratio polymeric nanocapsules via vesicle templation with RAFT polymerization and their interactions with cells Yunxin XIAO, Monash University
A5	Novel polymeric micelles for siRNA delivery Franck MARQUET, University of Geneva
A6	Polymeric nanocarriers for intravitreal delivery Vijayabhaskarreddy JUNNUTHULA, University of Helsinki
A7	Intraperitoneal delivery of neutron activatable mesoporous silica nanoparticles for the treatment of ovarian cancer peritoneal metastasis Derek HARGROVE, University of Connecticut
A8	Development of exosome assembly formed by utilization of DNA hybridization and its application for cancer vaccine Akihiro MATSUMOTO, Kyoto University
A9	Bioinspired cell-derived nanovesicles: a novel class of drug delivery systems Yub Raj NEUPANE, National University of Singapore
A10	Phytantriol modified with DSPE-PEG2000: A temperature-responsive lipid-based nanomaterials for on-demand drug delivery Xiaohan SUN, Monash University
A11	Particle design of porous PLGA microparticles encapsulating poor water-soluble drug as a novel inhalation formulation of lung cancer Miho KOMATSU, Nagoya City University
A12	Modification of cationic solid lipid nanoparticles with hyaluronic acid to overcome multi drug resistance Sang Eun LEE, Chungnam National University
A13	Quantification of nanoparticle uptake in human terminal hair follicle in the context of alopecia areata Rebekka CHRISTMANN, University of Saarland
A13b	Lipid-polymer hybrid nanoparticles (LPNs) for efficient pulmonary delivery of nucleic acids: Lessons learnt from quality-by-design based optimization Kaushik THANKI, University of Copenhagen
A14	High density lipoprotein as a novel lymph-directing platform for immunotherapy delivery Gracia GRACIA, Monash University
A15	Monocyte-targeted delivery to immune cells using modified polysaccharide particles Franklin AFINJUOMO, University of South Australia
A16	Development of the first monoclonal antibody for detection of elastin-like polypeptides Aida KOUHI, University of Southern California
A17	Enhanced oral absorption with nanostructured hydrogel biomaterials Elizabeth LEVY, University of California San Francisco
A18	Nanofibrillated cellulose hydrogel as a lyoprotectant in the freeze-drying of HepG2 3D spheroids Arto MERIVAARA, University of Helsinki
A19	Evaluation of taste-masking efficiency for the development of an orodispersible film formulation containing ondansetron hydrochloride Wen-Chin FOO, National University of Singapore
A20	Development of pH-responsive hydrated composite Eudragit-dendrimer formulations for drug delivery Cheryl WONG, National University of Singapore
A21	Mesoporous silica nanoparticles (MSN) for antimicrobial peptide delivery: The influence of PEG crosslinker length on activity Vanitha SELVARAJAN, National University of Singapore

Poster	Title, author, and affiliation
A22	Development of peptide-based oral vaccine against hookworm Stacey BARTLETT, University of Queensland
A23	Drug delivery to the colon using polysaccharides degraded by the human microbiome and pH-responsive film coatings Michael LANZ, University of Basel
A24	Development of microneedles coated with bleomycin for the treatment of skin warts Han Sol LEE, Chungnam National University
A25	The use of light as a therapeutic agent for treatment of diseases Lili DUSE, Philipps University of Marburg
A26	Human adipose derived mesenchymal stromal cells cultured with wood derived nanofibrillar cellulose Jasmi KIISKINEN, University of Helsinki
A27	A fast and precise method for the quantification of PLGA and gelatin based drug delivery systems Aljoscha KÖNNEKE, University of Saarland
A28	New methods to evaluate the pharmaceutical equivalence of herbal drugs Quyên TRAN THI, Chungnam National University
A29	Development, current applications and future roles of biorelevant two stage <i>in vitro</i> testing in drug development Tom FIOLKA, Goethe University Frankfurt
A30	Effects of drug particle size and lipid additives on the degree of drug coating by paraffin wax in spray congealing Hongyi OUYANG, National University of Singapore
A31	Influence of polymer structure on controlled release of docetaxel: a comparison of non-bio degradable polymer films for esophageal drug eluting stents Fateme FOUADIAN, University of South Australia
A32	Design and physicochemical characterization of fenofibrate solid dispersion by supercritical anti-solvent process Jungbin AHN, Chungnam National University
A33	Effect of calcium ascorbate on the gastric acidity and bioavailability Donghyun KIM, Chungnam National University
A34	Homogeneous immunoassay for the detection of EGFR-HER2 heterodimerization on cell surface Sun Jin KIM, University of Utah
A35	Magnesium isoglycyrrhizinate inhibits SMAD2/3 pathway and induced senescence in TGF- $\beta$ -activated hepatic stellate cells Jie-Kai TEE, National University of Singapore
A36	Nanomaterials as novel inhibitors that ameliorate fibrosis, adhesion and migration of hepatic stellate cells Fei PENG, National University of Singapore
A37	Overexpression of PKCzeta-SUMO mutant in endothelial cells limits angiogenesis in breast cancer cell Naehwan BAEK, Chungnam National University
A38	Palmitoylation of the apical sodium dependent bile acid transporter (ASBT;SLC10A2;IBAT) Ebehiremen AYEWOH, University of Maryland
A39	Improvement of glucose homeostasis by cucurbitane triterpenoids from the fruits of <i>Momordica charantia</i> through IRS-1 activation in diabetic mice Joo-Hui HAN, Chungnam National University
A40	Cytoprotective effects of hypothermia in various acute organ toxicities Yeong-Lan TAN, National University of Singapore
A41	Systems pharmacological analysis of a combination therapy to overcome HER2 and mTOR-therapies resistance in breast cancer Tanaya VAIDYA, University of Florida
A41b	Benznidazole combination therapy with new compound, Neq 821, has potential to protect mice against acute experimental infection of Chagas disease Carla LOPES, University of São Paulo
A42	Synthesis of vaccine candidates against Group A Streptococcus Chuankai DAI, University of Queensland
A43	Development of an aryloxazole class of Hepatitis C virus inhibitors targeting the entry stage of the viral replication cycle Nicholas KLUS, University of North Carolina at Chapel Hill
A44	Synthesis and biological evaluation of cationic amphiphilic indoles as antimycobacterial agents Samuel Agyei NYANTAKYI, National University of Singapore

Poster	Title, author, and affiliation
A45	Substitution of terminal amide with 1H-1,2,3-triazole: identification of unexpected class of potent antibacterial agents Fangchao BI, Shandong University
A46	Design and evaluation of novel beta-hairpin peptides as anti-infectives Nhan Dai Thien TRAM, National University of Singapore
A47	Complex speciation modeling to predict the effective concentrations of chelators in human plasma John PRYBYLSKI, University of North Carolina at Chapel Hill
A48	Development and <i>in vitro</i> validation of a computational model to predict MRP3 inhibitors Matthew WELCH, University of Maryland
A49	Multi-protein dynamic combinatorial chemistry: a novel strategy that leads to simultaneous discovery of subfamily-selective inhibitors against nucleic acid demethylases FTO and ALKBH3 Mohua DAS, National University of Singapore
A50	Biomimetic fabrication of DOPA based nano-coatings for stimuli-responsive release system Qinghua LYU, National University of Singapore
A51	Effects of mucilage extracts from <i>Pereskia bleo</i> leaves on blood coagulation time Kamonlawan CHOMCHOPBUN, National University of Singapore
A53	Pharmacokinetics study and biodistribution of HCPT-loaded tributyrin emulsion in rats Shili YANG, National University of Singapore
A54	<i>In vitro</i> - <i>in vivo</i> correlation for two bioequivalent lidocaine patches under transient heat exposure Sherin THOMAS, University of Maryland
A55	Development of mechanism based pharmacokinetics model for implementation of food effect on drug absorption Hyun-moon BACK, Chungnam National University
A56	Prediction of human pharmacokinetics of subcutaneously administered depot formulation using MBPK model Fiona Ge GAO, Goethe University Frankfurt
A57	Quantification of raloxifene in mouse plasma and tissues by ultra-high performance liquid chromatography-tandem mass spectrometry Sumit BANSAL, National University of Singapore
A58	CNS delivery of VX-970: a selective ATR inhibitor for radiosensitization in GBM Surabhi TALELE, University of Minnesota
A59	Elucidation of transporters involved in tissue distribution and urinary excretion of proguanil and cycloguanil in mice Yukana TOMODA, University of Tokyo
A60	Brain permeability of apolipoprotein A1 (ApoA1): Implications for Alzheimer's disease Andrew ZHOU, University of Minnesota
A61	Time-dependent inhibition of piperine and its impact on the metabolism of carbamazepine Tianjing REN, The Chinese University of Hong Kong
A62	Melanosomal drug uptake in the retinal pigment epithelium Laura HELLINEN, University of Eastern Finland
A63	Effect of permeability enhancers on paracellular transport of furosemide across Caco-2 cell monolayers Nihan IZAT, Hacettepe University
A64	Development and optimization of a direct contact blood brain barrier model for <i>in vitro</i> permeability screening Kelsey LUBIN, Purdue University

## Friday, September 28<sup>th</sup>

Poster	Title, author, and affiliation
B1	Novel mesoporous nanoparticles for the targeted delivery of anticancer agents to estrogen receptor overexpressing breast cancer Candace DAY, University of South Australia
B2	Examining the interactions between mesoporous silica particles and digestion of dietary components Kellie MAY, Monash University
B3	Calcium phosphate nanoparticles for the dual delivery of bisphosphonates and pDNA Sofia BISSO, ETH Zurich
B4	Doxorubicin-loaded MPI conjugates: Synthesis and in-vitro characterization Ankitkumar PARIKH, University of South Australia
B5	Chitosan nanoparticles for oral antigen delivery: A permeability approach Leah WRIGHT, University of South Australia
B6	Sublingual film of salmon calcitonin loaded hydroxyapatite nanoparticles as a non-invasive alternative to parenteral administration Darsheen KOTAK, Institute of Chemical Technology
B7	Preparation of microRNA34a-loaded chitosan nanoparticles to upregulate the expression of microRNA-34a in MDA-MB-231 cells Xiaoxia YANG, Shandong University
B8	Validation of purification methods for extracellular vesicles Jacopo ZINI, University of Helsinki
B9	The microRNA regulatory landscape of MSC-derived exosomes: A systems view Scott FERGUSON, University at Buffalo
B10	Development and <i>in vitro</i> characterization of novel PLGA nanoparticles-Lipid Hybrid (PLH) microparticles for pulmonary delivery of rifampicin Sajedehsadat MAGHREBI, University of South Australia
B11	Lymphatic uptake of liposomes after intraperitoneal administration primarily occurs via the diaphragmatic lymphatics and is surface property dependent Given LEE, Monash University
B12	Self-nanoemulsifying drug delivery system of resveratrol trimethyl ether: Preparation, characterization and pharmacokinetic evaluation Yu DAI, National University of Singapore
B13	Skin drug permeation characteristics of oligochitosan- and carboxymethyloligochitosan-carboxymethyl-5-fluorouracil conjugate nanoparticles Mazita MOHD DIAZ, Universiti Teknologi Mara
B14	Enhanced photodynamic therapy using nanoencapsulated curcumin Michael R. AGEL, Philipps University of Marburg
B15	Intratumoral injection of dextran-CpG oligonucleotide conjugates for enhanced immune-stimulation for cancer therapy Hien NGUYEN, University of Otago
B16	Kinetic tuning of antibody-biogel interactions for enhanced barrier properties Jennifer SCHILLER, University of North Carolina at Chapel Hill
B17	PLGA implants for long-acting release of anti-VEGF monoclonal antibody in a rabbit retinal vascular leakage model Jennifer WALKER, University of Michigan
B18	Indocyanine green loaded PLGA film coated coronary stents for photo-triggered in situ biofilm eradication Hendrik VÖGELING, Philipps University of Marburg
B19	Impact of substrate stiffness on dermal papilla aggregates in hydrogel microgels Justin TAN, National University of Singapore
B20	Electrospinning of high-content chitosan/polyethylene oxide fibers in GRAS acids Mai BAY STIE, University of Copenhagen
B21	Using coiled coil forming peptide to attach a peptide with high affinity Romain LEBOUX, Leiden University
B22	Infection responsive delivery of glycoside hydrolase and antibiotic combination Chelsea THORN, University of South Australia
B23	Development of the stable long acting injectable parenteral dosage form of omeprazole for horses Yunmei SONG, University of South Australia

Poster	Title, author, and affiliation
B24	<i>In vivo</i> brain delivery of proteins through the BBB Brian KOPEC, University of Kansas
B25	Mitigation of the pharmaceutical food effect: investigation of nanocrystals and lipids Tahlia MEOLA, University of South Australia
B26	A high-throughput method to predict the <i>in vivo</i> exposure of different drug delivery systems Caroline ALVEBRATT, Uppsala University
B27	Evaluation of effect of minor manufacturing changes and establishment of IVVC for compositionally equivalent parenteral microsphere drug products Janki ANDHARIYA, University of Connecticut
B28	Design of solubility studies in the context of BCS biowaiver monographs Gerlinde PLÖGER, Goethe University Frankfurt
B29	Effect of proteins radicals on the stability of polysorbate 80: fatty acid cis-trans isomerization Indira PRAJAPATI, University of Kansas
B30	Correlating the effect of magnesium stearate hydrate form, chemical composition and particle size with tablet dissolution Julie CALAHAN, University of Kentucky
B31	Effect of polymeric matrix and film formulation on development of verapamil extended release tablet Arnas LAKHIEW, Chulalongkorn University
B32	The comparison between co-melted and spray dried clotrimazole-PVP/VA solid dispersions systems Ahmad Ghazali ISMAIL, Universiti Sains Malaysia
B33	Formulation development of a recombinant protein based non-replicating rotavirus (NRRV) vaccine candidate: Antigen-adjuvant-preservative interactions Sanjeev AGARWAL, University of Kansas
B34	Structurally defined heparan sulfate protects from acetaminophen-induced acute liver failure Katelyn ARNOLD, University of North Carolina at Chapel Hill
B35	Clioquinol-mediated distribution of zinc and copper regulates the blood-brain barrier expression of breast cancer resistance protein (ABCG2) Chris YAP, Monash University
B36	Doxorubicin prodrug that binds apoptotic cells and activated by apoptotic caspase-3 as a component of concurrent chemoradiotherapy for improved therapeutic index Youngseok CHO, Seoul National University
B37	Radio-gene therapy targeting RanBP17 gene for down regulation of tumour proliferation in head and neck carcinomas Shashank Reddy PINNAPIREDDY, Philipps University of Marburg
B38	Effect of autophagy regulation on apoptosis in platelet-derived growth factor-BB stimulated vascular smooth muscle cells Do-Hyung LEE, Chungnam National University
B39	Antigen-drug conjugates in the treatment of autoimmunity Matthew CHRISTOPHER, University of Kansas
B40	A study of functional analyses for carboxylesterase type 2 isozymes of cynomolgus monkeys Maori TANAKA, Kumamoto University
B41	Disease interception of autoimmune disease using soluble antigen arrays Melissa PRESSNALL, University of Kansas
B41b	Perception, attitudes and knowledge of pharmacists towards antimicrobial stewardship at nursing homes Aysu SELCUK, National University of Singapore
B42	The structure-stability-toxicity relationships of L-DOPA and dopamine thioethers in neuronal cultures Sanzhar KARATAYEV, National University of Singapore
B43	Design and comparative evaluation of the anticonvulsant profile, carbonic- anhydrate inhibition and teratogenicity of novel carbamate derivatives of branched aliphatic carboxylic acids with 4-aminobenzensulfonamide David BIBI, The Hebrew University of Jerusalem
B44	Targeted delivery of potent immunosuppressants for treatment of ulcerative colitis Peter KLEINDL, University of Kansas
B45	Synthesis and mycobacterial dihydrofolate reductase inhibitory activity evaluation of 4,6-diamino-1,2-dihydro-2-aryl-1-alkoxyphenyl[1,3,5]triazines Edward LONG, National University of Singapore
B46	Advances in the development of peptidomimetics as potential antimicrobials: A comparison of tetrameric and octameric peptoids Bettina FLECK, National University of Singapore

Poster	Title, author, and affiliation
B47	Calcaratarin D attenuates inflammatory responses through the inhibition of NF- $\kappa$ B activation Thi Ngoc Quy TRAN, National University of Singapore
B48	Development of a macromolecular prodrug of tofacitinib for the sustained treatment of inflammatory arthritis Xin WEI, University of Nebraska Medical Center
B49	Polymorphs of an orally available analogue of diethylenetriaminepentaacetic acid: Physical and thermal characterization Carla COSTE SANCHEZ, University of North Carolina at Chapel Hill
B50	Medicinal plants used for erectile dysfunction Valerie SIN, National University of Singapore
B51	Reversible single crystal-to-single crystal phase transition with low-temperature induced twinning of diphenhydramine citrate salt Kunlin WANG, University of Minnesota
B53	Inhibition of human aldehyde oxidase by bazedoxifene and lasofoxifene Shiyuan CHEN, National University of Singapore
B54	Slow and tight binding inhibition kinetics of CYP17A1 by abiraterone and its active metabolite Eleanor CHEONG, National University of Singapore
B55	Human CYP2J2 inhibition by azole antifungals Jacqueline LEOW, National University of Singapore
B56	<i>In vitro</i> quantification of sequential metabolism kinetics of $\Delta$ 9-tetrahydrocannabinol and its metabolites Gabriela PATILEA-VRANA, University of Washington
B57	Investigation of the discriminatory power of dissolution specifications for a BCS-based biowaiver via pharmacokinetic modeling Martin HOFSSÄSS, Goethe University Frankfurt
B58	A pharmacometabolomics approach for predicting tenofovir diphosphate (TFV-DP) concentrations in dried blood spots (DBS) Mustafa IBRAHIM, University of Colorado
B59	Pharmacokinetic and allometric scaling studies of nanoparticle formulations of anthracyclines James BEAUDOIN, University of North Carolina at Chapel Hill
B60	Tryptophan metabolism and IDO/TDO expression in bladder cancer: A case-control study in Singapore Sze-Han LEE, National University of Singapore
B61	Pharmacokinetic disposition of cox-inhibitors for the prevention/treatment of colorectal cancer Glenn LEMMENS, KU Leuven
B62	A microfluidic enzymatic digestive system based on chaotic micromixers Pim DE HAAN, University of Groningen
B63	Predicting pulmonary pharmacokinetics from <i>in vitro</i> properties of dry powder inhalers Mong-Jen CHEN, University of Florida
B64	Primary human hepatocyte spheroids cultured and used in high-throughput screening format Niklas HANDIN, Uppsala University

# TRANSPORTATION AND OTHER INFORMATION

## **GPEN2018 venue addresses**

### Kent Ridge Guild House (KRGH)

9 Kent Ridge Drive  
Singapore 119241

### Shaw Foundation Alumni House (SFAH)

11 Kent Ridge Drive  
Singapore 119244

### Faculty of Science (FoS), LT31 at Block S16

National University of Singapore  
Block S16 Level 3  
6 Science Drive 2  
Singapore 117546  
*Closest MRT: Kent Ridge MRT*

## **Social events' addresses**

### Marina Barrage

8 Marina Gardens Drive  
Singapore 018951

### Satay by the Bay

18 Marina Gardens Drive  
Singapore 018953  
*Closest MRT: Bayfront MRT*

### Singapore Flyer

30 Raffles Avenue  
Singapore 039803  
*Closest MRT: Promenade MRT*

## **Hotels' addresses**

### Orchard Hotel Singapore

442 Orchard Road  
Singapore 238879

### Park Hotel Alexandra

323 Alexandra Road  
Singapore 159972

### Park Avenue Rochester

31 Rochester Drive  
Singapore 138637

## **Alternative transportation**

Grab app (book on iOS, Android)

Taxi (flag on road)

Mass Rapid Transit, MRT (single trip/tourist ticket available)

*Note: Uber (Singapore) is not available in the region*

## **Emergency contacts**

NUS Campus security 6874 1616

Non-emergency ambulance 1777

Fire/emergency ambulance 995

Police 999

*Note: Singapore's country code is +65*

## **Transportation for Orchard Hotel**

Wednesday, 26<sup>th</sup> September

- 3:00 PM, from your hotel to KRGH
- 8:00 PM, from KRGH to your hotel

Thursday, 27<sup>th</sup> September

- 7:00 AM from your hotel to SFAH
- 8:45 PM from Satay by the Bay to your hotel

Friday, 28<sup>th</sup> September

- 7:00 AM from your hotel to SFAH
- 8:45 PM from Singapore Flyer to your hotel

Saturday, 29<sup>th</sup> September

- 7:00 AM from your hotel to FoS

## **Transportation for Park Hotel Alexandra**

Wednesday, 26<sup>th</sup> September

- 3:15 PM, from your hotel to KRGH
- 8:15 PM, from KRGH to your hotel

Thursday, 27<sup>th</sup> September

- 7:10 AM from your hotel to SFAH
- 8:45 PM from Satay by the Bay to your hotel

Friday, 28<sup>th</sup> September

- 7:10 AM from your hotel to SFAH
- 8:45 PM from Singapore Flyer to your hotel

Saturday, 29<sup>th</sup> September

- 7:10 AM from your hotel to FoS

## **Transportation for Park Avenue Rochester**

Wednesday, 26<sup>th</sup> September

- 3:00 PM, from your hotel to KRGH
- 8:30 PM, from KRGH to your hotel

Thursday, 27<sup>th</sup> September

- 7:10 AM from your hotel to SFAH
- 8:45 PM from Satay by the Bay to your hotel

Friday, 28<sup>th</sup> September

- 7:10 AM from your hotel to SFAH
- 8:45 PM from Singapore Flyer to your hotel

Saturday, 29<sup>th</sup> September

- 7:10 AM from your hotel to FoS

## **Transportation for Others**

Wednesday, 26<sup>th</sup> September

- 2:00 PM – 6:00 PM, Kent Ridge MRT to KRGH
- 7:00 PM – 8:30 PM, KRGH to Kent Ridge MRT

Thursday, 27<sup>th</sup> September

- 7:00 AM – 9:30 AM, Kent Ridge MRT to SFAH
- 5:00 PM – 5:30 PM from SFAH to Marina Barrage

- 8:45 PM from Satay by the Bay to Bayfront MRT

Friday, 28<sup>th</sup> September

- 7:00 AM – 9:30 AM, Kent Ridge MRT to SFAH
- 4:40 PM – 5:10 PM from SFAH to Singapore Flyer

Saturday, 29<sup>th</sup> September

- 7:00 AM – 9:30 AM, Kent Ridge MRT to FoS

## **Transfer to Changi Airport**

Saturday, 29<sup>th</sup> September

- 2:30 PM from FoS to airport
- 3:30 PM from FoS to airport

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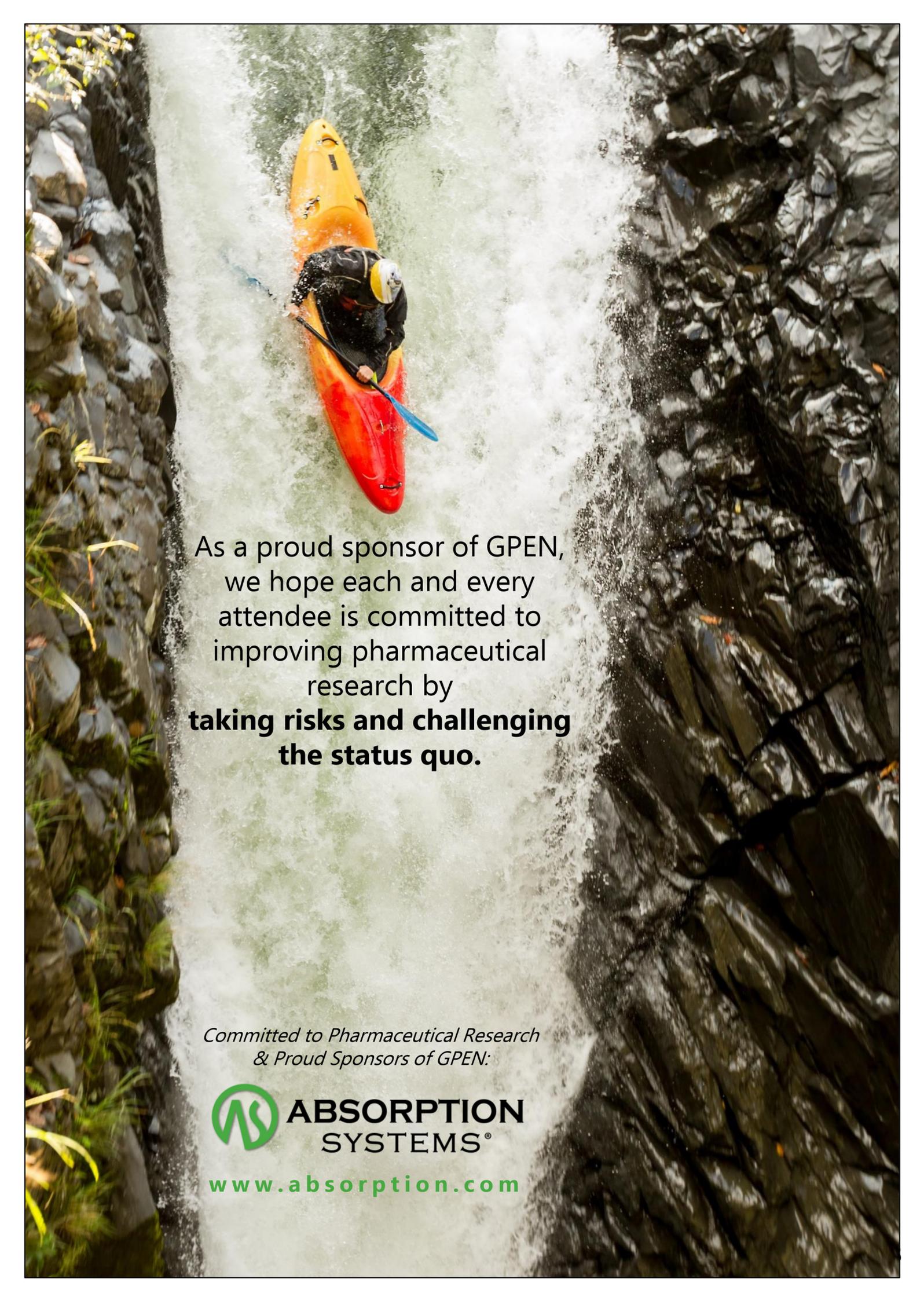
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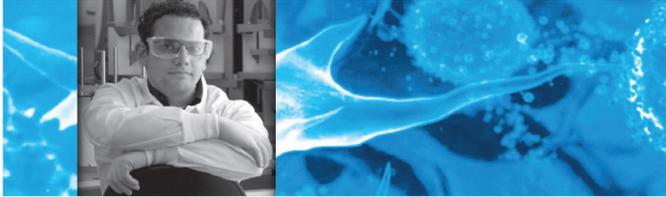
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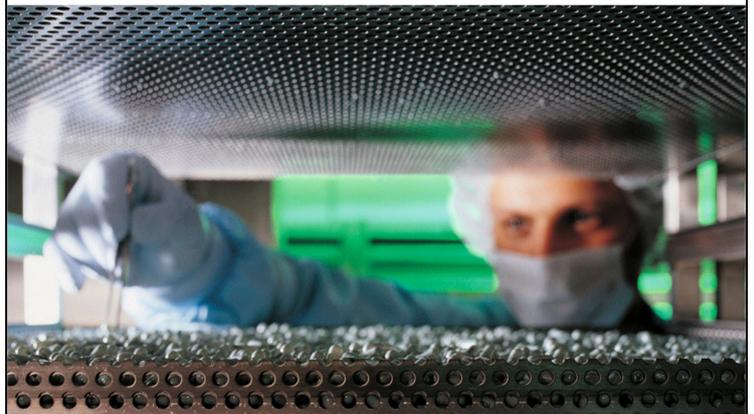
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# CONFERENCE ATTENDEES

First Name	Last Name	Institution	Email	Presentation
Muhammad Mustafa	Abeer	The University of Queensland	m.abeer@uq.edu.au	C37
Franklin	Afinjuomo	University of South Australia	olumide.afinjuomo@mymail.unisa.edu.au	A15
Sanjeev	Agarwal	University of Kansas	sanjeev.agarwal@ku.edu	B33
Michael R.	Agel	Philipps University of Marburg	michael.agel@pharmazie.uni-marburg.de	B14
Jungbin	Ahn	Chungnam National University	dkswjdqls13@naver.com	A32
Daniel	Akatwijuka	Kumamoto University	132p1057@st.kumamoto-u.ac.jp	S33
Caroline	Alvebratt	Uppsala University	caroline.alvebratt@farmaci.uu.se	B26
Tom	Anchordoquy	University of Colorado	tom.anchordoquy@ucdenver.edu	
Janki	Andhariya	University of Connecticut	janki.andhariya@uconn.edu	B27
Angelina	Angelova	University of Paris-Sud	angelina.angelova@u-psud.fr	
Katelyn	Arnold	University of North Carolina at Chapel Hill	arnoldk2@email.unc.edu	B34
Kenneth	Audus	University of Kansas	audus@ku.edu	
Patrick	Augustijns	KU Leuven	patrick.augustijns@kuleuven.be	C12
Ebehiremen	Ayewoh	University of Maryland, Baltimore	ebehiremen.ayewoh@umaryland.edu	A38
Shahar	Azar	The Hebrew University of Jerusalem	shaharazar10@gmail.com	S35
Hyun-Moon	Back	Chungnam National University	hmback@cnu.ac.kr	A55
Naehwan	Baek	Chungnam National University	ghks5139@cnu.ac.kr	A37
Sathy	Balu-Iyer	University at Buffalo	svb@buffalo.edu	
Sumit	Bansal	National University of Singapore	sumitbansal@u.nus.edu	A57
Stacey	Bartlett	The University of Queensland	stacey.bartlett@uqconnect.edu.au	A22
Mai	Bay Stie	University of Copenhagen	mai.bay.stie@sund.ku.dk	B20
James	Beaudoin	University of North Carolina at Chapel Hill	jbeaudoin@unc.edu	B59
Philippe	Berben	KU Leuven	philippe.berben@kuleuven.be	S28
Christel	Bergström	Uppsala University	christel.bergstrom@farmaci.uu.se	C22
Fangchao	Bi	Shandong University	yahe1111@163.com	A45
David	Bibi	The Hebrew University of Jerusalem	david.bibi1@mail.huji.ac.il	B43
Sofia	Bisso	ETH Zürich	sofia.bisso@pharma.ethz.ch	B3
Walter	Boiten	Leiden University	boitenwa@lacdr.leidenuniv.nl	S14
Gerrit	Borchard	University of Geneva	gerrit.borchard@unige.ch	
Ronald T.	Borchardt	University of Kansas	rborchardt@ku.edu	
Ben	Boyd	Monash University	ben.boyd@monash.edu	
Birger	Brodin	University of Copenhagen	birger.brodin@sund.ku.dk	
Kenneth	Brouwer	BioIVT	kbrouwer@bioivt.com	C21
Kim	Brouwer	University of North Carolina at Chapel Hill	kbrouwer@unc.edu	C64
Youngro	Byun	Seoul National University	yrbyun@snu.ac.kr	
Julie	Calahan	University of Kentucky	juliecalahan@uky.edu	B30
Jung-Woo	Chae	Chungnam National University	jwchae@cnu.ac.kr	
Christina	Chai	National University of Singapore	phahead@nus.edu.sg	
Eric	Chan	National University of Singapore	phaccye@nus.edu.sg	C61
Sui-Yung	Chan	National University of Singapore	phacsy@nus.edu.sg	
Bodhisattwa	Chaudhuri	University of Connecticut	bodhi.chaudhuri@uconn.edu	
Mong-Jen	Chen	University of Florida	bryan0512@ufl.edu	B63

First Name	Last Name	Institution	Email	Presentation
Shiyan	Chen	National University of Singapore	michelle11-2@hotmail.com	B53
Yu-Zong	Chen	National University of Singapore	phacyz@nus.edu.sg	C41
Eleanor	Cheong	National University of Singapore	cheong.eleanor@u.nus.edu	B54
Eng-Hui	Chew	National University of Singapore	phaceh@nus.edu.sg	
Cheong-Weon	Cho	Chungnam National University	chocw@cnu.ac.kr	
Youngseok	Cho	Seoul National University	zeroston325@gmail.com	B36
Kamonlawan	Chomchopbun	National University of Singapore	kamonlawan.c@u.nus.edu	A51
Rebekka	Christmann	Saarland University	rebekka.christmann@helmholtz-hzi.de	A13
Matthew	Christopher	University of Kansas	m905c980@ku.edu	B39
Katherina	Chua	University of California San Francisco	katherina.chua@ucsf.edu	S23
Kay Tse	Chua	Blackmores Singapore	kc.chua@blackmores.com.sg	
Wai-Keung	Chui	National University of Singapore	phacwk@nus.edu.sg	
Carla	Coste Sanchez	University of North Carolina at Chapel Hill	carlacs@email.unc.edu	B49
Chuankai	Dai	The University of Queensland	chuankai.dai@uqconnect.edu.au	A42
Yu	Dai	National University of Singapore	e0021583@u.nus.edu	B12
Mohua	Das	National University of Singapore	e0021584@u.nus.edu	A49
Candace	Day	University of South Australia	danly006@mymail.unisa.edu.au	B1
Sergio	de Albuquerque	University of São Paulo		
Pim	de Haan	University of Groningen	pim.de.haan@rug.nl	B62
Hartmut	Derendorf	University of Florida	hartmut@ufl.edu	
Padma	Devarajan	Institute of Chemical Technology	pvdevarajan@ictmumbai.edu.in	
Laura	Drbohlav	University of Kansas	drbohlav@ku.edu	S31
Joern	Drustrup	Novo Nordisk A/S	jdr@novonordisk.com	
Lili	Duse	Philipps University of Marburg	lili.duse@pharmazie.uni-marburg.de	A25
Rachel P. L.	Ee	National University of Singapore	phaepr@nus.edu.sg	
William	Elmquist	University of Minnesota	elmqu011@umn.edu	
Sara	Eyal	The Hebrew University of Jerusalem	sarae@ekmd.huji.ac.il	
Hao	Fan	Bioinformatics Institute, A*STAR	fanh@bii.a-star.edu.sg	C44
Scott	Ferguson	University at Buffalo	scottfer@buffalo.edu	B9
Tom	Fiolka	Goethe University Frankfurt	fiolka@em.uni-frankfurt.de	A29
Bettina	Fleck	National University of Singapore	bettina.fleck@kit.edu	B46
Lies	Fliervoet	Utrecht University	l.a.l.fliervoet@uu.nl	S10
Wen-Chin	Foo	National University of Singapore	wenchin.foo@u.nus.edu	A19
Fatemeh	Fouladian	University of South Australia	fatemeh.fouladian@mymail.unisa.edu.au	A31
Fiona Ge	Gao	Goethe University Frankfurt	gao@em.uni-frankfurt.de	A56
Sanjay	Garg	University of South Australia	sanjay.garg@unisa.edu.au	
Dana	Gates	Pfizer	dana.gates@pfizer.com	
Gracia	Gracia	Monash University	gracia.gracia@monash.edu	A14
Xiuli	Guo	Shandong University	guoxl@sdu.edu.cn	
R. Neslihan	Gürsoy	Hacettepe University	nesligursoy@gmail.com	
Pouya	Hadipour	University of Utah	hadipour.p@gmail.com	S3
Michael	Hageman	University of Kansas	mhageman@ku.edu	C24
Shaye	Hagler	University of North Carolina at Chapel Hill	shagler@unc.edu	S22

First Name	Last Name	Institution	Email	Presentation
Joo-Hui	Han	Chungnam National University	han5621@cnu.ac.kr	A39
Niklas	Handin	Uppsala University	niklas.handin@farmaci.uu.se	B64
Derek	Hargrove	University of Connecticut	derek.hargrove@uconn.edu	A7
Oliver	Hedge	Uppsala University	oliver.hedge@farmaci.uu.se	S7
Laura	Hellinen	University of Eastern Finland	laura.pelkonen@uef.fi	A62
Kyung-Sun	Heo	Chungnam National University	kheo@cnu.ac.kr	
Britta	Hettich	ETH Zürich	britta.hettich@pharma.ethz.ch	S2
Paul Chi-Lui	Ho	National University of Singapore	phahocl@nus.edu.sg	C56
Rodney	Ho	University of Washington	rodneyho@uw.edu	C62
Guenther	Hochhaus	University of Florida	hochhaus@ufl.edu	
Martin	Hofsäss	Goethe University Frankfurt	hofsass@em.uni-frankfurt.de	B57
Chienming	Hsieh	Taipei Medical University	cmhsieh@tmu.edu.tw	
Mustafa	Ibrahim	University of Colorado	mustafa.2.ibrahim@ucdenver.edu	B58
Teruko	Imai	Kumamoto University	iteruko@gpo.kumamoto-u.ac.jp	
Georgios	Imanidis	University of Basel	georgios.imanidis@unibas.ch	
Ahmad Ghazali	Ismail	Universiti Sains Malaysia	ghazali311@gmail.com	B32
Nihan	Izat	Hacettepe University	nihanizat@gmail.com	A63
Wim	Jiskoot	Leiden University	w.jiskoot@lacdr.leidenuniv.nl	C32
Robert	Jones	University at Buffalo	rsjones@buffalo.edu	S25
Fabian	Jung	Goethe University Frankfurt	fabian.f.jung@gmail.com	C63
Vijayabhaskarreddy	Junnuthula	University of Helsinki	junnuthula.vijayabhaskarreddy@helsinki.fi	A6
Sanzhar	Karatayev	National University of Singapore	sanzhar91@gmail.com	B42
Michael	Keusgen	Philipps University of Marburg	keusgen@staff.uni-marburg.de	
Vidhi	Khanna	University of Minnesota	khann035@umn.edu	S34
Jasmi	Kiiskinen	University of Helsinki	jasmi.kiiskinen@helsinki.fi	A26
Takayuki	Kikuchi	Daiichi Sankyo Co., Ltd.	kikuchi.takayuki.fm@daiichisankyo.co.jp	
Donghyun	Kim	Chungnam National University	dong_bal@naver.com	A33
Junyeong	Kim	Chungnam National University	jyeongkim@cnu.ac.kr	C52
Sun Jin	Kim	University of Utah	sun.jin.kim@utah.edu	A34
Peter	Kleindl	University of Kansas	p002k449@ku.edu	B44
Nicholas	Klus	University of North Carolina at Chapel Hill	klusnj0@unc.edu	A43
Gregory	Knipp	Purdue University	gknipp@purdue.edu	
Hwee-Ling	Koh	National University of Singapore	phakohl@nus.edu.sg	
Robbert	Kok	Utrecht University	r.j.kok@uu.nl	
Miho	Komatsu	Nagoya City University	nndinnno.6@gmail.com	A11
Fusae	Komura	Kyoto University	komura.fusae.65s@st.kyoto-u.ac.jp	S20
Aljoscha	Könneke	Saarland University	aljoscha.koenneke@uni-saarland.de	A27
Brian	Kopec	University of Kansas	brian.kopec@ku.edu	B24
Edmund	Kostewicz	Goethe University Frankfurt	kostewicz@em.uni-frankfurt.de	
Darsheen	Kotak	Institute of Chemical Technology	darsheenkotak16@gmail.com	B6
Aida	Kouhi	University of Southern California	kouhi@usc.edu	A16
Marcelo	Kravicz	University of São Paulo	kravicz@usp.br	C23
Deanna	Kroetz	University of California San Francisco	deanna.kroetz@ucsf.edu	
Soon Keong	Kwan	AB SCIEX (Distribution) Pte Ltd	soonkeong.kwan@sciex.com	

First Name	Last Name	Institution	Email	Presentation
Arnas	Lakhiew	Chulalongkorn University	rnaz_lk@hotmail.com	B31
Marlyn	Laksitorini	University of Manitoba	laksitorini@yahoo.com	S36
Marko	Laminsalo	University of Eastern Finland	marko.laminsalo@uef.fi	C66
Michael	Lanz	University of Basel	michael.lanz@fhnw.ch	A23
Aik Jiang	Lau	National University of Singapore	aikjiang.lau@nus.edu.sg	
Ashley	Lay	University of Kentucky	ashley.lay@uky.edu	S16
Romain	Leboux	Leiden University	r.j.t.leboux@lacdr.leidenuniv.nl	B21
Do-Hyung	Lee	Chungnam National University	dh5285@cnu.ac.kr	B38
Given	Lee	Monash University	given.lee@monash.edu	B11
Han Sol	Lee	Chungnam National University	sol4273@naver.com	A24
Sang Eun	Lee	Chungnam National University	nnininn@hanmail.net	A12
Sze-Han	Lee	National University of Singapore	lee.sze.han@u.nus.edu	B60
Jae-Young	Lee	Chungnam National University	jaeyoung@cnu.ac.kr	
Na Kyeong	Lee	Seoul National University	enkleee8@gmail.com	C13
Claus-Michael	Lehr	Saarland University	claus-michael.lehr@helmholtz-hzi.de	
Glenn	Lemmens	KU Leuven	glenn.lemmens@kuleuven.be	B61
Celine	Lemoine	University of Geneva	celine.lemoine@unige.ch	C33
Jacqueline	Leow	National University of Singapore	jacqueline.leow@u.nus.edu	B55
Shui Yee (Sharon)	Leung	The Chinese University of Hong Kong	sharon.leung@cuhk.edu.hk	
Elizabeth	Levy	University of California San Francisco	elizabeth.levy@ucsf.edu	A17
Yongquan	Li	University of Copenhagen	yongquan.li@sund.ku.dk	S18
Yi Ting	Lien	University of Florida	yitinglien@ufl.edu	S26
Carol	Lim	University of Utah	carol.lim@pharm.utah.edu	
Haishu	Lin	National University of Singapore	phalh@nus.edu.sg	
Jian	Liu	University of North Carolina at Chapel Hill	jian_liu@unc.edu	
Jin	Liu	Nagoya City University	ciwujialiujin@gmail.com	S9
Xinyong	Liu	Shandong University	xinyongli@sdu.edu.cn	
Edward	Long	National University of Singapore	phalfe@nus.edu.sg	B45
Carla	Lopes	University of São Paulo	cduquelopes@gmail.com	A41b
Kelsey	Lubin	Purdue University	klubin@purdue.edu	A64
Qinghua	Lyu	National University of Singapore	a0129473@u.nus.edu	A50
Shutao	Ma	Shandong University	mashutao@sdu.edu.cn	
Bryan	Mackowiak	University of Maryland, Baltimore	bryanmackowiak@umaryland.edu	C43
Sajedehsadat	Maghrebi	University of South Australia	magsy010@mymail.unisa.edu.au	B10
Sandhya	Mandlekar	Bristol-Myers Squibb	sandhya.mandlekar@bms.com	
Franck	Marquet	University of Geneva	franck.marquet@unige.ch	A5
Patrick	Marsac	University of Kentucky	patrick.marsac@uky.edu	
Lucía Amine	Martínez Jothar	Utrecht University	l.a.martinezjothar@uu.nl	A3
Sandro	Matosevic	Purdue University	sandro@purdue.edu	
Akihiro	Matsumoto	Kyoto University	matsumoto.akihiro.65m@st.kyoto-u.ac.jp	A8
Kellie	May	Monash University	kellie.may@monash.edu	B2
Arlene	Mcdowell	University of Otago	arlene.mcdowell@otago.ac.nz	
Craig	Mckelvey	Merck Sharp and Dohme	craig_mckelvey@merck.com	

First Name	Last Name	Institution	Email	Presentation
Sandro	Mecozzi	University of Wisconsin-Madison	sandro.mecozzi@wisc.edu	
Tahlia	Meola	University of South Australia	tahlia.meola@mymail.unisa.edu.au	B25
Arto	Merivaara	University of Helsinki	arto.merivaara@helsinki.fi	A18
Donald	Miller	University of Manitoba	donald.miller@umanitoba.ca	C14
Keiko	Minami	Setsunan University	keiko.minami@pharm.setsunan.ac.jp	C36
Takeshi	Miyake	University of Tokyo	tk1myk6@gmail.com	S27
Tadahaya	Mizuno	University of Tokyo	tadahaya@mol.f.u-tokyo.ac.jp	C45
Mazita	Mohd Diah	Universiti Teknologi Mara	mazita@sirim.my	B13
Brandon	Morinaka	National University of Singapore	phambi@nus.edu.sg	
Peter	Moyle	The University of Queensland	p.moyle@uq.edu.au	
Chang-Seon	Myung	Chungnam National University	cm8r@cnu.ac.kr	
Yub Raj	Neupane	National University of Singapore	yubraj9841@gmail.com	A9
Jian-Yao	Ng	National University of Singapore	e0223125@u.nus.edu	
Hien	Nguyen	University of Otago	hien.nguyen@postgrad.otago.ac.nz	B15
Juliane	Nguyen	University at Buffalo	julianen@buffalo.edu	C15
Joe	Nicolazzo	Monash University	joseph.nicolazzo@monash.edu	
Dunja	Novakovic	University of Helsinki	dunja.novakovic@helsinki.fi	S15
Samuel Agyei	Nyantakyi	National University of Singapore	a0135960@u.nus.edu	A44
Sybil	Obuobi	National University of Singapore	sybilobuobi@u.nus.edu	S11
Kayoko	Ohura	Kumamoto University	ohurak@kumamoto-u.ac.jp	
Pei-Shi	Ong	National University of Singapore	phaops@nus.edu.sg	
Kris	Oreschak	University of Colorado	kris.oreschak@ucdenver.edu	S24
Hongyi	Ouyang	National University of Singapore	e0002153@u.nus.edu	A30
Ankitkumar Yogeshbhai	Parikh	University of South Australia	ankit.parikh@unisa.edu.au	B4
Jeong Sook	Park	Chungnam National University	eicosa@cnu.ac.kr	
Giorgia	Pastorin	National University of Singapore	phapp@nus.edu.sg	
Gabriela	Patilea-Vrana	University of Washington	patilg@uw.edu	B56
Fei	Peng	National University of Singapore	phapf@nus.edu.sg	A36
Shashank Reddy	Pinnapireddy	Philipps University of Marburg	shashank.pinnapireddy@pharmazie.uni-marburg.de	B37
Nikola	Plenagl	Philipps University of Marburg	nikola.plenagl@pharmazie.uni-marburg.de	S5
Gerlinde	Plöger	Goethe University Frankfurt	g.ploeger@em.uni-frankfurt.de	B28
Indira	Prajapati	University of Kansas	indira.prajapati@ku.edu	B29
Melissa	Pressnall	University of Kansas	pressnallm@ku.edu	B41
Clive	Prestidge	University of South Australia	clive.prestidge@unisa.edu.au	
John	Prybylski	University of North Carolina at Chapel Hill	jprybylski@unc.edu	A47
Mugilarasi	Purushothaman	National University of Singapore	mugilarasi.purushothaman@u.nus.edu	
Thomas	Rades	University of Copenhagen	thomas.rades@sund.ku.dk	
Gauri	Rao	University of North Carolina at Chapel Hill	gaurirao@live.unc.edu	C67
Jarkko	Rautio	University of Eastern Finland	jarkko.rautio@uef.fi	
Tianjing	Ren	The Chinese University of Hong Kong	1155070164@link.cuhk.edu.hk	A61
Harshil	Renawala	Purdue University	hrenawal@purdue.edu	S32
Gampimol	Ritthidej	Chulalongkorn University	gampimol.r@chula.ac.th	
Selma	Sahin	Hacettepe University	sahin.selma@gmail.com	
Kazuki	Sato	Tohoku University	kazuki@dc.tohoku.ac.jp	S30

First Name	Last Name	Institution	Email	Presentation
Lindsay	Scheetz	University of Michigan	scheetzl@umich.edu	C35
Jennifer	Schiller	University of North Carolina at Chapel Hill	jschil@email.unc.edu	B16
Stephan	Schmidt	University of Florida	sschmidt@cop.ufl.edu	C55
Christian	Schöneich	University of Kansas	schoneic@ku.edu	C31
Hayley	Schultz	University of South Australia	hayley.schultz@mymail.unisa.edu.au	S6
Anna	Schwendeman	University of Michigan	annaschw@umich.edu	C34
Steven	Schwendeman	University of Michigan	schwende@umich.edu	
Aysu	Selcuk	National University of Singapore	a0135969@u.nus.edu	B41b
Vanitha	Selvarajan	National University of Singapore	e0021573@u.nus.edu	A21
Koyel	Sen	University of Connecticut	koyel.sen@uconn.edu	S12
Xiaojing	Shi	University of Southern California	xiaojins@usc.edu	C16
Teruna	Siahaan	University of Kansas	siahaan@ku.edu	C11
Hong-May	Sim	National University of Singapore	simhongmay@gmail.com	
Valerie	Sin	National University of Singapore	e0013219@u.nus.edu	B50
Richard	Sleightholm	University of Nebraska Medical Center	richard.sleightholm@unmc.edu	C27
Yunmei	Song	University of South Australia	may.song@unisa.edu.au	B23
Anastasia	Spyrogianni	ETH Zürich	anastasia.spyrogianni@pharma.ethz.ch	
Clare	Strachan	University of Helsinki	clare.strachan@helsinki.fi	
Sarah	Streck	University of Otago	sarah.streck@otago.ac.nz	S4
Xiaohan	Sun	Monash University	xiaohan.sun@monash.edu	A10
Raj	Suryanarayanan	University of Minnesota	surya001@umn.edu	C25
Estelle	Suys	Monash University	estelle.suys@monash.edu	S29
Peter	Swaan	University of Maryland	pswaan@rx.umaryland.edu	
Tatsuaki	Tagami	Nagoya City University	tagami@phar.nagoya-cu.ac.jp	
Yoshinobu	Takakura	Kyoto University	takakura@pharm.kyoto-u.ac.jp	
Surabhi	Talele	University of Minnesota	talel005@umn.edu	A58
Justin	Tan	National University of Singapore	a0067126@u.nus.edu	B19
Yeong-Lan	Tan	National University of Singapore	e0020834@u.nus.edu	A40
Maori	Tanaka	Kumamoto University	maori.t.0601@gmail.com	B40
Cheng Cai	Tang	Eli Lilly and Company	tang_cheng_cai@lilly.com	C53
Montira	Tangsangasakri	University of Wisconsin-Madison	tangsangasak@wisc.edu	A1
Jie-Kai	Tee	National University of Singapore	a0072441@u.nus.edu	A35
Tetsuya	Terasaki	Tohoku University	terasaki.tetsuya@m.tohoku.ac.jp	
Lai San	Tham	Eli Lilly and Company	tham_lai_san@lilly.com	C54
Kaushik	Thanki	University of Copenhagen	kaushik.thanki@sund.ku.dk	A13b
Sherin	Thomas	University of Maryland	sherin.thomas@umaryland.edu	A54
Ursula	Thormann	University of Basel	ursula.thormann@fhnw.ch	S17
Chelsea	Thorn	University of South Australia	chelsea.thorn@mymail.unisa.edu.au	B22
Selin Seda	Timur	Hacettepe University	selins.dogan@gmail.com	C17
Yukana	Tomoda	University of Tokyo	tomoda-yukana@g.ecc.u-tokyo.ac.jp	A59
Nhan Dai Thien	Tram	National University of Singapore	a0116655@u.nus.edu	A46
Thi Ngoc Quy	Tran	National University of Singapore	a0099426@u.nus.edu	B47
Quyen	Tran Thi	Chungnam National University	quyentran@cnu.ac.kr	A28
Tanaya	Vaidya	University of Florida	tvaidya@ufl.edu	A41

First Name	Last Name	Institution	Email	Presentation
Cornelus	Van Nostrum	Utrecht University	c.f.vannostrum@uu.nl	
Jonathan	Vennerstrom	University of Nebraska Medical Center	jvenners@unmc.edu	
Sabeth	Verpoorte	University of Groningen	sabeth.verpoorte@hotmail.com	
Fabiana T.M.C.	Vicentini	University of São Paulo	fabtesta@fcfrp.usp.br	
Hendrik	Vögeling	Philipps University of Marburg	hendrik.voegeling@uni-marburg.de	B18
Matthias	Wacker	Goethe University Frankfurt	wacker@em.uni-frankfurt.de	
Habibah	Wahab	Universiti Sains Malaysia	habibahw@usm.my	C42
Greg	Walker	University of Otago	greg.walker@otago.ac.nz	
Jennifer	Walker	University of Michigan	marchijm@umich.edu	B17
Fengshan	Wang	Shandong University	fswang@sdu.edu.cn	
Kunlin	Wang	University of Minnesota	wang3248@umn.edu	B51
Tianqi	Wang	Shandong University	wangtianqi1990@hotmail.com	S21
Zhiqiang	Wang	University of Paris-Sud	zhiqiangw.wang@gmail.com	S8
Xin	Wei	University of Nebraska Medical Center	x.wei@unmc.edu	B48
Agnes-Valencia	Weiß	Saarland University	agnes.weiss@uni-saarland.de	S1
Matthew	Welch	University of Maryland, Baltimore	mawelch@umaryland.edu	A48
Desmond	Williams	University of South Australia	des.williams@unisa.edu.au	
Cheryl	Wong	National University of Singapore	e0020785@u.nus.edu	A20
Tin Wui	Wong	Universiti Teknologi Mara	wongtinwui@yahoo.com	
Esther	Woon	National University of Singapore	phaewcy@nus.edu.sg	
Leah	Wright	University of South Australia	leah.wright@mymail.unisa.edu.au	B5
Yunxin	Xiao	Monash University	yunxin.xiao@monash.edu	A4
Shinji	Yamashita	Setsunan University	shinji@pharm.setsunan.ac.jp	
Shili	Yang	National University of Singapore	lisiysh@nus.edu.sg	A53
Xiaoxia	Yang	Shandong University	yxx_678@163.com	B7
Chris	Yap	Monash University	chris.yap@monash.edu	B35
Wai-Ping	Yau	National University of Singapore	phaywp@nus.edu.sg	
Jesse	Yu	University of Washington	yuj73@uw.edu	S13
Victor	Yu	National University of Singapore	phayuv@nus.edu.sg	
Hwi-Yeol	Yun	Chungnam National University	hyyun@cnu.ac.kr	C51
Pawel	Zbyszynski	University of Wisconsin-Madison	zbyszynski@wisc.edu	C26
Li	Zhang	National University of Singapore	e0029877@u.nus.edu	A2
Na	Zhang	Shandong University	zhangnancy9@sdu.edu.cn	
Yong	Zhang	University of Southern California	yongz@usc.edu	
Andrew	Zhou	University of Minnesota	zhoux760@umn.edu	A60
Jacopo	Zini	University of Helsinki	jacopo.zini@helsinki.fi	B8

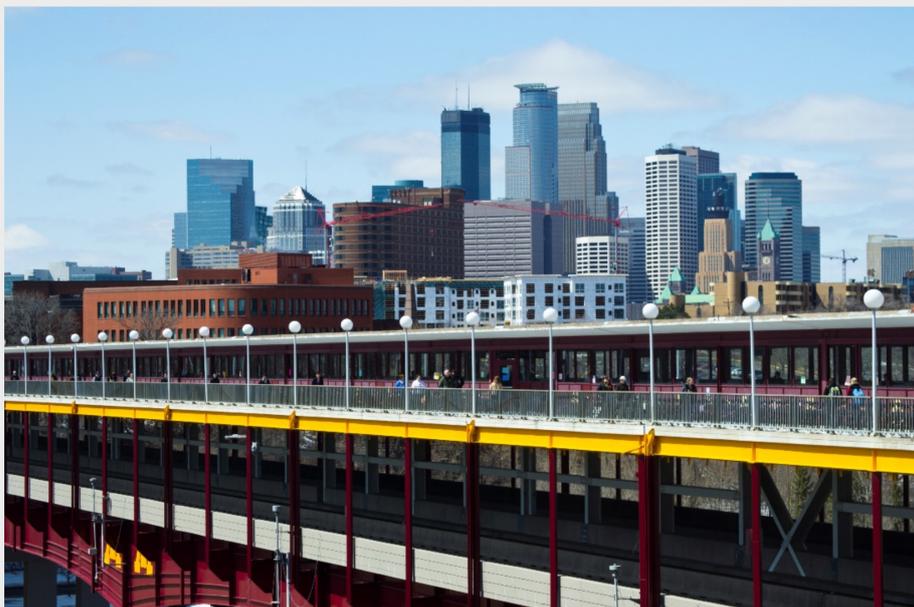
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Merli, Singapore's mythical Merlion, is energetic and outgoing, and has many friends from around the world. Whenever his friends visit, Merli takes the opportunity to show them the best and most interesting parts of Singapore!

Don't forget to tag us on social media when you explore our little island!

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