

GPEN 2022

Hosted at

University of Minnesota, Twin Cities

October 19 - 22, 2022

TABLE OF CONTENTS

Welcome from the Committee	2
Acknowledgement	3
Borchardt Keynote Lecture	4
Program Overview	5
Event Map	7
Event Highlights	8
Transportation and Other Information.....	9
Podium Presentations	10
Short Courses	14
Poster Presentations	19
Sponsors	24
Conference Attendees	32
Notes	41

WELCOME FROM THE COMMITTEE

Dear GPEN2022 Attendees,

We are delighted to host the Globalization of Pharmaceuticals Education Network (GPEN) 13th meeting (GPEN2022) at the University of Minnesota. GPEN2022 is pleased and honored to welcome over 200 participants from over 48 universities and 25 industrial observers. After 2 years of necessary postponement, we are eager to meet all of you and wholeheartedly welcome you from around the world.

The journey of GPEN started at the University of Kansas in 1996 with the founders' noble purpose: to provide an international platform for young pharmaceutical scientists to have scientific, professional, and personal interactions. In the 26 years of its existence, GPEN has provided this platform for students to present their cutting-edge research and interact with faculty and industrial scientists. The GPEN alums have taken up senior and distinguished roles in numerous areas of academic and industrial pharmaceutical sciences. Many of them continue to support GPEN, and we are immensely grateful for their contribution. We believe that the legacy of GPEN will be passed down to future students, nurturing new generations of pharmaceutical scientists.

One unique aspect of this GPEN meeting is that we all experienced an unprecedented global pandemic. The original GPEN biannual meeting was scheduled for 2020, which was postponed to 2022 due to travel restrictions and safety considerations. This pandemic has influenced all of us in our personal and professional lives, which is also the case for the GPEN2022 planning committee. The GPEN2022 organizing committee has put a great effort into preparing a safe, productive, and interactive meeting.

GPEN2022 meeting will provide career networking opportunities, connecting senior pharmaceutical students with industrial participants. We have also planned evening events in both Minneapolis and St. Paul to give you a flavor of our lovely Twin Cities. We sincerely look forward to four days of rigorous education, science, and networking and sincerely hope you all have a pleasant and fruitful meeting.

On behalf of the GPEN2022 Organizing Committee,

Tongzhen Xie, Wenjuan Zhang, Andrew Zhou & Surabhi Talele

Student Co-chairs

Prof. William F. Elmquist & Prof. Raj Suryanarayanan

Faculty Co-chairs

ACKNOWLEDGEMENT

The GPEN2022 Organizing Committee would like to thank graduate students, faculty and staff in the Department of Pharmaceutics at the University of Minnesota (UMN) for their solid support and significant contribution to the planning of the meeting.

The GPEN2022 Organizing Committee would like to publicly thank: Eli Lilly & Company for their generous support for registration bags and its contents; and the following companies for contributing toward the housing and registration expenses of 69 GPEN-sponsored graduate students and post-doctoral fellows: AbbVie; Bristol Myers Squibb; Teva; Novo Nordisk; Daiichi-Sankyo; AstraZeneca; Amgen Inc.; Merck & Co., Inc., Rahway, NJ, USA; Captisol, A Ligand Technology; Elsevier; APhA Journal of Pharmaceutical Sciences; Upsher-Smith; Forum for Pharmaceutical Technology Innovation, Japan; Sawai Pharmaceutical Co., Ltd..

The Organizing Committee wishes to express their deepest gratitude to all those who have provided support and guidance while organizing GPEN2022. We would like to especially thank:

- ❖ GPEN Founder and Senior Advisor Ronald Borchardt, the GPEN Board of Directors (Kenneth Audus, Teruna Siahaan, Yoshi Takakura, Jeffrey Krise) and the GPEN Executive Committee members (Patrick Augustijns, Christian Schöneich, Joseph Nicolazzo, Christel Bergström, Kim Brouwer, Bianca Liederer)
- ❖ Ms. Nancy Helm (University of Kansas) and Prof. Jeffrey Krise who were instrumental in organizing and planning of the meeting
- ❖ The Borchardt Keynote Lecturer Prof. Michael Osterholm (University of Minnesota)
- ❖ Ms. Katie James and Ms. Amanda Hokanson (University of Minnesota) who were our liaisons with various key contacts
- ❖ All student committee members and student volunteers from the Department of Pharmaceutics at the UMN
- ❖ All GPEN2022 sponsors
- ❖ All judges of podium and poster presentations
- ❖ All faculty and industrial short course speakers
- ❖ All podium session moderators
- ❖ All short course coordinators
- ❖ All industry observers
- ❖ GPEN2018 Organizing Committee, especially Sze-Han Lee, Hongyi Ouyang, Cheryl Xin-Yi Wong from National University of Singapore

BORCHARDT KEYNOTE LECTURE



Michael T. Osterholm, Ph.D., M.P.H.

Regents Professor, Division of Environmental Health Sciences, University of Minnesota

Director, Center for Infectious Disease Research and Policy (CIDRAP), University of Minnesota

Professor, Technological Leadership Institute, University of Minnesota

Adjunct Professor of Medicine, Division of Infectious Diseases and International Medicine, University of Minnesota

Dr. Osterholm is Regents Professor, McKnight Presidential Endowed Chair in Public Health, the director of the Center for Infectious Disease Research and Policy (CIDRAP), Distinguished University Teaching Professor in the Division of Environmental Health Sciences, School of Public Health, a professor in the Technological Leadership Institute, College of Science and Engineering, and an adjunct professor in the Medical School, all at the University of Minnesota.

In November 2020, Dr. Osterholm was appointed to President-elect Joe Biden's 13-member Transition COVID-19 Advisory Board. From June 2018 through May 2019, he served as a Science Envoy for Health Security on behalf of the US Department of State. He is also on the Board of Regents at Luther College in Decorah, Iowa.

He is the author of the *New York Times* best-selling 2017 book, *Deadliest Enemy: Our War Against Killer Germs*, in which he not only details the most pressing infectious disease threats of our day but lays out a nine-point strategy on how to address them, with preventing a global flu pandemic at the top of the list.

In addition, Dr. Osterholm is a member of the National Academy of Medicine (NAM) and the Council of Foreign Relations. In June 2005 Dr. Osterholm was appointed by Michael Leavitt, Secretary of the Department of Health and Human Services (HHS), to the newly established National Science Advisory Board on Biosecurity. In July 2008, he was named to the University of Minnesota Academic Health Center's Academy of Excellence in Health Research. In October 2008, he was appointed to the World Economic Forum Working Group on Pandemics.

Dr. Osterholm has been an international leader on the critical concern regarding our preparedness for an influenza pandemic. His invited papers in the journals *Foreign Affairs*, the *New England Journal of Medicine*, and *Nature* detail the threat of an influenza pandemic before the recent pandemic and the steps we must take to better prepare for such events.

Dr. Osterholm has also been an international leader on the growing concern regarding the use of biological agents as catastrophic weapons targeting civilian populations. In that role, he served as a personal advisor to the late King Hussein of Jordan. Dr. Osterholm provides a comprehensive and pointed review of America's current state of preparedness for a bioterrorism attack in his *New York Times* best-selling book, *Living Terrors: What America Needs to Know to Survive the Coming Bioterrorist Catastrophe*.

Learn more about Prof. Osterholm at
<https://www.cidrap.umn.edu/about-us/cidrap-staff/michael-t-osterholm-phd-mph>

PROGRAM OVERVIEW

Wednesday (October 19) McNamara Alumni Center & Graduate Hotel

2:00 PM-5:00 PM	Registration (Graduate Hotel)
5:30 PM onward	Registration (McNamara Alumni Center: Memorial Hall)
6:00 PM-6:10 PM	Welcoming remarks: Prof. Kenneth Audus (Chair of GPEN's Board of Directors)
6:10 PM-6:20 PM	Opening remarks: Dean Lynda Welage (Dean of the College of Pharmacy, UMN)
6:20 PM-6:30 PM	Opening remarks: Prof. Ronald Siegel (Department Head of Pharmaceutics, UMN)
6:30 PM-7:15 PM	Borchardt Keynote lecture: Prof. Michael Osterholm
7:15 PM-9:30 PM	Welcome Reception

Thursday (October 20) McNamara Alumni Center & Mill City Museum

8:00 AM-9:05 AM	Podium session 1: Travel Fellowship presentation (S1-S3)
9:05 AM-10:00 AM	Coffee break & Poster session (A1-A35)
10:00 AM-11:40 AM	Podium session 2: Drug discovery (S4-S8)
11:40 AM-12:50 PM	Buffet lunch
12:50 PM-2:30 PM	Podium session 3: In Vitro/In Vivo model (S9-S13)
2:30 PM-3:30 PM	Coffee break & Poster session (A1-A35)
3:30 PM-4:30 PM	Podium session 4: Machine learning (S14-S16)
5:20 PM-6:00 PM*	Bus transfer to Mill City Museum
6:00 PM-8:30 PM	Sunset Riverfront Dinner Buffet
8:00 PM-8:45 PM*	Bus transfer to Graduate Hotel

* *Transportation details on Page 9*

PROGRAM OVERVIEW

Friday (October 21)

McNamara Alumni Center & Minnesota History Center

8:00 AM-9:00 AM	Podium session 5: Formulation (S17-S19)
9:00 AM-10:00 AM	Coffee break & Poster session (B1-B36)
10:00 AM-11:40 AM	Podium session 6: Nanoparticles in drug delivery (S20-S24)
11:40 AM-12:50 PM	Buffet lunch
12:50 PM-2:10 PM	Podium session 7: PK/PD (S25-S28)
2:10 PM-3:10 PM	Coffee break & Poster session (B1-B36)
3:10 PM-4:50 PM	Podium session 8: Macromolecular drug delivery (S29-S33)
5:30 PM-5:45 PM*	Bus transfer to Minnesota History Center
6:00 PM-9:00 PM	Gallery Banquet
9:10 PM-9:30 PM*	Bus transfer to Graduate Hotel

** Transportation details on Page 9*

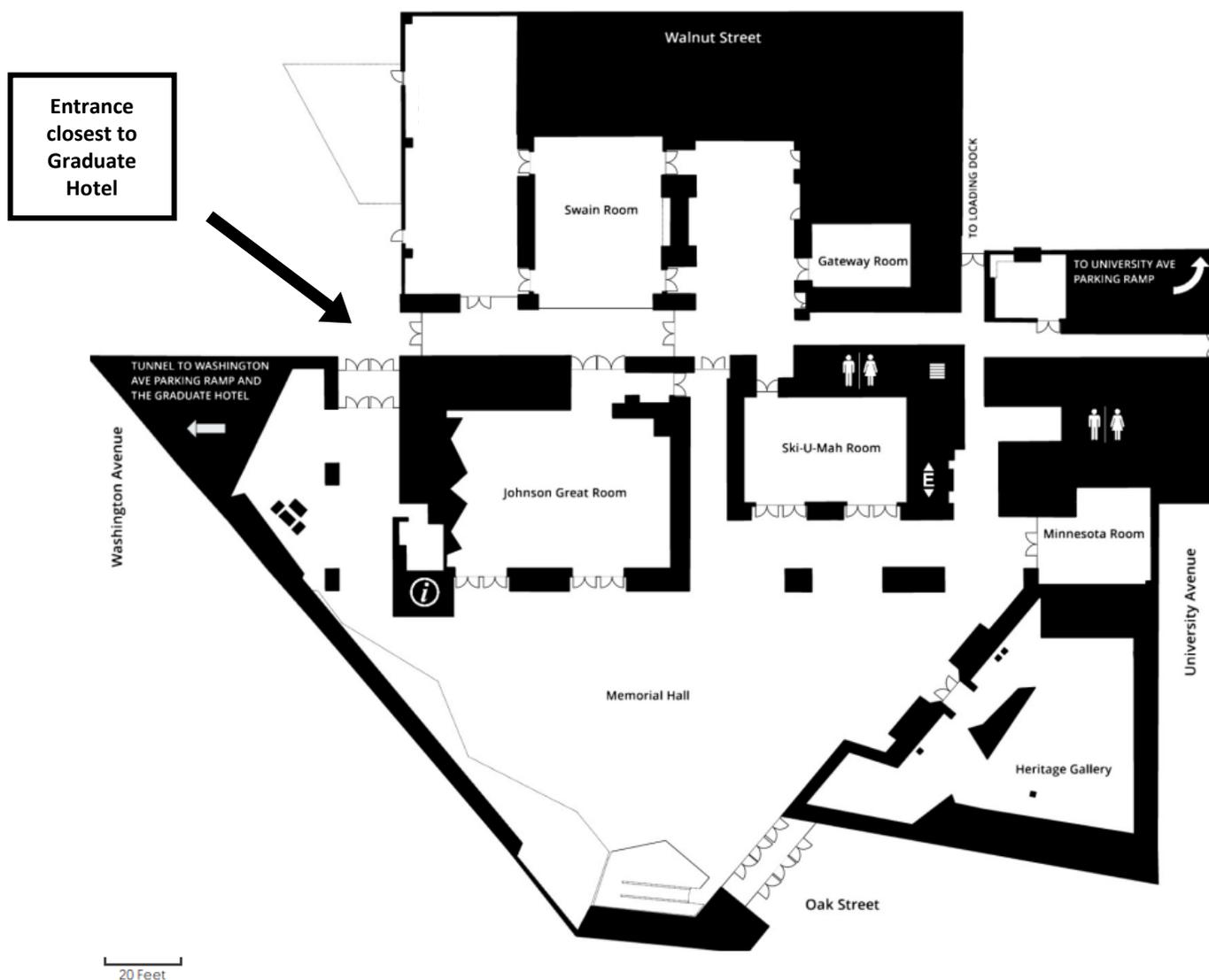
Saturday (October 22)

McNamara Alumni Center

7:00 AM onward	Luggage Storage at Graduate Hotel until 3:00 PM
8:30 AM-9:10 AM	Student podia presentation (Breakout rooms#)
9:10 AM-9:20 AM	Coffee break
9:20 AM-10:20 AM	Faculty short courses (Breakout rooms#)
10:20 AM-10:30 AM	Coffee break
10:30 AM-11:30 AM	Faculty short courses (Breakout rooms#)
11:30 AM-12:30 PM	Box lunch (Memorial Hall)
12:30 PM-1:00 PM	Closing Remarks & Award Ceremony (Memorial Hall)

Breakout room details on Page 7

McNAMARA ALUMNI CENTER MAP



SHORT COURSES BREAKOUT ROOMS

Short course	Breakout room
Drug discovery-development interface	Minnesota Room
PK/PD modeling of biologics and delivery to the brain	Thomas Swain Room
Strategies for enhancing oral bioavailability	Heritage Gallery
Formulation of biologics	Johnson Great Room
Materials and polymer science	Ski-U-Mah Room

EVENT HIGHLIGHTS

Opening and Keynote Lecture

Venue: McNamara Alumni Center - Memorial Hall

October 19, 6:00 pm–7:15 pm

Prof. Kenneth Audus welcomes everyone to GPEN2022, and will present the organization, objectives, and history of GPEN. Dean Lynda Welage and Prof. Ronald Siegel will deliver the opening address. This will be followed by Keynote Lecture with Prof. Michael Osterholm.

Welcome Reception

Venue: McNamara Alumni Center - Memorial Hall

October 19, 7:15 pm–9:30 pm

Sponsored by Pharmaron

Enjoy a warm welcome to Minneapolis while marveling at the grandeur and unique ambience of the McNamara Alumni Center. Meet and greet fellow participants as we kick off the long awaited GPEN2022 conference.



Sunset Riverfront Dinner Buffet

Venue: Mill City Museum, Minneapolis

October 20, 6:00 pm–8:30 pm

Sponsored by Department of Pharmaceutics & College of Pharmacy, University of Minnesota



Join us for buffet style dinner at the historic Mill City Museum. A national historic landmark, which was built within the ruins of what was once the world's largest flour mill. Enjoy the panoramic view of the Minneapolis skyline from the observation deck and take a deep dive into the history of Minneapolis as you wander the museum corridors.

Gallery Banquet

Venue: Minnesota History Center, St. Paul

October 21, 6:00 pm–9:00 pm

Sponsored by Gilead Sciences, Inc.

Take a tour and experience Minnesota's history in the galleries at the Minnesota History Center. Also step into Victorian London and test your powers of observation as you work alongside the world's most famous detective in the Sherlock Holmes gallery. Later, relish a comfortable dinner and witness the Handover Ceremony.



TRANSPORTATION AND OTHER INFORMATION

<p>Addresses</p> <p><i>Academic Sessions Venue:</i></p> <p><u>McNamara Alumni Center</u> 200 SE Oak St, Minneapolis, MN 55455</p> <p><i>Hotel:</i></p> <p><u>The Graduate Minneapolis Hotel</u> 615 Washington Ave SE, Minneapolis, MN 55455</p> <p><i>Networking Events Venues:</i></p> <p><u>Mill City Museum:</u> 704 S 2nd St, Minneapolis, MN 55401</p> <p><u>Minnesota History Center:</u> 345 W Kellogg Blvd, St Paul, MN 55102</p> <p><i>Emergency contacts:</i></p> <p>Emergency 911 Campus police 612 624-2677 <i>Note: USA's country code is +1</i></p>	<p>Transportation</p> <p>For the convenience of GPEN2022 attendees, there will be free school bus shuttles between Graduate Hotel and the networking event venues.</p> <p><i>October 20 (Thursday)</i></p> <p><u>To Mill City Museum:</u> Buses will depart at 5:20 pm and 6:00 pm from Graduate Hotel</p> <p><u>To Graduate Hotel:</u> Buses will depart at 8:00 pm and 8:45 pm from Mill City Museum</p> <p><i>October 21 (Friday)</i></p> <p><u>To Minnesota History Center:</u> Buses will depart at 5:30 pm and 5:45 pm from Graduate Hotel</p> <p><u>To Graduate Hotel:</u> Buses will depart at 9:10 pm and 9:30 pm from Minnesota History Center</p> <p><i>*Parking will be available at all venues at the owner's cost</i></p> <p><i>Alternative transportation:</i> Uber/ Lyft (book on iOS/Android) Metro Transit (Buses and Light Rail) – Single trip/ 6-hr pass available https://www.metrotransit.org/</p>
<p>Health and Safety</p> <p>GPEN is focused on ensuring a safe and productive GPEN2022 conference. GPEN encourages all attendees to remain masked for the duration of GPEN2022, in accordance with local health authorities in Minneapolis, MN. Hand sanitizers are placed in every venue.</p> <p>For more details about health and safety, please refer to: www.gpenconference.com</p>	

PODIUM PRESENTATIONS

Thursday, October 20

Memorial Hall

Podium session 1: Ronald T. and Pamela K. Borchardt Travel Fellowship presentation

Podium Moderator: Prof. Ronald Borchardt (University of Kansas)

Sponsored by Ronald T. and Pamela K. Borchardt & Amgen Inc.

8:00–8:05 Borchardt Travel Fellowship Introduction

Code	Time	Title	Presenter	Affiliation
S1	8:05-8:25	Metabolic activation of the acrylamide Michael acceptor warhead in Futibatinib to an epoxide intermediate engenders covalent inactivation of cytochrome P450 3A	Lloyd Wei Tat Tang	National University of Singapore
S2	8:25-8:45	Evaluating burst release kinetics of leuprolide acetate PLGA microspheres using an in-situ UV fiber optic technique	Minzhi Yu	University of Michigan
S3	8:45-9:05	Identifying transporter involvement in complex drug-drug interactions	Jasleen Sodhi	Septerna

Morning coffee break and poster session

9:05 AM – 10:00 AM

Poster number: A1-A35

Sponsored by GSK

Podium session 2: Drug Discovery

Podium Moderator: Katia Sirna (University of Helsinki)

Sponsored by GSK

Code	Time	Title	Presenter	Affiliation
S4	10:00-10:20	Targeting CYP51 and CYP5122A1 in the ergosterol biosynthesis pathway in <i>Leishmania donovani</i> for the treatment of human leishmaniasis	Yiru Jin	University of Kansas
S5	10:20-10:40	Fluorogenic EXO-probe aptamers for imaging and tracking exosomal RNAs	Emily Bonacquisti	University of North Carolina
S6	10:40-11:00	Immunomodulatory effect of NAP1051 in murine systemic lupus erythematosus (SLE)	Priyal Dave	University of Southern California
S7	11:00-11:20	Development of novel long-acting glaucoma medicines by utilizing melanin binding	Annika Valtari	University of Eastern Finland
S8	11:20-11:40	Sex difference of glucose transport in an Alzheimer's disease transgenic mouse model	Lushan Wang	University of Minnesota

Buffet Lunch

11:40 AM – 12:50 PM

Sponsored by AbbVie

PODIUM PRESENTATIONS

Thursday, October 20

Memorial Hall

Podium session 3: In Vitro/In Vivo model

Podium Moderator: Zengtao Wang (University of Minnesota)

Sponsored by Kailas and Dhiren Thakker

Code	Time	Title	Presenter	Affiliation
S9	12:50-1:10	Evaluation in Pig of an Intestinal Administration Device for Oral Peptide Delivery	Staffan Berg	Uppsala University
S10	1:10-1:30	Chorioallantoic membrane (CAM) as a 3D cell culture model used for evaluating photoactive nanoscale drug delivery systems	Jan Schulze	University of Marburg
S11	1:30-1:50	In vitro efficacy testing for drugs targeting inflammatory bowel disease	Sabrina Schnur	Saarland University
S12	1:50-2:10	Dosage escalation and time-course histology study for adriamycin-induced FSGS animal model	Haochen Jiang	University of Nebraska
S13	2:10-2:30	Development of immunoliposome for analysis in organ-on-a-chip platform	Daniel Giuliano Cerri	University of Sao Paulo

Afternoon coffee break and poster session

2:30 PM – 3:30 PM

Poster number: A1-A35

Sponsored by Kailas and Dhiren Thakker

Podium session 4: Machine learning

Podium Moderator: Iori Azuma (University of Tokyo)

Sponsored by Kailas and Dhiren Thakker

Code	Time	Title	Presenter	Affiliation
S14	3:30-3:50	Solubility prediction by deep learning of quantum information on molecular surface	Nicholas Huls	Purdue University
S15	3:50-4:10	An end-to-end machine learned peptide aptamer strategy to develop translational precision extracellular vesicle therapeutics	Zachary Greenberg	University of Florida
S16	4:10-4:30	Importance of an evaluation strategy using the time axis in adverse event prediction with machine learning	Katsuhisa Morita	University of Tokyo

GPEN networking event: Sunset Riverfront Dinner Buffet

6:00 PM – 8:30 PM at Mill City Museum

Sponsored by Department of Pharmaceutics & College of Pharmacy, University of Minnesota

PODIUM PRESENTATIONS

Friday, October 21

Memorial Hall

Podium session 5: Formulation

Podium Moderator: Preye Agbana (University of Kentucky)

Sponsored by Boehringer-Ingelheim Pharmaceuticals, Inc.

Code	Time	Title	Presenter	Affiliation
S17	8:00-8:20	Modification of hyaluronic acid based nanogels as a curcumin delivery enhancer	Tisana Kaewruethai	Chulalongkorn University
S18	8:20-8:40	Towards the rational development of long-acting intrauterine systems for contraception	Suraj Fpanse	University of Connecticut
S19	8:40-9:00	Biomimetic PLGA nanoparticles to improve the absorption of sorafenib for the treatment of hepatocellular carcinoma	Minki Jin	Chungnam National University

Morning coffee break and poster session

9:00 AM – 10:00 AM

Poster number: B1-B36

Sponsored by Boehringer-Ingelheim Pharmaceuticals, Inc.

Podium session 6: Nanoparticles in drug delivery

Podium Moderator: Yuexuan Li (University of Minnesota)

Sponsored by Boehringer-Ingelheim Pharmaceuticals, Inc.

Code	Time	Title	Presenter	Affiliation
S20	10:00-10:20	Hollow gold nanoparticles as a platform of photothermal therapy and drug delivery	Jin Liu	Nagoya City University
S21	10:20-10:40	Exploiting an innate immune response to lipid-nucleic acid nanoparticles to decrease off-target accumulation and increase tumor delivery of chemotherapeutic nanomedicines	Scott Tilden	University of Colorado
S22	10:40-11:00	Optimizing a Liposomal Azithromycin Formulation to Relieve Cardiac Inflammation	Abdullah Masud	University of Kentucky
S23	11:00-11:20	Poly(lactic acid) nanoparticle modulation of macrophage inflammatory responses	Andrea Cottingham	University of Maryland
S24	11:20-11:40	Vascular pathophysiology characterization in chronic rhinosinusitis for controlled drug delivery	Nitish Khurana	University of Utah

Buffet lunch

11:40 AM – 12:50 PM

Sponsored by Chong Yuan and Xiaohong Yu

PODIUM PRESENTATIONS

Friday, October 21

Memorial Hall

Podium session 7: PK/PD

Podium Moderator: Wenqiu Zhang (University of Minnesota)

Sponsored by BASF

Code	Time	Title	Presenter	Affiliation
S25	12:50-1:10	The dose-dependent effect of a stabilized cannabidiol nanoemulsion on ocular surface inflammation and intraocular pressure	Leslie Rebibo	Hebrew University of Jerusalem
S26	1:10-1:30	Utilization of natural lipid trafficking pathways through lipid conjugation of brush PEG polymers to influence lymph uptake, plasma half-life and biodistribution	Mohammad Abdallah	Monash University
S27	1:30-1:50	Pharmacokinetics/pharmacodynamics evaluation of antibody-drug conjugate administered via nonconventional routes.	Hsuan Ping Chang	University at Buffalo, SUNY
S28	1:50-2:10	Evaluation of the transwell system as a new tool to predict multidrug and toxin extrusion protein (MATE) mediated renal DDIs	Leticia Salvador Vieira	University of Washington

Afternoon coffee break and poster session

2:10 PM – 3:10 PM; Poster number: B1-B36

Sponsored by BASF

Podium session 8: Macromolecular drug delivery

Podium Moderator: Silvana Geisshüsler (ETH-Zurich)

Sponsored by BASF

Code	Time	Title	Presenter	Affiliation
S29	3:10-3:30	Stabilization of a DNA transfection system based on human transcription factor A (TFAM)	Steffen Honrath	ETH-Zurich
S30	3:30-3:50	A native chemical ligating crosslinker for the preparation of biodegradable core-crosslinked polymeric micelles and click conjugation of model compounds	Erik Hebels	Utrecht University
S31	3:50-4:10	Investigation of in vivo behavior of extracellular vesicles with different sizes after intraduodenal administration	Yuki Kobayashi	Kyoto University
S32	4:10-4:30	Depletion of tumor associated macrophages enhances local and systemic platelet-mediated anti-PD-1 delivery for post-surgery tumor recurrence treatment	Zhaoting Li	University of Wisconsin
S33	4:30-4:50	Direct effect of food-derived macromolecules on intestinal functions --Apple-derived exosome-like nanoparticles mediate down-regulation of intestinal transporter expression by microRNA of apples	Qiunan Zhu	Kanazawa University

GPEN networking event: Gallery Banquet

6:00 PM – 9:00 PM at Minnesota History Center

Sponsored by Gilead Sciences, Inc.

SHORT COURSES

Saturday, October 22

Short course 1: Drug Discovery – Development Interface

Sponsored by Pfizer, Inc.

Venue: Minnesota Room

Leader:

Prof. Michael Hageman (University of Kansas)

Code	Time	Title	Presenter	Affiliation
SC1	8:30-8:50	Membrane molecular dynamics-adjuvated design and synthesis of multisubstituted pyridines as novel PKC-targeted agonists	Riccardo Provenzani (Student)	University of Helsinki
SC2	8:50-9:10	Development of a Dual Prodrug for Triggered Antibiotic Activation	Catherine Ross (Student)	University of Otago
9:10-9:20 AM Break				
SC3	9:20-9:50	The ADME-Tox Toolbox for Candidate Selection	Kim Brouwer	University of North Carolina at Chapel Hill
SC4	9:50-10:20	Preclinical Assessment of Drug Delivery and Developability	Michael Hageman	University of Kansas
10:20-10:30 AM Break				
SC5	10:30-11:00	Oral delivery of macromolecules: impact of permeation enhancers and dosage form design on intestinal absorption	Christel Bergström	Uppsala University
SC6	11:00-11:30	Role of excipients in efficient drug delivery	Raj Suryanarayanan	University of Minnesota
11:30-12:30 PM Box Lunch				

Closing Remarks & Award Ceremony (Memorial Hall)

12:30 PM – 1:00 PM

Sponsored by Theravance

SHORT COURSES

Saturday, October 22

Short course 2: PK/PD modeling of biologics and delivery to the brain

Sponsored by Pfizer, Inc.

Venue: Thomas Swain Room

Leaders:

Prof. Joseph Balthasar (University at Buffalo, SUNY)

Prof. William Elmquist (University of Minnesota)

Code	Time	Title	Presenter	Affiliation
SC7	8:30-8:50	Investigation of the absorption characteristics of tacrolimus in children and adults using PBPK	Matthias Van der Veken (Student)	Katholieke Universiteit Leuven
SC8	8:50-9:10	A microfluidic brain-on-a-chip model for examining blood-brain barrier (BBB) response to the tumor microenvironment and approaches to enhance drug delivery to the brain	Stacey Line (Student)	University of Manitoba
9:10-9:20 AM Break				
SC9	9:20-9:50	PBPK Models to Characterize Brain PK of Protein Therapeutics	Dhaval Kumar Shah	University at Buffalo, SUNY
SC10	9:50-10:20	PK-inspired adjuvants to increase the safety and efficacy of anti-cancer antibody therapies	Joseph Balthasar	University at Buffalo, SUNY
10:20-10:30 AM Break				
SC11	10:30-11:00	Preclinical Translational Studies on CNS Penetration of Drugs	William Elmquist	University of Minnesota
SC12	11:00-11:30	Disease effects on the blood-brain barrier: implications for CNS drug delivery	Joseph Nicolazzo	Monash University
11:30-12:30 PM Box Lunch				

Closing Remarks & Award Ceremony (Memorial Hall)

12:30 PM – 1:00 PM

Sponsored by Theravance

SHORT COURSES

Saturday, October 22

Short course 3: Strategies for enhancing oral bioavailability (including lipid-based systems)

Sponsored by Pfizer, Inc.

Venue: Heritage Gallery

Leaders:

Prof. Ben Boyd (Monash University & University of Copenhagen)

Code	Time	Title	Presenter	Affiliation
	8:30-8:40	Introduction to the topic	Ben Boyd	Monash University and University of Copenhagen
SC13	8:40-9:10	Solid state properties in enhancing bioavailability	Thomas Rades	University of Copenhagen
9:10-9:20 AM Break				
SC14	9:20-9:50	The good, the bad and the ugly of oral lipid-based drug delivery	Anette Müllertz	University of Copenhagen
SC15	9:50-10:05	Supersaturation Propensity of Nilotinib – Identifying Effective Polymeric Precipitation Inhibitors to Inform Oral Formulation Design	Jonathan Currie (Student)	University of Copenhagen
10:05-10:30 AM Break				
SC17	10:30-11:00	TBD	Simon Matoori	University of Montreal
SC18	11:00-11:30	The good and the bad of complexation for enhancing oral delivery	Ben Boyd	Monash University and University of Copenhagen
11:30-12:30 PM Box Lunch				

Closing Remarks & Award Ceremony (Memorial Hall)

12:30 PM – 1:00 PM

Sponsored by Theravance

SHORT COURSES

Saturday, October 22

Short course 4: Formulation of biologics (proteins, antibodies, and vaccines)

Sponsored by Pfizer, Inc.

Venue: Johnson Great Room

Leaders:

Prof. Christian Schöneich (University of Kansas)

Code	Time	Title	Presenter	Affiliation
SC19	8:30-8:50	Targeted peptide/phospholipid oligonucleotide delivery platform - a delivery tool with promise for in vivo gene delivery	Frazer Sinclair (Student)	University of Queensland
SC20	8:50-9:10	Polysarcosine as a promising alternative to polyethylene glycol in mRNA lipid formulations both in vitro and in vivo	Dennis Unthan (Student)	Leiden University
9:10-9:20 AM Break				
SC21	9:20-9:50	Formulation of biologics: How to ask the right questions?	Gerhard Winter	Ludwig Maximilian University of Munich
SC22	9:50-10:20	Chemical degradation of biologics: mechanisms, prediction, and impact on aggregation and immunogenicity	Christian Schöneich	University of Kansas
10:20-10:30 AM Break				
SC23	10:30-11:00	Challenges with Regard to Processing and Handling of Protein Drug Products	Reza Nejadnik	University of Iowa
SC24	11:00-11:30	Formulation of nucleic acid-based vaccines	Camilla Foged	University of Copenhagen
11:30-12:30 PM Box Lunch				

Closing Remarks & Award Ceremony (Memorial Hall)

12:30 PM – 1:00 PM

Sponsored by Theravance

SHORT COURSES

Saturday, October 22

Short course 5: Materials and polymer science

Sponsored by Pfizer, Inc.

Venue: Ski-U-Mah Room

Leaders:

Prof. Raj Suryanarayanan (University of Minnesota)

Prof. Ronald Siegel (University of Minnesota)

Code	Time	Title	Presenter	Affiliation
SC25	8:30-8:50	Lipid Nanoparticles with Tunable Structure for Plasmalogen Delivery in Nanomedicine	Yu Wu (Student)	University of Paris-Saclay
SC26	8:50-9:10	In vitro optimization and in vivo testing of a novel tablet formulation with double control mechanism for colonic drug delivery	Viviane Doggwiler (Student)	University of Basel
9:10-9:20 AM Break				
SC27	9:20-9:50	Non-Viral Carrier Development for mRNA Delivery	Owen Fenton	University of North Carolina at Chapel Hill
SC28	9:50-10:20	Poly(ortho esters) in Drug Delivery: "Old" Polymers for New Tricks	Chun Wang	University of Minnesota
10:20-10:30 AM Break				
SC29	10:30-11:00	Industrial perspective on role of polymers for drug product design using case studies	Snehal Shukla	Pfizer
SC30	11:00-11:30	Aspects of Sustainability in Amorphous Drug and Dosage Form Design	Thomas Rades	University of Copenhagen
11:30-12:30 PM Box Lunch				

Closing Remarks & Award Ceremony (Memorial Hall)

12:30 PM – 1:00 PM

Sponsored by Theravance

Poster	Title and Author
A1	Intradermal administration of influenza vaccine with trehalose and pullulan-based dissolving microneedle arrays Jihui Lee, Leiden University
A2	Improving the nanomaterial delivery by using Transportan peptide in the bystander manner Nianwu Wang, University of Minnesota
A3	Oral chemotherapy – an alternative chemotherapy dosage pathway utilizing bovine exosomes Madison Ricco, University of Colorado
A4	Antigen-adjuvant interactions, stability, and immunogenicity profiles of a SARS-CoV-2 receptor-binding domain (RBD) antigen formulated with aluminum salt and CpG adjuvants Sakshi Bajoria, University of Kansas
A5	Systematic evaluation of the ex-throat plume properties of MDI formulation Simon Berger, University of Florida
A6	CNS delivery of novel DNA damage response (DDR) inhibitors for the treatment of brain tumors Sneha Rathi, University of Minnesota
A7	Spray-dried microparticles composed of carbamazepine-polyvinylalcohol solid dispersion for the drug delivery via nose-to-brain route Susumu Suwabe, Nagoya City University
A8	Degradation of disulfide-containing proteins induced by pharmaceutical buffers Yaqi Wu, University of Kansas
A9	Near UV and visible light degradation of iron (III)-containing citrate buffer: formation of carbon dioxide radical anion via fragmentation of a sterically hindered alkoxyl radical Yilue Zhang, University of Kansas
A10	Taste masking of Ephedrine Hydrochloride by forming a new salt with sodium cyclamate Arushi Agarwal, University of Minnesota
A11	Preparation and characterization of new sweet salt of berberine Tianyi Xiang, University of Minnesota
A12	Effect of bottlebrush polymer architecture on pH response for oral drug delivery Kaylee Barr, University of Minnesota
A13	In vitro simulation of pressure conditions in the colon and their influence on drug release Michael Lanz, University of Basel
A14	Dry powder formulation of RNA-loaded nanoparticles for inhalation and improved storage stability Benjamin Winkeljann, Ludwig Maximilian University of Munich

Poster	Title and author
A15	Development and evaluation of Eudragit S100 coated curcumin-nanostructured lipid carriers Jong-Hee Won, Chungnam National University
A16	Ternary polypeptide nanoparticles with improved encapsulation, sustained release, and enhanced in vitro efficacy of carfilzomib Preye Agbana, University of Kentucky
A17	Thimerosal-induced Destabilization of HPV16 VLPs: Mechanism Studies Ria Caringal, University of Kansas
A18	Remote loading of ATP into liposome by metal gradient for therapeutic study Yu Zhang, University of North Carolina
A19	Systems biology modeling of the insulin signaling network in the blood-brain barrier endothelium predicts cerebrovascular inflammation in Alzheimer's disease Zengtao Wang, University of Minnesota
A20	Surfactant adsorption modelling Vedant Bhagali, University of Minnesota
A21	Paper-based technology for diagnosis of infectious diseases Aayushi Laliwala, University of Nebraska
A22	Investigation of matrix factorization methods employed in drug repositioning Iori Azuma, University of Tokyo
A23	Agmatine attenuates the calcium transients in ex vivo spinal cord dorsal horn Tongzhen Xie, University of Minnesota
A24	Evaluating of different nanoscale drug delivery systems for photodynamic therapy Jens Schäfer, University of Marburg
A25	Development poly-ADP-ribose as novel vaccine carrier Jiawei Li, University of Southern California
A26	Design, synthesis and biological evaluation of tertiary bisamide pyridines and bicyclic derivatives as allosteric modulators of protein kinase C Katia Sirna, University of Helsinki
A27	Targeting intratumoral fibrin-clot improves the immune checkpoint inhibitor efficacy against pancreatic ductal adenocarcinoma Md Mahedi Hasan, University of Texas at El Paso
A28	Quantitative analysis of the effect of osmolality on beverage-drug interaction by evaluating ingredient absorption Miyuki Takemura, Kanazawa University
A29	ZipperCells exhibit enhanced accumulation and retention at the site of myocardial infarction Natalie Jasiewicz, University of North Carolina
A30	A rheological approach for determining miscibility of amorphous solid dispersions Sichen Song, University of Minnesota

Poster	Title and author
A31	CendR peptides targeting into laser induced choroidal neovascularization after intravitreal injection in mice Sonja Korhonen, University of Eastern Finland
A32	Differential gene expression of human brain endothelial cells compared to endothelial cells co-cultured with pericytes Doug Nelson, University of Minnesota
A33	The positive feedback loop between cerebrovascular inflammation and amyloid beta accumulation in Alzheimer’s disease Vrishali Salian, University of Minnesota
A34	Enhanced tumor targeting and in vivo efficacy of dendrimer-peptide conjugates: a novel nanocarrier platform for effective immune checkpoint blockade DaWon Kim, University of Wisconsin
A35	Click-to-dissolve: Stimuli-responsive hydrogels for improved drug delivery Parul Rani, University of Otago

Friday, October 21

Poster	Title and author
B1	Intracellular tracking of plasmid DNA in cell transfection assays Christina Greitens, ETH-Zurich
B2	Non-invasive Brain Delivery and Clearance of Antibodies in Animal Models Kelly Schwinghamer, University of Kansas
B3	Liquid crystalline nanoparticles loading triptolide and TNF-alpha siRNA to deliver anti-inflammatory drug and silencing gene expression in topical therapy of psoriasis Ana Vitoria Silvestrini, University of Sao Paulo
B4	Inulin-based dual-function polymer for the combination treatment of acute kidney injury Chinmay Jogdeo, University of Nebraska
B5	Intramuscularly Delivered Platinum-based Cyanide Countermeasures Matthew Behymer, Purdue University
B6	Analytical and preformulation characterization studies of a recombinant adeno-associated virus (rAAV) vector-based vaccine candidate to enable future formulation development Michael Wang, University of Kansas
B7	Does the Proton Coupled Organic Cation Antiporter Contribute to Brain Capillary Endothelial Cell Uptake of Triptans? Nana Svane, University of Copenhagen
B8	Study the complexation behavior between the cyclic peptide Lanreotide and HPβ-CD Negar Jafari, University of Kansas
B9	Polymer nanoparticles for efficacious mRNA delivery Palas Tiwade, University of North Carolina

Poster	Title and author
B10	Dual Functionality of Bile Acid: Physical Stabilization of Drugs in the Amorphous State and Solubility Enhancement in Solution Rahul Lalge, University of Minnesota
B11	Nanoparticulate Vaccines Delivered via Microneedles Silvana Geisshüsler, ETH-Zurich
B12	Surface-modified PLGA nanoparticles for actively targeted photodynamic therapy of circulating tumor cells Valeri Roschenko, University of Marburg
B13	Developing protein-sparing methods to study protein solubility and stability at high concentration Xi Luan, University of Kansas
B14	CNS Distributional Kinetics of Panobinostat in Mouse Models Wenqiu Zhang, University of Minnesota
B15	COBRA Loaded Ace-DEX Microparticles for Broadly Active Influenza Vaccination Dylan Hendy, University of North Carolina
B16	Direct prediction of hydrodynamic influence on permeating molecular species in biorelevant pharmaceutical profiling Patrick D Sinko, Uppsala University
B17	Characterisation of luminal contents in the proximal colon in healthy adults Sebastian Steigert, Katholieke Universiteit Leuven
B18	Poor and variable oral bioavailability of dimethandrolone (DMA), an investigational male hormonal contraceptive, is likely associated with UGT2B17 mediated first-pass metabolism Sheena Sharma, Washington State University
B19	Optimization and characterization of doxorubicin-loaded ultradeformable liposomal hydrogels for transdermal drug delivery Yeseul Lee, Chungnam National University
B20	CNS penetration of navtemadlin, a potent p53/MDM2 pathway inhibitor for treatment of glioblastoma Wenjuan Zhang, University of Minnesota
B21	Subcutaneous prime combined with pulmonary mucosal boost immunization with an mRNA vaccine induces antigen-specific T-cell responses in the lungs Melike Ongun, University of Copenhagen
B22	Overcoming the skin barrier using zinc oxide tetrapods Anna-Lena Schaedel, University of Copenhagen
B23	Targeting Antigenic Peptides to Immune Cells using Fc-BPI for Immune Modulation in EAE Mice Rucha Mahadik, University of Kansas
B24	Coarse-grained Molecular Dynamics Simulations of ssDNA Loaded Adeno-Associated Virus Tibo Duran, University of Connecticut

Poster	Title and author
B25	Theranostic porous silicon nanoparticles for targeted and responsive treatment and diagnosis of thrombosis Peije Russell, Monash University
B26	Efficient antimicrobial photodynamic therapy based on the photo-triggered release of hypericin cyclodextrin inclusion complex from thermosensitive liposomes Bernd Gutberlet, University of Marburg
B27	Discovering small-molecule auxiliary enhancers of CRISPR/Cas9 gene correction through high-throughput screening of anticancer drugs Danny Wilbie, Utrecht University
B28	Study of In-use stability test in multi-use eye drops according to storage conditions HyeLim Yoo, Chungnam National University
B29	Evaluating the photodynamic efficacy of nebulized liposomal formulations in vitro and in vivo Lena Bender, University of Marburg
B30	Functionalization of docetaxel-loaded liposomes enhances in vitro anti-cancer effect Nhan Phan Tran, Chungnam National University
B31	Effects of varying ratios of gemcitabine and paclitaxel on drug combination nanoparticle formulation that enhances cell delivery and exposures in metastatic breast cancer intended for cancer clearance Xiaolin Xu, University of Washington
B32	Nanoparticle entry into cells in the bystander manner driven by free energy decline and regulated by sizes and shapes YueXuan Li, University of Minnesota
B33	Improving vascular/tissue penetration of nanomaterial through pharmacological regulation of extracellular vesicles Jiaqi Zhao, University of Minnesota
B34	Gelatin based hybrid core-shell structured nanoparticles for macromolecular drug delivery Armin Novak, Saarland University
B35	Biomimetic transplacental delivery of nucleic acid loaded lipid nanoparticles for targeting fetal diseases Amr Abostait, University of Manitoba
B36	Development of lipid-based nanoparticles for the management of lysosomal acid lipase deficiency gene replacement therapy Matthias Zadory, University of Montreal

SPONSORS

Platinum Level

- ❖ AbbVie
- ❖ Amgen Inc.
- ❖ Ronald T. and Pamela K. Borchardt
- ❖ Gilead Sciences, Inc.
- ❖ Pharmaron

Gold Level

- ❖ Bristol Myers Squibb
- ❖ Dean's Office, College of Pharmacy, University of Minnesota
- ❖ Department of Pharmaceutics, University of Minnesota
- ❖ Pfizer, Inc.
- ❖ Chong Yuan and Xiaohong Yu

Silver Level

- ❖ BASF
- ❖ Boehringer-Ingelheim Pharmaceuticals, Inc.
- ❖ Eli Lilly & Company
- ❖ GSK
- ❖ Kailas and Dhiren Thakker

Bronze Level

- ❖ Amgen Inc.
- ❖ AstraZeneca
- ❖ Daiichi-Sankyo
- ❖ Eli Lilly & Company
- ❖ Merck & Co., Inc., Rahway, NJ, USA
- ❖ Novo Nordisk
- ❖ Teva
- ❖ Theravance

Supporter Level

- ❖ Elsevier
- ❖ APhA Journal of Pharmaceutical Sciences
- ❖ Captisol, A Ligand Technology
- ❖ Upsher-Smith

Friend of GPEN

- ❖ Forum for Pharmaceutical Technology Innovation
- ❖ Sawai Pharmaceutical Co., Ltd.

abbvie

A career in science
and innovation?

We Offer That.



Apply
Today



People. Passion. Possibilities.*



GPEN would like to thank the following benefactors for making this initiative possible:

Ronald T. and Pamela K. Borchardt

Amgen, Inc.

Application materials will be sent to member institutions in November 2022

For more information on the Fellowship and its past recipients, please visit <https://gpenconference.com/welcome-2-2/travel-fellowship/>

GILEAD IS PROUD TO SPONSOR GPEN 2022



For more information,
please visit www.Gilead.com.





Premier R&D service provider for the life science industry

Global CRO partner to bring your therapies to life

Thanks to innovation, collaboration, and our deep commitment to our employees and partners, we have been able to keep growing since 2004. We are constantly looking for extraordinary and talented individuals with a passion for science and learning to join the Pharmaron team.



Biologics & CGT

- Discovery Biologics
- Biologics CDMO
- CGT Lab Services
- CGT CDMO – Viral Vectors and Plasmid DNA
- Biologics & Viral Analytics and Characterisation



Chemistry, Manufacturing & Control

- Process Chemistry & Analytical Development
- Material Science
- GMP API Manufacturing
- Formulation Development
- Drug Product Manufacturing
- Commercial-scale Manufacturing



Clinical Development

- Radiosynthesis ^{14}C (including GMP) & ^3H
- Non-clinical ADME ($^{14}\text{C}/^3\text{H}$)
- Pharmacology Models ($^{14}\text{C}/^3\text{H}$)
- Clinical Bioanalysis (GCP)
- Clinical Pharmacology
- Environmental Assessments



Laboratory Services

- Synthetic & Medicinal Chemistry
- Analytical Chemistry
- Computational Chemistry & CADD
- DMPK/ADME
- Biology & Pharmacology
- Medical Device Evaluation
- Safety Assessment

Join an Elite Team that Inspires Passion



United States

China

United Kingdom



pharmaron.com/careers
us.hr@pharmaron.com




UNIVERSITY
OF MINNESOTA
Driven to Discover®

Interested in Drug Delivery?

The PhD and MS Graduate Programs in
Pharmaceutics prepare students for research in
the development and testing of drug products,
including investigating interactions of drugs with
complex biological systems and the physical and
chemical formulation of drugs for delivery.

z.umn.edu/pharmaceutics

 Bristol Myers Squibb™

Transforming patients' lives through science™

We are in the business of breakthroughs—the kind that transform patients' lives. Dedicated to our mission of discovering, developing and delivering life-saving innovations that help patients prevail over serious diseases, we'll never give up our search for more hope, for more people, around the world.

Visit bms.com to see how we're bringing a human touch to everything we do.

© 2022 Bristol-Myers Squibb Company. All rights reserved.





For more than 130 years, the University of Minnesota College of Pharmacy has been home to innovative researchers who work determinedly to discover, develop and implement new ways to meet the diverse health needs of Minnesota and beyond.

PHARMACY.UMN.EDU



COLLEGE OF PHARMACY

UNIVERSITY OF MINNESOTA

Driven to DiscoverSM

WE BELIEVE SCIENCE CAN CURE EVERY HUMAN FROM DISEASE.

SCIENCE WILL WIN
Visit pfizer.com to see how #ScienceWillWin

BASF
We create chemistry

BASF Pharma Solutions

BASF creates chemistry for a sustainable future offering intelligent solutions to the pharmaceutical industry.

With its expertise in polymer chemistry, R&D-capabilities and its commitment in developing excipients, BASF creates solutions for:

- Orals
- Topicals & Transdermals
- Parenterals
- Solubilization
- Biopharma Ingredients
- APIs

Explore our portfolio, request samples, and learn from our experts.
<https://pharmaceutical.basf.com>

Contact us: pharma-solutions@basf.com



Bringing Molecules to Market

At Pfizer, we're committed to creating an environment where our colleagues can achieve success while contributing to the improved health of the world. We walk in as scientists, engineers, and managers. But no matter where we come from or where we take our careers, we share a common purpose. To make the world a healthier place.

Right now, we are seeking to fill positions in our Drug Product Design organization. We offer opportunities in Formulation & Process Design, Materials Science, Molecular Pharmaceuticals, and Biopharmaceutics across our global sites in California, Colorado, Illinois, Massachusetts, Connecticut, and England.

Discover your path. Apply now.

Visit www.pfizercareers.com to learn more about our business, our science and our commitment to global health.

www.pfizercareers.com



LILLY FOR BETTER

At Lilly, we are constantly evolving the way we discover, develop and manufacture medicines to bring new treatments to the people who need them even faster – and to expand access to these medicines for even more people around the world.

Lilly.com

2021. All Rights Reserved. Lilly and Company. ALL RIGHTS RESERVED.



Value through innovation

Improving the health of humans and animals – Our goal.

As a leading research-driven biopharmaceutical company, Boehringer Ingelheim is working on breakthrough therapies in areas of high unmet medical need. Founded in 1885 and family-owned ever since, Boehringer Ingelheim takes a long-term perspective. More than 52,000 employees serve over 130 markets in the three business areas, Human Pharma, Animal Health, and Biopharmaceutical Contract Manufacturing.

www.boehringer-ingelheim.com



GSK

Ahead Together

We unite science, technology and talent to get ahead of disease together.

 gsk.com

CONFERENCE ATTENDEES

First name	Last name	Institution	Email	Code
Mohammad	Abdallah	Monash University	mohammad.abdallah@monash.edu	S26
Arushi	Agarwal	University of Minnesota	agarw268@umn.edu	A10
Preye	Agbana	University of Kentucky	preye.agbana@uky.edu	A16
Taslim	Al-Hilal	University of Texas at El Paso	taalhilal@utep.edu	
Shawn	Allwein	Teva Pharmaceuticals	shawn.allwein@tevapharm.com	
Tom	Anchordoquy	University of Colorado	tom.anchordoquy@cuanschutz.edu	
Angelina	Angelova	University of Paris-Saclay	angelina.angelova@universite-paris-saclay.fr	
Kapildev	Arora	Pfizer	kapildev.arora@pfizer.com	
Kenneth L.	Audus	University of Kansas	audus@ku.edu	
Patrick	Augustijns	Katholieke Universiteit Leuven	patrick.augustijns@kuleuven.be	
Iori	Azuma	University of Tokyo	azuma-iori@g.ecc.u-tokyo.ac.jp	A22
Ilaria	Badagnani	Theravance Biopharma	ibadagnani@theravance.com	
Sakshi	Bajoria	University of Kansas	sakshi.bajoria@ku.edu	A4
Joseph	Balthasar	University at Buffalo, SUNY	jb@buffalo.edu	SC10
Kaylee	Barr	University of Minnesota	barr0518@umn.edu	A12
Bjoern	Bauer	University of Kentucky	bjoern.bauer@uky.edu	
Matthew	Behymer	Purdue University	mbehymmer@purdue.edu	B5
Lena	Bender	University of Marburg	lena.bender@pharmazie.uni-marburg.de	B29
M. Vitoria	Bentley	University of Sao Paulo	vbentley@usp.br	
Staffan	Berg	Uppsala University	staffan.berg@farmaci.uu.se	S9
Simon	Berger	University of Florida	simonberger@ufl.edu	A5
Christel	Bergström	Uppsala University	christel.bergstrom@farmaci.uu.se	SC5
Vedant	Bhagali	University of Minnesota	bhaga037@umn.edu	A20
Bakul	Bhatnagar	Pfizer	bakul.bhatnagar@pfizer.com	
Emily	Bonacquisti	University of North Carolina	embona@live.unc.edu	S5
Ronald T.	Borchardt	University of Kansas	rborchardt@ku.edu	
Thomas	Borchardt	AbbVie	thomas.borchardt@abbvie.com	
Ben	Boyd	Monash University	ben.boyd@monash.edu	SC18

CONFERENCE ATTENDEES

First name	Last name	Institution	Email	Code
Kim	Brouwer	University of North Carolina	kbrouwer@unc.edu	SC3
Kenneth	Brouwer	BioIVT	kbrouwer@bioivt.com	
Michael	Burger	ETH-Zurich	michael.burger@pharma.ethz.ch	
Ria	Caringal	University of Kansas	ria.caringal@ku.edu	A17
Katie	Cavanagh	Eli Lilly and Company	cavanagh_katie@lilly.com	
Daniel Giuliano	Cerri	University of Sao Paulo	dagcerri@gmail.com	S13
Hsuan Ping	Chang	University at Buffalo, SUNY	hsuanpin@buffalo.edu	S27
Bodhi	Chaudhuri	University of Connecticut	bodhi.chaudhuri@uconn.edu	
Joan	Cheng	University of Minnesota	cheng842@umn.edu	
Cheong-Weon	Cho	Chungnam National University	chocw@cnu.ac.kr	
Benjamin	Clements	University of Minnesota	cleme481@umn.edu	
Andrea	Cottingham	University of Maryland	acottingham@umaryland.edu	S23
Jonathan	Currie	University of Copenhagen	jonathan.currie@sund.ku.dk	SC15
Matthew	Danielson	Eli Lilly and Company	danielson_matthew_l@lilly.com	
Priyal	Dave	University of Southern California	priyalda@usc.edu	S6
Kashappa Goud	Desai	GlaxoSmithKline	kashappa-goud.x.desai@gsk.com	
Viviane	Doggwiler	University of Basel	viviane.doggwiler@fhnw.ch	SC26
Tibo	Duran	University of Connecticut	tibo.duran@uconn.edu	B24
William	Elmquist	University of Minnesota	elmqu011@umn.edu	SC11
Sara	Eyal	Hebrew University of Jerusalem	sara.eyal@mail.huji.ac.il	
Carolyn	Fairbanks	University of Minnesota	carfair@umn.edu	
Suraj	Fanse	University of Connecticut	suraj.fanse@uconn.edu	S18
Owen	Fenton	University of North Carolina	osfenton@unc.edu	SC27
Camilla	Foged	University of Copenhagen	camilla.foged@sund.ku.dk	SC24
Silvana	Geisshüsler	ETH-Zurich	silvana.geisshuesler@pharma.ethz.ch	B11
Shreya	Goel	University of Utah	shreya.goel@utah.edu	
Zachary	Greenberg	University of Florida	zfg2013@ufl.edu	S15
Christina	Greitens	ETH-Zurich	christina.greitens@pharma.ethz.ch	B1
Bernd	Gutberlet	University of Marburg	bernd.gutberlet@pharmazie.uni-marburg.de	B26
Vineetha	Guttha	University of Minnesota	gutth001@umn.edu	
Michael	Hageman	University of Kansas	mhageman@ku.edu	SC4
Louane	Hann	Pfizer	louane.hann@pfizer.com	

CONFERENCE ATTENDEES

First name	Last name	Institution	Email	Code
Md Mahedi	Hasan	University of Texas at El Paso	mhasan11@miners.utep.edu	A27
Mei	He	University of Florida	mhe@cop.ufl.edu	
Erik	Hebels	Utrecht University	e.r.hebels@uu.nl	S30
Nancy	Helm	University of Kansas	nhelm@ku.edu	
Dylan	Hendy	University of North Carolina	dyhendy@email.unc.edu	B15
Rodney	Ho	University of Washington	rodneyho@uw.edu	
Steffen	Honrath	ETH-Zurich	steffen.honrath@pharma.ethz.ch	S29
Sarah	Hook	University of Otago	sarah.hook@otago.ac.nz	
Pin-Syuan	Huang	University of Minnesota	huan2533@umn.edu	
Nicholas	Huls	Purdue University	nhuls@purdue.edu	S14
Casey	Hurley	Gilead Sciences	casey.hurley@gilead.com	
Georgios	Imanidis	University of Basel	georgios.imanidis@unibas.ch	
Negar	Jafari	University of Kansas	negar.jafari@ku.edu	B8
Natalie	Jasiewicz	University of North Carolina	natjas@live.unc.edu	A29
Gary	Jenkins	AbbVie	gary.jenkins@abbvie.com	
Haochen	Jiang	University of Nebraska	haochen.jiang@unmc.edu	S12
Yiru	Jin	University of Kansas	yiru.jin@ku.edu	S4
Minki	Jin	Chungnam National University	jmk2720@nate.com	S19
Chinmay	Jogdeo	University of Nebraska	chinmaymahesh.jogdeo@unmc.edu	B4
Lindsay	Johnson	BASF Corporation	Lindsay.Johnson@basf.com	
Tisana	Kaewruethai	Chulalongkorn University	tisana.kaew@gmail.com	S17
Karunya	Kandimalla	University of Minnesota	kkandima@umn.edu	
Umesh	Kestur	Bristol Myers Squibb	umesh.kestur@bms.com	
Nitish	Khurana	University of Utah	nitish.khurana@utah.edu	S24
DaWon	Kim	University of Wisconsin	dkim634@wisc.edu	A34
Hyunjoon	Kim	University of Kansas	kimx@ku.edu	
Riddhi Vivek	Kini	University of Minnesota	kini0011@umn.edu	
Gregory	Knipp	Purdue University	gknipp@purdue.edu	
Yuki	Kobayashi	Kyoto University	kobayashi.yuki.67z@st.kyoto-u.ac.jp	S31
Sonja	Korhonen	University of Eastern Finland	sonja.korhonen@uef.fi	A31
Ossi	Korhonen	University of Eastern Finland	ossi.korhonen@uef.fi	
Rahul	Lalge	University of Minnesota	lalge001@umn.edu	B10

CONFERENCE ATTENDEES

First name	Last name	Institution	Email	Code
Aayushi	Laliwala	University of Nebraska	aayushi.laliwala@unmc.edu	A21
Michael	Lanz	University of Basel	michael.lanz@fhnw.ch	A13
Jihui	Lee	Leiden University	j.lee@lacdr.leidenuniv.nl	A1
Yeseul	Lee	Chungnam National University	yesul6700@naver.com	B19
Sangeun	Lee	Saarland University	sangeun.lee@uni-saarland.de	
Jiawei	Li	University of Southern California	jli167@usc.edu	A25
Jinghan	Li	University of Minnesota	li000947@umn.edu	
Yuxuan	Li	University of Minnesota	li000613@umn.edu	B32
Zhaoting	Li	University of Wisconsin	zli2443@wisc.edu	S32
Bianca	Liederer	Genentech	biancal@gene.com	
Stacey	Line	University of Manitoba	lines@myumanitoba.ca	SC8
Jin	Liu	Nagoya City University	ciwujialiujin@gmail.com	S20
Xi	Luan	University of Kansas	xi.luan@ku.edu	B13
Jittima	Luckanagul	Chulalongkorn University	jittima.l@pharm.chula.ac.th	
Yutian	Ma	University of North Carolina	yutianm@unc.edu	
Rucha	Mahadik	University of Kansas	rucha.mahadik@ku.edu	B23
Enrico	Mastrobattista	Utrecht University	e.mastrobattista@uu.nl	
Abdullah	Masud	University of Kentucky	aama245@uky.edu	S22
Simon	Matoori	University of Montreal	simon.matoori@umontreal.ca	SC17
Sandro	Mecozzi	University of Wisconsin	sandro.mecozzi@wisc.edu	
Don	Miller	University of Manitoba	Donald.Miller@umanitoba.ca	
Katsuhisa	Morita	University of Tokyo	winwinwin19963rd@gmail.com	S16
Ryan	Moulder	Amgen	kmoulder@amgen.com	
Peter	Moyle	University of Queensland	p.moyle@uq.edu.au	
Anette	Müllertz	University of Copenhagen	anette.mullertz@sund.ku.dk	SC14
Eric	Munson	Purdue University	munsone@purdue.edu	
Reza	Nejadnik	University of Iowa	reza-nejadnik@uiowa.edu	SC23
Douglas	Nelson	University of Minnesota	nels9816@umn.edu	A32
Joseph	Nicolazzo	Monash University	Joseph.Nicolazzo@monash.edu	SC12
Armin	Novak	Saarland University	armin.novak@uni-saarland.de	B34
Angela	Olsofsky	Amgen	angelao@amgen.com	
Melike	Ongun	University of Copenhagen	melike.ongun@sund.ku.dk	B21

CONFERENCE ATTENDEES

First name	Last name	Institution	Email	Code
Tetsuya	Ozeki	Nagoya City University	ozekit@phar.nagoya-cu.ac.jp	
Mary	Paine	Washington State University	mary.paine@wsu.edu	
Hongbo	Pang	University of Minnesota	pang0051@umn.edu	
Jeong-Sook	Park	Chungnam National University	eicosa@cnu.ac.kr	
Ryan	Pearson	University of Maryland	rpearson@rx.umaryland.edu	
Justin	Pennington	Merck	justin.pennington@merck.com	
Eduard	Preis	University of Marburg	eduard.preis@pharmazie.uni-marburg.de	
Riccardo	Provenzani	University of Helsinki	riccardo.provenzani@helsinki.fi	SC1
Thomas	Rades	University of Copenhagen	thomas.rades@sund.ku.dk	SC13, SC30
Vishard	Ragoonanan	AbbVie	vishard.ragoonanan@abbvie.com	
Sneha	Rathi	University of Minnesota	rathi029@umn.edu	A6
Leslie	Rebibo	Hebrew University of Jerusalem	leslie.rebibo@mail.huji.ac.il	S25
Madison	Ricco	University of Colorado	madison.ricco@cuanschutz.edu	A3
Valeri	Roschenko	University of Marburg	valeri.roschenko@pharmazie.uni-marburg.de	B12
Catherine	Ross	University of Otago	catherine.ross.one@gmail.com	SC2
Peije	Russell	Monash University	peije.russell@monash.edu	B25
Vrishali	Salian	University of Minnesota	salia006@umn.edu	A33
Leticia	Salvador Vieira	University of Washington	lsvieira@uw.edu	S28
Rada	Savic	University of California at San Francisco	rada.savic@ucsf.edu	
Anna-Lena	Schaedel	University of Copenhagen	anna-lena.schaedel@sund.ku.dk	B22
Jens	Schäfer	University of Marburg	j.schaefer@staff.uni-marburg.de	A24
Sabrina	Schnur	Saarland University	sabrina.schnur@uni-saarland.de	S11
Christian	Schöneich	University of Kansas	schoneic@ku.edu	SC22
Jan	Schulze	University of Marburg	jan.schulze@pharmazie.uni-marburg.de	S10
Kelly	Schwinghamer	University of Kansas	kschwin2@ku.edu	B2
Dhavalkumar	Shah	University at Buffalo, SUNY	dshah4@buffalo.edu	SC9
Sheena	Sharma	Washington State University	sheena.sharma@wsu.edu	B18
Snehal	Shukla	Pfizer	snehal.shukla@pfizer.com	SC29
Teruna	Siahaan	University of Kansas	siahaan@ku.edu	

CONFERENCE ATTENDEES

First name	Last name	Institution	Email	Code
Ronald	Siegel	University of Minnesota	siege017@umn.edu	
Ana Vitória Pupo	Silvestrini	University of Sao Paulo	anapupo@usp.br	B3
Frazer	Sinclair	University of Queensland	f.sinclair@uq.edu.au	SC19
Patrick D	Sinko	Uppsala University	patrick.d.sinko@farmaci.uu.se	B16
Katia	Sirna	University of Helsinki	katia.sirna@helsinki.fi	A26
Jasleen	Sodhi	Septerna	jasleens@gmail.com	S3
Sichen	Song	University of Minnesota	song0357@umn.edu	A30
Diana	Sperger	Gilead Sciences	diana.sperger@gilead.com	
Sebastian	Steigert	Katholieke Universiteit Leuven	sebastian.steigert@kuleuven.be	B17
Clare	Strachan	University of Helsinki	clare.strachan@helsinki.fi	
Calvin	Sun	University of Minnesota	sunx0053@umn.edu	
Raj	Suryanarayanan	University of Minnesota	surya001@umn.edu	SC6
Susumu	Suwabe	Nagoya City University	c202908@ed.nagoya-cu.ac.jp	A7
Nana	Svane	University of Copenhagen	nana.svane@sund.ku.dk	B7
Miyuki	Takemura	Kanazawa University	miyuki.takemura@stu.kanazawa-u.ac.jp	A28
Surabhi	Talele	Bristol Myers Squibb	talel005@umn.edu	
Lloyd Wei Tat	Tang	National University of Singapore	lloyd.tang@u.nus.edu	S1
Alexandra	Teleki	Uppsala University	alexandra.teleki@farmaci.uu.se	
Marcus	Terneus	Boehringer Ingelheim	Marcus.Terneus@boehringer-ingelheim.com	
Scott	Tilden	University of Colorado	scott.tilden@cuanschutz.edu	S21
Palas	Tiwade	University of North Carolina	pbtiwade@unc.edu	B9
Nhan Phan	Tran	Chungnam National University	trannhanphanhp@gmail.com	B30
David	Ulkoski	AstraZeneca	david.ulkoski@yahoo.com	
Dennis	Unthan	Leiden University	d.m.unthan@lacdr.leidenuniv.nl	SC20
Arto	Urtti	University of Eastern Finland	arto.urtti@uef.fi	
Joseph	Valente	Bristol Myers Squibb	joseph.valente@bms.com	
Annika	Valtari	University of Eastern Finland	annika.valtari@uef.fi	S7
Matthias	Van der Veken	Katholieke Universiteit Leuven	matthias.vanderveken@kuleuven.be	SC7
Narayan	Variankaval	Merck	narayan_variankaval@merck.com	

CONFERENCE ATTENDEES

First name	Last name	Institution	Email	Code
Vaishnavi	Veerareddy	University of Minnesota	veera039@umn.edu	
Yukihiko	Wakimoto	Daiichi Sankyo Co., Ltd.	ywakimoto@dsi.com	
Zengtao	Wang	University of Minnesota	wang9003@umn.edu	A19
Nianwu	Wang	University of Minnesota	wan00505@umn.edu	A2
Michael	Wang	University of Kansas	micwang@ku.edu	B6
Lushan	Wang	University of Minnesota	wang7886@umn.edu	S8
Zijian	Wang	University of Minnesota	wang9044@umn.edu	
Chun	Wang	University of Minnesota	wangx504@umn.edu	SC28
Tingting	Wang	Eli Lilly and Company	wang_tingting@lilly.com	
Danny	Wilbie	Utrecht University	d.wilbie@uu.nl	B27
Benjamin	Winkeljann	Ludwig Maximilian University of Munich	benjamin.winkeljann@cup.uni-muenchen.de	A14
Gerhard	Winter	Ludwig Maximilian University of Munich	gerhard.winter@lrz.uni-muenchen.de	SC21
Jong-Hee	Won	Chungnam National University	yawjhda@hanmail.net	A15
Yaqi	Wu	University of Kansas	yaqiwu@ku.edu	A8
Yu	Wu	University of Paris-Saclay	yu.wu@universite-paris-saclay.fr	SC25
Tianyi	Xiang	University of Minnesota	xiang178@umn.edu	A11
Tongzhen	Xie	University of Minnesota	xiexx507@umn.edu	A23
Xiaolin	Xu	University of Washington	alinxu@uw.edu	B31
Hyelim	Yoo	Chungnam National University	hlyoo0822@naver.com	B28
Minzhi	Yu	University of Michigan	minzhiyu@umich.edu	S2
Matthias	Zadory	University of Montreal	matthias.zadory@umontreal.ca	B36
Yilue	Zhang	University of Kansas	yiluezhang@ku.edu	A9
Wenqiu	Zhang	University of Minnesota	zhan4937@umn.edu	B14
Wenjuan	Zhang	University of Minnesota	zhan6717@umn.edu	B20
Yong	Zhang	University of Southern California	yongz@usc.edu	
Jiaqi	Zhao	University of Minnesota	zhao1633@umn.edu	B33
Andrew	Zhou	University of Minnesota	zhoux760@umn.edu	
Qiunan	Zhu	Kanazawa University	zhuqiunan@stu.kanazawa-u.ac.jp	S33
Vahid	Zia	Gilead Sciences	vahid.zia@gilead.com	

GPEN2022 Organizing Committee appreciates your participation!

Faculty Co-chairs



Prof. Raj Suryanarayanan



Prof. William F. Elmquist

Student Co-chairs



Tongzhen Xie



Wenjuan Zhang



Andrew Zhou



Dr. Surabhi Talele

Sub-committee Heads



Sneha Rathi
Logistics



Joan Cheng
Communications and
Registrations



Wenqiu Zhang
Hospitality



Zengtao Wang
Scientific and
Publications

Sub-committee Team Members



Vaishnavi V.
Logistics



Rahul Lalde
Logistics



Vrishali Salian
Logistics



Zijian Wang
Hospitality



Arushi Agarwal
Hospitality



Joel Updyke
Communications and
Registrations



Tianyi Xiang
Communications and
Registrations

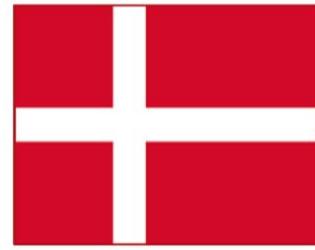


Sichen Song
Scientific and
Publications

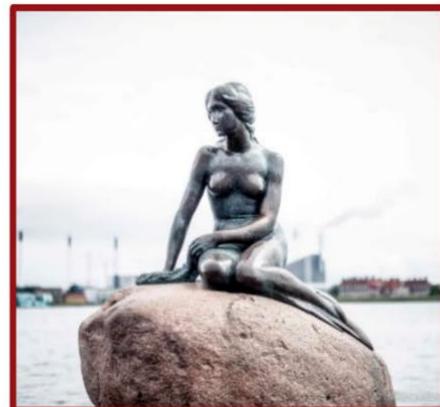


Doug Nelson
Scientific and
Publications

We can't wait to welcome you to
GPEN 2024
at the



UNIVERSITY OF
COPENHAGEN



NOTES

NOTES

