

2ND ANNUAL
DRUG DELIVERY WEST
MAY 6-7, 2019 • MARINES' MEMORIAL CLUB AND HOTEL, SAN FRANCISCO, CA

*The Partnering Event Addressing Scientific and Business Solutions for the
Best Routes of Delivery Across Different Therapeutic Areas*



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DAY ONE - MONDAY, MAY 6, 2019**8:00 am**

Registration, Morning Coffee & Tea

8:30 am

Co-Chair's Opening Remarks

Ann Daugherty, PhDSenior Manager, Drug Delivery, **Genentech****James Cunningham, PhD**Executive Director, Drug Delivery, **Allergan****Keynotes, Intracellular Delivery, Brain Delivery, Peptide & Ophthalmology Delivery Alternatives and Pharma Delivery Needs & Partnering****8:40 am****Keynote: State of the Industry Address & Nano-medicine's Current Clinical Reality: An Analysis of Recent Results****David W Grainger, PhD**University Distinguished Professor, Chair, Department of Biomedical Engineering, Department of Pharmaceuticals and Pharmaceutical Chemistry, **University of Utah****9:20 am****Intracellular and Tissue Specific Delivery of Therapeutic Payloads**

- Targeted Therapeutics team at Janssen is focused on addressing the challenges of intracellular and tissue specific delivery across modality spectrum
- A focus on understanding parameters of receptor-specific uptake and internalization and using relevant assays for proper ligand selection
- Examples of using these methods for specific functional delivery of nucleic acids and nanoparticles

Vadim Dudkin, PhDHead of Targeted Therapeutics at Janssen Discovery Sciences, **Johnson & Johnson****9:40 am**

Morning Networking Break

10:20 am**Keynote: Focused Ultrasound with Blood-Brain Barrier Modulation for Delivery of Therapeutics****Isabelle Aubert, PhD**Professor, Department of Laboratory Medicine and Pathobiology, **University of Toronto****10:50 am****Updates on Alternative Administration of Peptides: Bioavailability and Capability of Delivering Peptides and Non Small Molecules Through the Oral Route**

- What are the delivery options outside the traditional subcutaneous injections moving forward?
- What strategies are showing success in improving the oral absorption of peptide-based drugs?

Moderated by:

Ann Daugherty, PhDSenior Manager, Drug Delivery, **Genentech****11:10 am****Ophthalmology: Exploring Other Routes of Administration**

- Exploring other routes of administration beyond injection to the back of the eye.
- Long acting implants for the eye or topical delivery to the back of the eye. These are unsolved problems so we would not have to inject patients with an IV injection
- How important is retinal penetration for efficacy?
- What are the benefits of different ways of delivering things to the eye and challenges?

Moderated by:

James Cunningham, PhDExecutive Director, Drug Delivery, **Allergan**

Panelists:

James E Chastain, PhDExecutive Director, PK Sciences - Ophthalmology, **Novartis Institutes for BioMedical Research, Inc****Susan Crowell, PhD**Scientist, Preclinical and Translational PKPD, **Genentech****Viral Kansari, PhD**VP, Discovery, **Clearside Bio****11:50 am****Pharma Spotlights on Drug Delivery Needs**

In this session, pharma companies discuss their current needs, partnering philosophy and scouting interests, as related to drug delivery.

GSK**Nima Akhavein**, Associate Fellow and Scientific Leader**Biogen****Lani Hack**, Engineer I, ASO Formulation Development and Manufacturing**EMD Serono****Simon Geißler, PhD**, Director Drug Delivery and Innovation, Healthcare R&D, CPD, Pharmaceutical Technologies

Additional Companies TBD

12:50 pm

Networking Lunch & Partnering Meetings

1:50 pm**How to Realize your Next Drug Delivery Innovation: A Practical Guide to Getting your Innovation to Market****Uri Baruch**Director, Head of Drug Delivery, **Cambridge Design Partners****2:10 pm****Delivering an Innovative, Patient-Centric Delivery System as a Result of Strong Collaborations Between Flex and Amgen****Daniele Fazio**VP, Design & Engineering, **Flex****William (Bill) Rich**VP, Final Drug Product Technologies, **Amgen**

TECH PRESENTATIONS & PARTNERING

2:30 pm

Drug Delivery Presentations

The afternoon sessions feature companies that will present a wide range of drug delivery technologies, products, or services. These are “quick fire” presentations, with Q&A following each presentation. Throughout the program there are reserved blocks of time for one-on-one partnering meetings to learn more about the technologies and products presented.

Chaired by:

Mitch Zhao, PhD

Engineering Director, Primary Container and Drug Delivery Systems, Janssen R&D, Johnson & Johnson

Presenting Companies:

Battelle**BioQ Pharma****Drug Delivery Experts****Harro Höfliger****Oakwood Labs****Portal Instruments****Starpharma****tesa Labtec**

5:00 pm

End of Day One & Networking Reception

DAY TWO - TUESDAY, MAY 7, 2019

8:30 am

Co-Chair's Opening Remarks

Ann Daugherty, PhD

Senior Manager, Drug Delivery, Genentech

James Cunningham, PhD

Executive Director, Drug Delivery, Allergan

Keynotes, Investment Decision Making, Precision Medicine, Digital and Connected Delivery, Nanostructured Materials, Ophthalmology Delivery & Partnering

8:40 am

Panel: Investor Perspectives on Drug Delivery Needs and Investments

- What are VCs investing in, trends they are seeing, competition and concerns
- Before VCs invest, what decision making criteria are they using?
- What VCs think is important and what pharma thinks is important. Those don't always match up, how can we better align. What are those differences and what are the rationales?
- Is there a specific revenue target for a startup company that they would look at before making an investment?

Moderated by:

David Allison, PhD

Partner, 5am Ventures

Panelists:

Colin Cahill, MBA

VP, Healthcare Investor, Venrock

Andrew ElBardissi, MD

Principal, Deerfield Management

Lori Hu, MBA

Principal, Vertex Ventures HC

Aaron Royston, MD, MBA

Partner, venBio

9:20 am

Leveraging Physiology for Bioresponsive Precision Drug Delivery & The Future Impact of Precision Medicine on Drug Delivery

Spurred by recent advances in materials chemistry, molecular pharmaceuticals and nanobiotechnology, stimuli-responsive “smart” systems offer opportunities for precisely delivering drugs in dose-, spatial- and temporal-controlled manners. In this talk, Dr Zhen Gu, UCSF, will discuss:

- The ongoing efforts in developing physiological signal-triggered bioinspired drug delivery systems
- Glucose-responsive synthetic systems for biomimetic delivery of insulin for diabetes treatment
- Bioresponsive microneedle patches and vesicle fusion-mediated synthetic beta cells will be emphasized
- Local and targeted delivery of immunomodulatory therapeutics for enhanced cancer therapy
- An introduction to their latest study utilizing platelets, cell conjugates and sprayable gels for delivery of immune checkpoint inhibitors
- Insights on the future of precision medicine and the impact on drug delivery moving forward

Zhen Gu, PhD

Professor, Department of Bioengineering, California NanoSystems Institute (CNSI), University of California, Los Angeles (UCLA)

9:50 am

Morning Networking Break & Partnering Meetings

10:35 am

Keynote: Nanostructured Materials for Enhanced Therapeutic Delivery

Tejal Desai, PhD

Ernest L. Prien Endowed Professor and Chair, Department of Bioengineering and Therapeutic Sciences, UCSF Schools of Pharmacy and Medicine

11:05 am

Industry Keynote: The Digital and Connected Health Ecosystem: Incorporating Wellness into the Pharma Model and How Drug Delivery will be a Key Enabler

Justin M Wright, PhD

Global Head of Innovation, Novartis

11:35 am

Connected Device Systems that Span Multiple Regulatory Classifications

Kimberly Ringenberger, PhD

Associate Engineering Advisor, Eli Lilly

12:05 pm

Advancing the Connected and Smart Drug Delivery Ecosystem: A Path Forward

The connected drug delivery device market is expected to grow tremendously with emerging technologies that connect patients, physicians, researchers, health systems, etc, while reducing burden to all. Drug delivery manufacturers of inhalers to treat asthma and chronic lung disease for example are fast developing the next generation of smart devices with sensors to monitor if patients are using their devices correctly. In this panel discussion, we focus on next generation emerging technologies, design needs and challenges, and regulatory hurdles to advance the drug delivery smart and connected world.

Moderated by:

Justin M Wright, PhD

Global Head of Innovation, Novartis

Panelists:

Kimberly Ringenberger, PhD

Associate Engineering Advisor, Eli Lilly

Rajan Patel

CEO and Founder, iO Life Science

Dirk Schapeler

VP, Digital Innovation, Bayer Healthcare

1:00 pm

Networking Lunch & Partnering Meetings

EARLY STAGE TECHNOLOGIES AND EVALUATIONS

2:00 pm

Early Stage Technology Showcase

This session features five-minute talks on cutting-edge technologies, inventions and ideas. The showcase is open to start-up companies, entrepreneurs, investors, licensing officers and university researchers.

Chaired by:

Sheldon Moberg

Head of Advanced Device Technologies & Innovation, Amgen

Presenting Companies:

Adephthera, LLC

2:40 pm

How do we Overcome the Barriers of Getting New Technologies Evaluated and Brought in earlier in Product Development?

Pharma companies often face challenges when it comes to working with external drug delivery technologies as a result of cost and resources. Because pharma's primary focus is developing molecules, developing drug delivery strategies doesn't always get worked into the pipeline early enough. This panel will delve into the following:

- How can we get drug delivery technologies earlier in the pipeline development of molecules?
- How can we lower the upfront risks?
- What are the work arounds?

Moderator:

Ann Daugherty, PhD

Senior Manager, Drug Delivery, Genentech

Panelists:

Matthew Burke

Head of Drug Delivery, GSK

Sheldon Moberg

Head of Advanced Device Technologies & Innovation, Amgen

Andrew Ratz

Senior Director, Delivery, Device & Connected Solutions, Eli Lilly

3:25 pm

End of Day Two