



DATA  
INNOVATION  
US 2018 DAY

## Data Innovation Day 2018: The Future of Data-Driven Medicine

With the advent of electronic health records, low-cost genome sequencing, molecular imaging, and wearable devices, the digital footprint of the average patient is rapidly expanding. As an increasing number of data scientists and computer scientists join those on the front lines of medical research and these researchers gain access to an enormous amount of computing power in the cloud, there will be unprecedented opportunities to use data to accelerate medical research and develop more cost-effective, personalized treatments.

The purpose of this event is to discuss the latest developments in using data to improve health care outcomes, reduce health care costs, and empower patients. In particular, this event will focus on the successful ways the pharmaceutical industry is using data to create more value in health care, especially by using data to drive down costs, bring drugs to market faster, and address the needs of different patient populations.

#DataInnovation

### Sponsors



# Thursday, September 13

District Architecture Center | 421 7th St NW | Washington, DC 20004

1:00 – 1:05 pm	<b>Introduction &amp; Welcome</b> <b>Daniel Castro</b> , Director, Center for Data Innovation
1:05 – 1:20 pm	<b>Opening Keynote: The Impact of AI on Drug Discovery</b> <b>Dr. Qingsong Zhu</b> , Chief Operating Officer, Insilico Medicine, Inc.
1:20 – 2:30 pm	<b>Panel 1: Accelerating Data-Driven Drug Discovery</b> <b>Roselie Bright</b> , Epidemiologist, Food and Drug Administration <b>Elliot Menschik</b> , Senior Manager, Business Development, Healthcare and Life Science Ventures <b>Srini Ramanathan</b> , Vice President, Development Sciences, Horizon Pharma
2:30 – 2:40 pm	<b>Break</b>
2:40 – 3:50 pm	<b>Panel 2: The Future of Data-Driven Clinical Trials</b> <b>Nate Crisel</b> , Vice President, Real World Informatics & Analytics, Astellas <b>Faisal Khan</b> , Executive Director of Advanced Analytics and Artificial Intelligence, AstraZeneca <b>Gil Alterovitz</b> , Presidential Innovation Fellow, General Services Administration <b>Kenneth Bengtson</b> , Director of eSource, Pfizer
3:50 – 5:00 pm	<b>Panel 3: Modernizing Regulatory Processes for Data-Driven Medicine</b> <b>Robert Kowalski</b> , Head of Regulatory Affairs, Novartis <b>Neil Chilson</b> , Senior Research Fellow for Technology and Innovation, Charles Koch Institute <b>Jason Brooke</b> , Director, Healthcare and Life Sciences Disputes, Regulatory, Compliance, and Investigations, Navigant
5:00 – 5:30 pm	<b>Reception</b>

## SPEAKERS

Gil Alterovitz



Professor Gil Alterovitz is a faculty member at Harvard Medical School in the Center for Biomedical Informatics. He is also the Director of the Biomedical Cybernetics Laboratory at the Boston Children's Hospital Informatics Program. His research on integrative methods for "big data" in biomedical informatics has been published or presented in more than 30 peer-reviewed publications. He received his PhD under the joint Harvard/MIT Division of Health Sciences and Technology in Electrical and Biomedical Engineering.

Kenneth Bengtson



Kenneth Bengtson is the Director of eSource, within the Center of Excellence at Pfizer. eSource at Pfizer will utilize Electronic Health records and other digital sources to support the next generation of clinical trials. He has been at Pfizer for 19 years and has held many positions within the data management and clinical trial application work areas.

Jason Brooke



M. Jason Brooke, M.S.E., J.D., is a director in Navigant's Healthcare and Life Sciences Disputes, Regulatory, Compliance, and Investigations (HLS DRCI) practice. Jason brings a focused expertise in the medical device industry that combines more than 15 years of experience ranging from science and technology design, development, implementation, and testing; to business strategy and operations; to legal and regulatory compliance.

Daniel Castro



Daniel Castro is the Director of the Center for Data Innovation and Vice President of the Information Technology and Innovation Foundation. Mr. Castro’s work on issues related to information technology and internet policy, including data, privacy, and internet governance, has been referenced in numerous media outlets such as *The Washington Post*, *The Wall Street Journal*, and NPR. In 2015, U.S. Secretary of Commerce Penny Pritzker appointed Mr. Castro to the Commerce Data Advisory Council.

Neil Chilson



Neil Chilson is the Senior Research Fellow for Technology and Innovation at the Charles Koch Institute. His research supports the Institute’s efforts to promote digital freedom of speech and association, to lower and eliminate barriers to innovation, and to foster a national culture embracing innovation. Before joining CKI, Mr. Chilson was the Chief Technologist at the Federal Trade Commission where he focused on understanding the economics of privacy and established the FTC’s Blockchain Working Group.

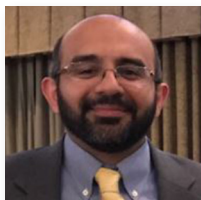
Nate Crisel



Nate Crisel is Vice President and head of Astellas’ Real World Informatics and Analytics division—a central function accountable for expanding efficient, effective, and responsible use of healthcare data. Mr. Crisel has worked in new product analysis, product and portfolio strategy, and corporate strategy. Mr. Crisel received his Master of Business Administration in finance and entrepreneurship at Krannert School of Management, Purdue University and his Bachelor of Science in chemistry from Indiana University.

## SPEAKERS

### Faisal Khan



Faisal Khan, Ph.D. is the Executive Director of Advanced Analytics and Artificial Intelligence at Astrazeneca. His work focuses on the intersections of data science, biostatistics, bioimaging, personalized medicine, and healthcare delivery. His career has encompassed all aspects of healthcare and biomedical analytics, including diagnostics, devices, clinical trials, and therapeutics. Dr. Khan has worked or consulted across academia and industry with both startups and Fortune-50 companies. He has over 90 published papers, abstracts, and patents.

### Robert Kowalski



Dr. Rob Kowalski is the Head of Regulatory Affairs for Novartis and the US Head of Global Drug Development. His leadership has led to dozens of new products, including chemical entities in the small molecule, biologics, and cell & gene therapy spaces. He has worked on innovative therapies and access medicines in rare diseases, pediatrics, devices, companion diagnostics, digital medicine and new technologies, and biosimilars. He has 25 years of regulatory and drug development experience.

### Elliot Menschik



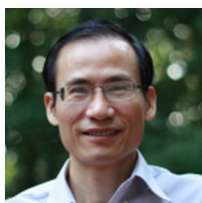
At Amazon Web Services, Mr. Menschik is responsible for relationships with healthcare and life science ventures and their investors, partnering to speed their products to market. Earlier he founded the healthcare practice of Dreamit Ventures where he led investments in 40+ seed-stage startups. Elliot also founded HxTechnologies, a pioneer in health information exchange which he sold to Health Care Service Corporation, the parent of Blue Cross Blue Shield of TX, IL, OK, NM and MT.

## Srini Ramanathan



Dr. Srini Ramanathan is the Vice President of Development Sciences at Horizon Pharma. Dr. Ramanathan has more than 17 years of drug development expertise across a wide range of disease areas. He is responsible for several global drug approvals in infectious diseases and oncology. In his current role, Dr. Ramanathan is responsible for portfolio oversight of Horizon Pharma's clinical development functions, which includes biometrics, clinical pharmacology, bioanalysis and translational sciences, and preclinical development.

## Qingsong Zhu



Dr. Qingsong Zhu is the Chief Operating Officer of Insilico Medicine, Inc. and leads Insilico Medicine operations and drug development. He received his Ph.D. degree from Kansas State University in biochemistry and his postdoctoral training studying breast cancer at Johns Hopkins under Dr. Nancy Davidson. He has over 12 years of experience in genomics research and drug development. Dr. Zhu has focused on improving the early diagnosis and treatment of cancer and other age-related diseases.

### **Introduction & Welcome**

Daniel Castro, Director of the Center for Data Innovation, will kick off Data Innovation Day 2018.

### **Opening Keynote: The Impact of AI on Drug Discovery**

Dr. Qingsong Zhu, COO of Insilico Medicine, will discuss the impact AI is having on drug discovery and what this means for the industry, patients, and regulators.

### **Panel 1: Accelerating Data-Driven Drug Discovery**

Pharmaceutical research is an increasingly data-driven process. Researchers are using artificial intelligence to automate the drug discovery and development processes. For example, researchers can use recommendation algorithms to predict which untested compounds show the most promise and send these for more advanced testing in the lab. Similarly, researchers are using machine learning techniques and image recognition technology to extract biological insights from new experimental compounds. And researchers are making significant advances in using in silico research methods to predict how patients might respond to various experimental treatments. What are the opportunities and challenges that will arise from these advances in data-driven medical research, and how can government help accelerate these types of innovations?

### **Panel 2: The Future of Data-Driven Clinical Trials**

New technologies, particularly wearables and mobile apps, present new opportunities for collecting data during clinical trials, while the growth of electronic health records and online communities creates new opportunities to recruit qualified participants for clinical trials as well as using new research designs that embed clinical research into traditional medical care. What are the technical, organizational, and legal obstacles to data sharing in clinical research settings, and what improvements would allow patients, researchers, and companies to extract more value from health data? Moreover, how can policymakers support growing the patient data pool, increasing data sharing, and addressing the needs of diverse populations, including patients that suffer from rare diseases?

### **Panel 3: Modernizing Regulatory Processes for Data-Driven Medicine**

Proper government oversight of medical products is responsible for delivering safe, effective, and affordable treatments to patients. As drug research and development and clinical trials evolve to make use of expanding data sets and new technologies, regulatory agencies need to keep pace with these changes. For example, regulatory agencies can use artificial intelligence to analyze diverse data sets to improve the speed and accuracy of regulatory decisions, as well as enhance post-market surveillance. How are regulatory agencies adapting to recent innovations in medical research, and how can better use of data improve the regulatory review process?





The Center for Data Innovation conducts high-quality, independent research and educational activities on the impact of the increased use of information on the economy and society. In addition, the Center for Data Innovation formulates and promotes pragmatic public policies designed to enable data-driven innovation in the public and private sector, create new economic opportunities, and improve quality of life. The Center is a nonprofit, nonpartisan research institute affiliated with the Information Technology and Innovation Foundation.

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