

# AI IN PHARMA

## S U M M I T

### 5th Annual Wednesday, October 13th | Virtual, EST Timezone

AI undoubtedly remains one of the most instrumental and cutting-edge technologies in drug R&D's arsenal. However, huge obstacles such as data, organisational buy-in and hype management still need to be overcome to successfully and completely implement AI in Pharma.

The fifth annual AI in Pharma Summit returns to tackle these crucial questions, share lessons learned by industry front runners, and showcase exactly where the proverbial needle is being moved. Through interactive panel discussions and case studies focused on both the highs and the lows, the AI in Pharma Summit will deep-dive into the most urgent functional gaps hindering AI-assisted progress in drug discovery and development and host the conversations to establish future success in the industry.

#### Wednesday, October 13th, 2021

7:45am ET **Conference Platform Opens**

The conference platform opens before the agenda starts, giving you time to plug the presentations, panels, and discussions into your agenda for the rest of the day. This also gives you plenty of time to get familiar with the platform.

8:45am ET **Chair's Opening Remarks & Setting the Scene**

**John Reynders**, Chief Data Sciences Officer, **Neumora**

Co-Chair: **Oscar Rodriguez**, VP, Head of Data Engineering, **Neumora**

8:55am ET **Keynote Presentation - Intelligent Systems for Discovery, Translation and Implementation**

**Calum Macrae**, Vice Chair for Scientific Innovation, **Brigham and Women's Hospital & Harvard Medical School**

9:25am ET **Wellness Break**

9:30am ET Keynote Panel Discussion with Open Q&A - **Will We Always Be Limited by Data?**

*Data has been, and continues to be, arguably the biggest challenge facing AI in Pharma. This panel will deep-dive into our main data limitations with leaders from across the field, and tackle the crucial questions that need to be addressed in order to overcome the greatest hurdle in the industry.*

- How is AI being held back by data, and what progress have we made over the last 5 years?
- How do the data hurdles differ throughout between discovery and development, and how we can overcome these to improve AI's clinical success?
- Are data sharing and privacy-preserving computing the best solutions to our data problem, and what unique challenges do they bring?
- Are large datasets always the answer, or can we still see success with small datasets?
- How can we tackle the lack of diversity in biomedical data and start to close the data gap?

**Gabriel Eichler**, VP & Head of Data, **Data 42 at Novartis**

**Raunaq Malhotra**, Director of Digital Operations & Innovation, **Merck**

**Gayle Wittenberg**, Senior Director, Neuroscience Data Science, **The Janssen Pharmaceutical Companies of Johnson & Johnson**

**Moderated by: Yugal Sharma**, Senior Director, **CAS Custom Services**



10:25am ET Morning Extended Wellness Break

### Challenges and Lessons Learned from AI in Drug Discovery

10:40am ET Presentation - **Discovering New Proteins with AI - Absci's Integrated Drug Creation™ Platform**



- Absci's Integrated Drug Creation™ platform enables the simultaneous discovery of drugs and a cell line that can biomanufacture them.
- We leverage AI to discover novel support proteins that can maximize the correct folding and expression of a therapeutic protein.
- New technologies are unlocking the potential of AI for drug discovery with generative models of high-throughput affinity and manufacturability data.

**Joshua Meier**, Lead AI Scientist, **Absci**

11:05am ET Wellness Break

11:10am ET Presentation - **Data: Breaker of Silos - The Value of a Strategy That's End-to-End and Back Again**

**Gayle Wittenberg**, Senior Director, Neuroscience Data Science, **Janssen**

11:30am ET Wellness Break

11:35am ET Presentation - **Overcoming the Data Challenges of AI Model Training and Validation**

- A look at how in silico drug discovery relies on biologically relevant, structured & fully annotated high-quality experimental data to train and validate AI models; yet, conventional lab operations are increasingly insufficient to deal with the data requirements of AI-/ ML-driven drug discovery.
- Explore how Ulysses, the fully automated drug discovery platform developed by Arctoris, takes a different approach to generate and capture rich, reliable, and robust data with peerless efficiency, reproducibility, and quality.
- Learn about how other industry leaders partner with Arctoris to accelerate their AI-driven drug discovery work, and take home actionable insights on the technological approach and expertise necessary to power your programs with the right data at the right time.

**Martin-Immanuel Bittner**, CEO, **Arctoris**



12:00pm ET Wellness Break

12:05pm ET Presentation - **A Data-Driven Approach to External Innovation**

- A look at Biogen's data-driven approach to external innovation, leveraging external public and proprietary data sources via an interactive and multidimensional visualization system that summarizes all competitive intelligence activities in CNS diseases.
- Explore how AI/ML algorithms are applied to execute continuous and dynamic search for external innovation opportunities by interrogating trending topics in science and medicine.
- Discuss how this platform is used by External Innovation at Biogen to identify companies in drug discovery and development on CNS assets and across multiple modalities in a systematic manner.

**Lili Peng**, Associate Director, External Innovation Data Sciences, **Biogen**

12:25pm ET Wellness Break

12:30pm ET Panel Discussion with Open Q&A: **The Promise of AI in Bridging the Information Gap in Healthcare**

- Where are high-value gaps and why do these gaps exist?
- How do they impact decision making, insights discovery today?
- How does data generation, flow and fragmentation impact the information landscape?
- What market needs are driving investment decisions in the space?
- What investment theses are driving innovation at the intersection of AI and healthcare information, and what are open problems/needs?
- What role does the investment community play in the space?



**Moderated by: Rob Consalvo**, Director of Strategic Commercial Engagement, **H1**

**Mohak Shah**, SVP, Data Science & Learning, **H1**

**Deena Shakir**, Partner, **Lux Capital**

**Nitesh Chawla**, Founding Director, Lucy Family Institute for Data and Society, **University of Notre Dame**

1:10pm - 2:00pm ET

**Lunch**

2:00pm ET Presentation - **Presentation by Nanome**

**Representative from Nanome**



2:25pm ET Wellness Break

**AI in Clinical Development**

2:30pm ET Presentation - **Designing Clinical Trials and Evaluating Eligibility Criteria using AI**

**Shemra Rizzo**, Senior Data Scientist, **Genentech**

2:50pm ET Wellness Break

2:55pm ET Presentation - **AI-Powered Pathology in Pharma Research and Development**



*Learn how machine learning pathology algorithms can uncovering novel insights in biomarker research and drug development programs*

**Ilan Wapinski**, VP of Scientific Programs, **PathAI**

3:20pm ET Wellness Break

3:25pm ET Presentation - **Using Machine Learning to Drive Biological Discovery and Clinical Impact**

**Puneet Batra**, Director, Machine Learning | Machine Learning for Health Co-Lead, **Broad Institute of MIT and Harvard**

3:45pm ET Extended Wellness Break

4:05pm ET Case Studies with Q&A: **Genomics and its Implications in Pharma**

Opening: **Hanif Khalak**, Director of Technology & Engineering, **G42 Healthcare**

**Case study 1: Pharmacogenomics/CYP gene analysis from Emirati Genome Program**

**Javier Quílez Oliete**, Senior Bioinformatician, **G42 Healthcare**

**Case study 2: AI/ML model to predict variant gene functioning**

**Shadab Khan**, Head of AI and Applied Sciences, **G42 Healthcare**



4:45pm ET Wellness Break

4:50pm ET Presentation - **Integrating QSP and Machine Learning**

**Carolyn Cho**, Pharmacometrics Immunology Therapeutic Area Lead, **Merck**

5:15pm ET Wellness Break

5:20pm ET Panel Discussion with Open Q&A - **How Do We Make Pharma a Data-Driven Organisation?**

*AI technologies are now fully established in drug R&D, yet structural challenges such as organisational buy-in and cultural awareness still limit the success of the industry. Deep-dive into the crucial organizational questions that need answers for pharma to truly become a data-driven organization.*

- What are the biggest organizational challenges we've faced to date, and what have we learned from these?
- What is the most effective strategy for acquiring or collaborating with AI start-ups and academic researchers?
- How do we find the right balance between developing internal capabilities and collaborating with third parties?
- What are the benefits and risks of making pharma a more data-driven organisation?
- How do we encourage a shift in cultural awareness to increase AI support and adoption by traditional roles in pharma, and how do you get scientists and data scientists to work together?

**Carolyn Cho**, Pharmacometrics Immunology Therapeutic Area Lead,

**Merck**

**Deepak Kumar Rajpal**, Head, Translational Sciences US, **Sanofi**

**Ryan Copping**, Global Head of Data Science Acceleration, Product Development Data Science, **Genentech**

**J Christian Baber**, Head of Scientific & Pharmaceutical Data, Informatics & Systems, **The Janssen Pharmaceutical Companies of Johnson & Johnson**

**Hanif Khalak**, Director of Technology & Engineering, **G42 Healthcare**



6:10pm ET End of AI in Pharma Summit 2021