BUILDING A GLOBAL NETWORK FOR PRECISION MEDICINE

23rd ANNUAL Bio·IT World

CONFERENCE & EXPO

Join world-class experts advancing scientific discoveries and initiatives.

REGISTER EARLY & SAVE

APRIL 15-17, 2024

BOSTON, MA & VIRTUAL

OMNI BOSTON HOTEL
AT THE SEAPORT

10 BIO-IT FOCUSED TRACKS

- MODERN DATA PLATFORMS AND STORAGE INFRASTRUCTURE
- DATA MANAGEMENT
- DATA SCIENCE AND ANALYTICS TECHNOLOGIES
- SOFTWARE APPLICATIONS AND SERVICES
- CLOUD COMPUTING
- GENERATIVE AI
- AI FOR DRUG DISCOVERY AND DEVELOPMENT
- AI FOR ONCOLOGY, PRECISION MEDICINE, AND HEALTH
- BIOINFORMATICS
- PHARMACEUTICAL R&D INFORMATICS

6 FULL-DAY SYMPOSIA

- FAIR DATA
- KNOWLEDGE GRAPHS
- QUANTUM COMPUTING
- AUTOMATION, DIGITAL LAB, AND ROBOTICS
- DIGITAL BIOPHARMA
- DIGITIZATION OF CLINICAL DEVELOPMENT AND CLINICAL TRIALS

Bio·IT World: VENTURE, INNOVATION & PARTNERING Conference

8 TECHNICAL WORKSHOPS

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Bio-ITWorldExpo.com #BioITExpo

Organized by Cambridge HEALTHTECH Institute

SCHEDULE & CONTENTS

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Schedule

Bio·IT World 2024

WELCOME

Now, more than ever, the life sciences community is at a tipping point as both scientific and computing capabilities explode and we have brand new opportunities to make the most of spatial 'omics, generative AI, quantum computing, human virtual models, and so much more.

Of course, that means there's also some hype to cut through as we get down to the business of driving real advances in biomedical research, drug discovery & development, and clinical and healthcare initiatives.

Since its debut in 2002, the annual Bio-IT World Conference & Expo has established itself as the place to have the most vibrant conversations in life sciences. More than 3,000 experts and professionals from 30+ countries weigh in on data ecosystems, real-world data, artificial intelligence, FAIR data, precision medicine, technology investments, and more—sharing their experiences, use cases, and practical advice.

Our 2024 program is rich with 200+ in-depth technical and scientific presentations across 10 tracks, 15 workshops and symposia, two expert-judged awards programs, three plenary keynotes, and an exhibit hall of 100+ leading technology service providers offering countless face-to-face opportunities to connect with the people you need to meet.

Join us in Boston on April 15-17, 2024, at the Bio-IT World Conference & Expo (with a live virtual stream as well) as we tackle these important topics together. Thank you for being part of our community.

We hope to see you in April!

Allison Proffitt
Editorial Director, Bio-IT World

Cindy Crowninshield
Executive Event Director
Bio-IT World Conference & Expo

EVENT AT-A-GLANCE

DAY 1 MONDAY, APRIL 15

6 FULL-DAY, DEEP-DIVE SYMPOSIA 8:00AM-4:20PM

FAIR Data	Quantum Computing	Digital Biopharma
Knowledge Graphs	Automation, Digital Lab & Robotics	Digitization of Clinical Development and Clinical Trials

TWO-HOUR WORKSHOPS 8:00AM-4:00PM IN-PERSON ONLY

Separate registration required for symposia and workshops

8:00 – 10:00am

W1: Generative AI 101: Demystifying for Drug Discovery Research

W2: Data Science in Practice: Embracing the Challenges, Unleashing the Possibilities

W3: Semantic Management Technologies and Processes: An Agile Framework to Enable Innovation

10:30am – 12:30pm

W4: Large Language Models and Their Practical Applications within Novartis: Best Practices and Use Cases

W5: Digitalization of Pharma R&D—Master the Marathon

W6: Biomedical Digital Twins

2:00-4:00pm

W7: Unlocking the Power of Data & AI for Drug Discovery

W8: Instrument-Driven Discovery for the 99%: Modern Infrastructure for Research

OPENING PLENARY KEYNOTE 4:30-6:00PM

DAYS 2 AND 3 TUESDAY, APRIL 16 AND WEDNESDAY, APRIL 17

PLENARY KEYNOTE PROGRAMS APRIL 16 8:00-9:30AM and APRIL 17 8:00-9:45AM

10 BIO-IT-FOCUSED CONFERENCE TRACKS APRIL 16-17 10:15AM-4:30PM

- Modern Data Platforms and Storage Infrastructure
- Data Management
- Data Science and Analytics Technologies
- Software Applications & Services
- Cloud Computing
- Generative AI - NEW
- AI for Drug Discovery and Development
- AI for Oncology, Precision Medicine, and Health
- Bioinformatics
- Pharmaceutical R&D Informatics

BIO-IT WORLD: VENTURE, INNOVATION & PARTNERING CONFERENCE APRIL 17 8:00AM-4:30PM - New for 2024!

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SPONSORSHIP & EXHIBIT OPPORTUNITIES

CHI offers comprehensive packages that can be customized to your budget and objectives. Sponsorship allows you to achieve your goals before, during, and long after the event. Packages may include presentations, exhibit space and branding, as well as the use of delegate lists. Signing on early will maximize your exposure to qualified decision-makers and drive traffic to your website in the coming months.

PODIUM PRESENTATIONS — Available within Main Agenda!

Showcase your solutions to a guaranteed, targeted audience through a 15- or 30-minute presentation during a specific program, lunch, or a pre-conference workshop. Package includes exhibit space, onsite branding, and access to cooperative marketing efforts by CHI. Lunches are delivered to attendees who are already seated in the main session room. Presentations will sell out quickly! Sign on early to secure your talk.

INVITATION-ONLY VIP DINNER/HOSPITALITY SUITE

Select specific delegates from the pre-registration list to attend a private function at an upscale restaurant or a reception at the hotel. From extending the invitations, to venue suggestions, CHI will deliver your prospects and help you make the most of this invaluable opportunity.

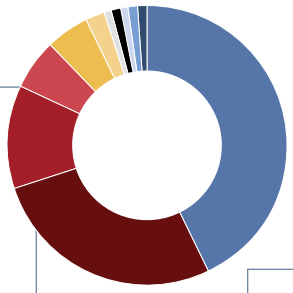
ONE-TO-ONE MEETINGS

CHI will set up 6-8 in-person meetings during the conference, based on your selections from the advance registration list. Our staff will handle invites, confirmations and reminders, and walk the guest over to the meeting area. This package also includes a meeting space at the venue, complimentary main-conference registrations, branding, an 8'x10' exhibit space, and more.

Additional branding and promotional opportunities are available, including:

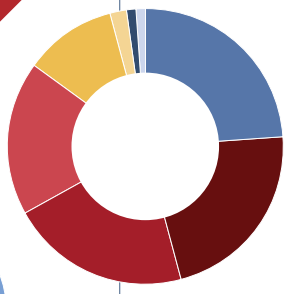
» Conference Tote Bags
» Literature Distribution (Tote Bag Insert or Chair Drop)
» Notebooks
» Water Bottles
» Graphics on elevator doors, columns and glass railings
» Refreshment breaks and receptions

2023 ATTENDEE DEMOGRAPHICS



COMPANY TYPE

Biotech	43%
Services	27%
Pharma	12%
Healthcare	6%
Academic	5%
Government	2%
CRO	1%
Financial	1%
Societies	1%
Press	1%
Other	1%



DELEGATE TITLE

Scientist/Technologist	24%
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Manager	11%
Assistant	2%
Professor	1%
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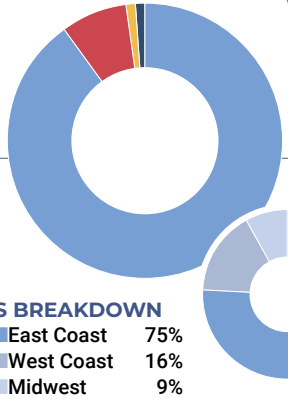

US BREAKDOWN

East Coast	75%
West Coast	16%
Midwest	9%

GEOGRAPHIC LOCATION

USA	90%
Europe	8%
Asia	1%
Rest of World	1%

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COMPANIES A-K
Rod Eymael
Business Development Manager
(781) 247-6286
reymael@healthtech.com

COMPANIES L-Z
Aimee Croke
Business Development Manager
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PLENARY **KEYNOTE PROGRAM**

Daniel Stanzione, PhD
Executive Director, Texas Advanced Computing Center (TACC)

Caroline Chung, MD, MSc, FRCPC, CIP
Vice President and Chief Data Officer and Director of Data Science Development and Implementation of the Institute for Data Science in Oncology, MD Anderson Cancer Center

David Hewlett
Actor/Writer/Director; Creator, The Tech Bandits

MONDAY, APRIL 15

7:00 am Registration Open

8:00 am Recommended Pre-Conference Workshops and Symposia*

On Monday, April 15, 2024, Cambridge Healthtech Institute is pleased to offer nine pre-conference Workshops scheduled across three time slots (8:00–10:00 am, 10:30 am–12:30 pm, and 2:00–4:00 pm) and six Symposia from 8:00 am–4:20 pm. All are designed to be instructional, interactive and provide in-depth information on a specific topic. They allow for one-on-one interaction and provide a great way to explain more technical aspects that would otherwise not be covered during the main conference tracks that take place Tuesday–Wednesday.

**Separate registration required. See details on the Symposia and Workshops at Bio-ITWorld Expo.com.*

PLENARY KEYNOTE PROGRAM

4:30 pm Organizer's Remarks
Cindy Crowninshield, Executive Event Director, Cambridge Healthtech Institute

4:35 pm Plenary Keynote Introduction
Speaker to be Announced

4:45 pm PLENARY KEYNOTE PRESENTATION: Unleashing the Power of Advanced Computing in Biomedical Informatics: A Vision for Transformative Collaboration
Daniel Stanzione, PhD, Executive Director, Texas Advanced Computing Center (TACC)

In the dynamic intersection of life science and computing, our mission at the Texas Advanced Computing Center (TACC) is to propel biomedical informatics into a new era of discovery and innovation. As computational leaders, we are dedicated to harnessing the potential of high-performance computing (HPC), machine learning (ML), and data analytics to revolutionize precision medicine. In this visionary pursuit, we prioritize the development of user-friendly interfaces and intuitive platforms. This approach ensures accessibility for executives and leaders in the life sciences industry, promoting seamless interaction with computational tools and fostering an environment where scientific and technological advancements coalesce. This presentation shares our vision for shaping the future of biomedical informatics where innovation, collaboration, and cutting-edge technologies converge to redefine the boundaries of what is possible in the realm of precision medicine.

6:00 pm Welcome Reception in the Exhibit Hall with Poster Viewing *(Sponsorship Opportunity Available)*

TUESDAY, APRIL 16

7:00 am Registration and Morning Coffee

PLENARY KEYNOTE PROGRAM

8:00 am Organizer's Remarks
Allison Proffitt, Editorial Director, Bio-IT World

8:05 am Keynote Introduction
Speaker to be Announced

8:15 am PLENARY KEYNOTE PRESENTATION: Unveiling Tomorrow's Possibilities: Embrace the Power of Digital Twins in Cancer Care and Research
Caroline Chung, MD, MSc, FRCPC, CIP, Vice President and Chief Data Officer and Director of Data Science Development and Implementation of the Institute for Data Science in Oncology, MD Anderson Cancer Center

Explore the transformative potential of digital twins in revolutionizing cancer care and research. Gain insights into how digital twins can help deepen biological understanding, accelerate drug discovery, and personalize therapeutic strategies to optimize treatment outcomes for every individual. Amidst the exciting opportunities are the challenges that must be tackled to harness the power of digital twins to advance precision oncology, empower researchers and clinicians with unprecedented insights, and improve patient outcomes..

9:30 am Coffee Break in the Exhibit Hall with Poster Viewing *(Sponsorship Opportunity Available)*

WEDNESDAY, APRIL 17

7:30 am Registration and Morning Coffee

PLENARY KEYNOTE PROGRAM

8:00 am Organizer's Remarks
Cindy Crowninshield, Executive Event Director, Cambridge Healthtech Institute

8:05 am Innovative Practices Awards
Allison Proffitt, Editorial Director, Bio-IT World

The Innovative Practices Awards recognizes and celebrates technology innovation in the life sciences. Bio-IT World is currently accepting entries for the 2024 Innovative Practices Awards, a competition designed to recognize partnerships and projects pushing our industry forward. Winners will be announced in mid-March 2024, recognized during the Wednesday April 17 Plenary Keynote Program, and scheduled to give a podium presentation about their project during the conference. The deadline for entry is February 2, 204. For more details about the Awards and to submit an application, visit www.bio-itworldexpo.com/innovativepractices.

8:20 am Plenary Keynote Introduction
Deven Atnoor, PhD, Vice President of Scientific Strategy, Clovertex

8:30 am PLENARY KEYNOTE PRESENTATION: Lights, Camera, Science: Film and Social Media Influence on Real-world Scientific Progress and Innovation
David Hewlett, Actor/Writer/Director; Creator, The Tech Bandits

Now, more than ever, life sciences is subject to misinterpretation, reduction, and inaccuracies at the hand of social media and Hollywood. And while it might be tempting to ignore the fake science streaming on YouTube and TikTok, there's a generation of would-be investigators for whom those platforms might be their primary introduction to research and discovery. David Hewlett has had his share of big screen roles representing science—and science fiction—and he believes it's imperative that the scientific and technology communities take back the narrative, filling gaps between what's real and what could be real soon! He's meeting this future generation where they are in schools, on YouTube, and on Twitch, championing real science in all its iterative, messy, exploratory glory, to recruit bright, diverse minds to lead the next generation of real scientists. He's got our report from the front lines.

9:45 am Coffee Break in the Exhibit Hall with Poster Viewing *(Sponsorship Opportunity Available)*

CAMBRIDGE HEALTHTECH INSTITUTE AND BIO-IT WORLD

2024 **AWARDS PROGRAMS**

Bio-IT World Innovative Practices Awards

Recognizing and Celebrating Innovation in the Life Sciences

Bio-IT World is accepting entries for the 2024 Innovative Practices Awards, a competition designed to recognize the most exciting partnerships and projects pushing the life sciences industry forward. The deadline for entry is February 2, 2024, and the $300 application fee will be waived for entrants who meet the early submission deadline of **January 5, 2024.**

For more than two decades, the Innovative Practices Awards have highlighted strategies that can be widely shared and implemented across the industry to improve science quality, pace, and reach. Judged by an independent panel of industry experts, the awards honor the ideas that are accelerating life sciences advancements. This year, winners will be announced in mid-March 2024 and will be invited to present at the Bio-IT World Conference & Expo in a special, Innovative Practices Awards Winners session in Boston on Wednesday, April 17, 2024.

For more information on the program and to download the entry form, please visit **Bio-IT WorldExpo.com/Awards.**

Bio-IT World 2024 Best of Show Awards

Recognizing Exceptional Innovation in Technologies Used by Life Sciences Professionals

The Best of Show Awards offer exhibitors of the Bio-IT World Conference & Expo an exclusive opportunity to distinguish and highlight their products, whether an innovative application, technology, tool, or solution. The Bio-IT World community is invited to identify exceptional innovation in technologies used by life science professionals, voting on the most impactful new products of the year.

We look forward to continuing this tradition. Exhibitors are invited to enter their products via the online submission form below. Attendees are encouraged to explore the novel technologies and solutions firsthand in the exhibit hall and vote for the People's Choice Award once the conference has begun. Please note, selection is not based upon level of sponsorship or exhibit participation.

"It's always amazing to watch this community come together to solve problems and advance precision medicine with truly innovative solutions."

- ALLISON PROFFITT, EDITORIAL DIRECTOR, BIO-IT WORLD

Bio·IT World 2024

Unparalleled **Networking** Opportunities

Bio-IT World is investing in innovative technology to ensure attendees can connect with fellow participants whether they are attending in-person or virtually.

- Take part in 1-on-1 networking with an easy to navigate profile search, filter, and scheduling platform
- Receive personalized 1-on-1 networking recommendations based on CHI's unique matchmaking algorithm
- Identify and establish meetings with participants who have similar initiatives and challenges within minutes
- Engage with technology leaders in their booths in-person or online
- Take part in live Q&A with speakers and participants following each presentation

Learn more by visiting **Bio-ITWorldExpo.com/Networking**

SUNDAY, APRIL 14

5:00 pm Registration Open

MONDAY, APRIL 15

7:00 am Registration and Morning Coffee

8:00 Organizer's Remarks

8:05 Chairperson's Remarks

Ishwar Chandramouliswaran, Program Director, Office of Data Science Strategy, NIH

HOW FAIR IS FAIR?

8:10 How FAIR is FAIR Enough?

Vinay C. Desai, PhD, MBA, Senior Director Regeneron IT, Regeneron Pharmaceuticals, Inc.

Michael Georgiadis, Principal Scientific Business Analyst, Research IT, Regeneron Pharmaceuticals, Inc.

Michael Livstone, PhD, Scientific Data Curation Lead, Regeneron Pharmaceuticals, Inc.

John McLoughlin, Associate Director IT, Regeneron Pharmaceuticals, Inc.

We have begun an effort to make our data FAIR, building from the principle that metadata should be collected once ("born FAIR") and then transmitted wherever it is needed. We weighed the pros and cons of several approaches against business needs and adopted an Agile approach to building and evolving FAIR systems for instrument files. One major consideration was how much FAIRness is required to achieve adequate, scalable usability.

FAIR RESOURCES

8:30 Data Repository Attributes—FAIR Repositories

Michael Witt, Head, Distributed Data Curation Center, Purdue University

One important step towards achieving FAIR data is the development and improvement of data repositories to be findable, accessible, and interoperable. The recent recommendation from the Research Data Alliance, Common Descriptive Attributes of Research Data Repositories, provides guidance to enable well-described repositories to support researchers, funders, publishers, repository developers and managers, registries, and other stakeholders, including both users and user agents.

8:50 Putting FAIR into Practice: It Takes a Village

Susanna-Assunta Sansone, PhD, Professor of Data Readiness, Department of Engineering Science; Academic Lead for Research Practice, University of Oxford

The FAIR Principles have succeeded to unite stakeholders worldwide behind a common concept: good data management under common standards. However, FAIR is aspirational, and the narrative principles are insufficient to circumscribe the valid mechanisms to achieve the behaviours they describe. This presentation provides an overview of a community-driven resource, and a community task force showing how they contribute to enabling FAIR compliance and turn FAIR into reality.

9:10 Presentation to be Announced *(Sponsorship Opportunity Available)*

9:40 Networking Coffee Break

10:00 The Elixir FAIR Cookbook: Turning FAIR Into Practice

Philippe Rocca-Serra, PhD, Senior Director FAIR Collaborations R&D, AstraZeneca, Cambridge UK, and Associate Member of Faculty, Oxford e-Research Centre, University of Oxford

Created by data managers, professionals in academia, (bio)pharmaceutical companies, and information service industries, the FAIR Cookbook is an online resource of hands-on recipes that guides researchers and data stewards in their FAIRification journey. It also provides policy-makers and trainers with practical examples to recommend in their guidance and use in their educational material. Part of the ELIXIR ecosystem, this resource is open to contributions of new recipes.

10:20 FAIR for Machine Learning; Building on the Lessons from FAIR Software

Fotis Psomopoulos, PhD, Senior Researcher, INAB|CERTH

Research software has only just started to receive the same level of attention as FAIR data in recent years, with targeted actions towards the definition of the FAIR principles, as well as concerted efforts around reproducibility, quality, and sustainability. Given the rapid rise of ML as a key technology across all science domains, it is important to build on our collective experience, towards addressing the challenges of making ML FAIR.

10:40 Implementing FAIR Biomedical Research Software

Bhavesh Patel, PhD, Associate Research Professor, FAIR Data Innovations Hub, California Medical Innovations Institute

Research software such as data analysis tools and AI models have become an essential part of biomedical research. Making them FAIR is therefore critical to enable the reproducibility of research results, prevent duplicate efforts, and ultimately increase the pace of discoveries. In this talk, we discuss what it means to make software FAIR and present the FAIR Biomedical Research Software (FAIR-BioRS) guidelines, which are actionable guidelines for making software FAIR.

11:00 RDMKit Alliance

Munazah Andrabi, PhD, Data & Community Manager, The University of Manchester

11:20 U.S. National PID Strategy

John Chodacki, Director, University of California Curation Center (UC3)

This session outlines a national strategy for integrating persistent identifiers (PIDs) and metadata into research following OSTP guidelines for research integrity. Co-led by Todd Carpenter (NISO) and John Chodacki (RDA-US), we'll discuss consensus-building for PIDs, promoting best practices, and recommending PIDs for specific uses. The goal is to enhance metadata quality, ensure seamless data flow across platforms, and potentially set a National Standard, benefiting a broad spectrum of research stakeholders.

11:40 Luncheon Presentation *(Sponsorship Opportunity Available)* **or Enjoy Lunch on Your Own**

12:40 pm Session Break

FAIR PLATFORMS

12:55 Chairperson's Remarks

Ishwar Chandramouliswaran, Program Director, Office of Data Science Strategy, NIH

1:00 Figshare FAIR Best Practices

Dan Valen, Head of Strategic Development, Figshare

Figshare is a flexible generalist repository that allows researchers to FAIR-ly share any research output in a trusted repository so it is discoverable and reusable. As part of the NIH Generalist Repository Ecosystem Initiative (GREI), Figshare has been working together with other repositories to enhance its interoperable metadata, use of persistent identifiers, user interface, search capabilities, and metrics reporting to support both the sharing and discovery of FAIR open data.

1:20 Building on a FAIRly Strong Foundation to Connect Academic Research to Translational Impact

Jack DiGiovanna, PhD, CSO, Velsera

Making data and analytics FAIR has transformative potential within organizations to build on existing knowledge. FAIR resources also democratize access to information and tools in underserved communities. Global standards and analysis platforms provide strong foundational elements. However, FAIRness across time and different sectors of the biomedical workforce

presents challenges. Here we summarize how platforms make data and analysis FAIR today and what we see as key areas of future focus.

1:40 FAIR and Compliant: A Blueprint for Collaborating on Protected Data

Rachana Ananthakrishnan, Executive Director, Globus, University of Chicago

The explosion of the amount of data coming off instruments, new research data sharing policy requirements for publication of scientific data, and the availability of a wide diversity of storage systems contribute to the increased demands on system administrators in research computing. Globus (globus.org) is a comprehensive platform for research IT which includes data description and discovery, protected data management, and automation.

2:00 Networking Refreshment Break

2:20 FAIR—Alliance of Genomic Resources

Paul Sternberg, PhD, Bren Professor of Biology, Biology & Biological Engineering, California Institute of Technology

2:40 Why Industry Should Care: Boosting Research Efficiency with FAIR Data

Juergen Harter, PhD, CEO, The Cambridge Crystallographic Data Centre (CCDC)

The Cambridge Crystallographic Data Centre (CCDC) maintains the Cambridge Structural Database (CSD), a trusted repository of 1.2M+ experimental 3D structures used by academics and researchers in pharmaceutical, agrochemical, and fine chemical industries. FAIR data concepts have driven our approach to sustaining this critical global resource. We will share our FAIR journey and reflect on the value and importance of the FAIR data principles to the life sciences industry at large.

3:00 PANEL DISCUSSION WITH SYMPOSIUM SPEAKERS: Accelerating Biomedical Discovery with FAIR Data Resources and Best Practices

Co-Moderators:

Ishwar Chandramouliswaran, Program Director, Office of Data Science Strategy, NIH

Nick Lynch, PhD, Founder & CTO, Curlew Research; Member, FAIRplus Consortium

4:20 Close of Symposium

4:20 Transition to Plenary Keynote

PLENARY KEYNOTE PROGRAM

4:30 Organizer's Remarks

Cindy Crowninshield, Executive Event Director, Cambridge Healthtech Institute

4:35 Plenary Keynote Introduction

WEKA

Speaker to be Announced

4:45 PLENARY KEYNOTE PRESENTATION: Unleashing the Power of Advanced Computing in Biomedical Informatics: A Vision for Transformative Collaboration

Daniel Stanzione, PhD, Executive Director, Texas Advanced Computing Center (TACC)

Embark on a transformative journey with the Texas Advanced Computing Center, where high-performance computing, machine learning, and data analytics converge to revolutionize medicine. Through collaborative efforts, we integrate bioinformatics and computational biology, accelerating personalized patient care and drug discovery. Our commitment to user-friendly interfaces ensures accessibility for industry leaders. We are redefining boundaries of life science computing, shaping a future where innovation and collaboration drive breakthroughs in biomedical informatics.

6:00 Welcome Reception in the Exhibit Hall with Poster Viewing
(Sponsorship Opportunity Available)

7:15 Close of Day

SUNDAY, APRIL 14

5:00 pm Registration Open

MONDAY, APRIL 15

7:00 am Registration and Morning Coffee

8:00 Organizer's Remarks

KNOWLEDGE GRAPHS: INTRODUCTION, USE CASES, TECHNICAL FOUNDATION

8:05 Chairperson's Remarks
Michael Liebman, PhD, Managing Director, IPQ Analytics, LLC

8:10 An Introduction to Knowledge Graphs: A Technical Foundation
Peter V. Henstock, PhD, Machine Learning & AI Lead, Software Engineering & Statistics & Visualization, Pfizer Inc.

8:30 From Evidence to Insights: Cascading Insight Generation Using Knowledge Graphs
Sebastian Scharf, PhD, Data Scientist, Roche Pharma

The talk is about automated generation of insights from evidence with a special focus on provenance.

8:50 Charting the Patient Path: Harnessing Knowledge Graphs for Insightful Visualization and Management of Care Infrastructure
Ray Lukas, Principal Engineer, MITRE Labs

9:10 Presentation to be Announced

9:40 Networking Coffee Break

10:00 Knowledge-Driven Mechanistic Enrichment of the Preeclampsia Ignorome
Tiffany Callahan, PhD, Postdoctoral Research Scientist, IBM

Differentially expressed genes (DEGs) associated with a disease experimentally that have no known association to the disease in the literature are known as the ignorome. Preeclampsia has an extensive body of scientific literature and a large pool of DEG data, but only one definitive treatment. In this talk, I demonstrate how a knowledge graph can be used to support discovery and improve our understanding of this disease.

10:20 An Ignorance-Base for Prenatal Nutrition: A Knowledge Graph to Explore the Literature's Known Unknowns
Mayla R. Boguslav, PhD, Postdoctoral Research Fellow, Colorado State University

Research progresses through accumulating knowledge such that a previously unexplored subject (unknown unknown) becomes an active research area exploring questions (known unknowns), until a body of established facts emerges (known knowns). Many knowledge-bases exists for known knowns, but no ignorance-bases exist for known unknowns. What novel connections and insights are in the unknowns? Using a knowledge graph, we created the first ignorance-base for prenatal nutrition to help find pertinent questions.

10:40 Knowledge Graphs: Complex Reasoning in Clinical Research and Clinical Decision Support
Michael Liebman, PhD, Managing Director, IPQ Analytics, LLC

We have been developing a novel method for creating knowledge graphs to incorporate the complexities of the patient, the disease, and the practice of medicine. In addition, we have incorporated temporal modeling to reflect the biologic/physiologic processes and patient journey, including evolution of clinical protocols for diagnosis and treatment. Application to infant/maternal morbidity and mortality and hypertensive disorders of pregnancy will be presented.

11:00 PANEL DISCUSSION: Getting Started with Knowledge Graphs
Moderator: Michael Liebman, PhD, Managing Director, IPQ Analytics, LLC
Panelists:
Mayla R. Boguslav, PhD, Postdoctoral Research Fellow, Colorado State University
Tiffany Callahan, PhD, Postdoctoral Research Scientist, IBM
Peter V. Henstock, PhD, Machine Learning & AI Lead, Software Engineering & Statistics & Visualization, Pfizer Inc.
Ray Lukas, Principal Engineer, MITRE Labs
Sebastian Scharf, PhD, Data Scientist, Roche Pharma

11:30 Transition to Lunch

11:40 LUNCHEON PRESENTATION: Harnessing AI to Bridge the Gap Between your Data and Global Research Knowledge
Sebastian Schmidt, CEO, metaphacts

The data needed to create new opportunities and drive decisions is abundant, but it is distributed across heterogeneous sources and lacks the context needed to deliver insights. The Dimensions KG powered by metaphactory combines the power of symbolic AI and neural AI to transform data into knowledge, connect internal data with global research knowledge, and augment and scale business decisions. Customers benefit from actionable and explainable insights following a human-in-the-loop approach.

12:40 pm Session Break

TAKING THE NEXT STEP: BUILDING ADVANCED GRAPHING CAPABILITIES

12:55 Chairperson's Remarks
Janice McCallum, Managing Director, Health Content Advisors

1:00 AI Chatbots & Biology: Generative AI and Knowledge Graphs for Frictionless Information Access
Nick Brown, Executive Director, Imaging & Data Analytics, AstraZeneca

In the vast world of biology data, finding the right information can feel like searching for a needle in a haystack. This talk introduces an exciting solution: using AI chatbots paired with knowledge graphs. These tools can dive deep into large datasets, unveiling crucial insights that might otherwise stay hidden. We'll explore how this blend of technology helps, its safety benefits, and the ways it promises to revolutionize biology research.

1:20 Ask ARCH: LLM Question Answering over Large-Scale Knowledge Graphs
Jon Stevens, PhD, AI Language Capability Lead, AbbVie, Inc.

AbbVie's ARCH Graph harmonizes and connects various biomedical entities from different data sources, allowing scientists to make connections and discover knowledge. We integrate Neo4J with LLMs to create a question-answering system that returns natural language answers along with underlying ARCH Graph data and Cypher queries. Our system utilizes vector search, Cypher generation and validation, and LLM-based summarization. This integration reduces hallucinations, improves reliability, and enables interactive knowledge discovery.

1:40 Insights through Knowledge Graphs, Quantum Computing, and Machine Learning in the NIH's Bridge2AI Initiative

Wade L. Schulz, MD, PhD, Assistant Professor; Director of Informatics, Laboratory Medicine; Director, CORE Center for Computational Health, Center for Outcomes Research & Evaluation (CORE), Yale School of Medicine

The Bridge2AI initiative, initiated by the National Institutes of Health (NIH), aims to broaden the application of artificial intelligence in both biomedical and behavioral research. This talk discusses a project we are engaged in that integrates knowledge graphs with quantum computing and machine learning, as a component of the NIH's Bridge2AI program.

2:00 Networking Refreshment Break

2:20 Presentation to be Announced *(Sponsorship Opportunity Available)*

2:50 CO-PRESENTATION: Enhancing Decision-Making and Drug Portfolio Workflows at Takeda Pharmaceuticals: The Role of Information Architecture and Digital Tools

Seth Earley, CEO, Earley Information Science

Giovanni Piazza, Head of Knowledge Management Services, Takeda

This talk explores Takeda Pharmaceutical's revamp of its drug portfolio evaluation process. Overhauling manual workflows, the organization integrated systems, improved user experience, and aligned information architecture with corporate ontology and knowledge graph. This optimized process ensures strategic information management, boosts operational efficiency and showcases marked improvements in decision-making speed. Additionally, a Large Language Model Proof of Concept showed enhanced recall and accuracy, minimizing errors.

3:50 PANEL DISCUSSION: Advanced Capabilities

Moderator: Janice McCallum, Managing Director, Health Content Advisors

Panelists:

Nick Brown, Executive Director, Imaging & Data Analytics, AstraZeneca

Seth Earley, CEO, Earley Information Science

Giovanni Piazza, Head of Knowledge Management Services, Takeda

Wade L. Schulz, MD, PhD, Assistant Professor; Director of Informatics, Laboratory Medicine; Director, CORE Center for Computational Health, Center for Outcomes Research & Evaluation (CORE), Yale School of Medicine

Jon Stevens, PhD, AI Language Capability Lead, AbbVie, Inc.

4:20 Close of Symposium

4:20 Transition to Plenary Keynote

PLENARY KEYNOTE PROGRAM

4:30 Organizer's Remarks

Cindy Crowninshield, Executive Event Director, Cambridge Healthtech Institute

4:35 Plenary Keynote Introduction

WEKA

Speaker to be Announced

4:45 PLENARY KEYNOTE PRESENTATION: Unleashing the Power of Advanced Computing in Biomedical Informatics: A Vision for Transformative Collaboration

Daniel Stanzione, PhD, Executive Director, Texas Advanced Computing Center (TACC)

Embark on a transformative journey with the Texas Advanced Computing Center, where high-performance computing, machine learning, and data analytics converge to revolutionize medicine. Through collaborative efforts, we integrate bioinformatics and computational biology, accelerating personalized patient care and drug discovery. Our commitment to user-friendly interfaces ensures accessibility for industry leaders. We are redefining boundaries of life science computing, shaping a future where innovation and collaboration drive breakthroughs in biomedical informatics.

6:00 Welcome Reception in the Exhibit Hall with Poster Viewing *(Sponsorship Opportunity Available)*

7:15 Close of Day

SUNDAY, APRIL 14

5:00 pm Registration Open

MONDAY, APRIL 15

7:00 am Registration and Morning Coffee

8:00 Organizer's Remarks

QUANTUM COMPUTING UNLEASHED! FROM PRECISION MEDICINE TO PHARMA'S QUANTUM LEAP

8:05 Chairperson's Remarks

Christopher Bishop, Chief Reinvention Officer, Improvising Careers

8:10 Quantum Computing—We've Got a Lot of Growing Up to Do

Brian Martin, Head of AI, R&D Information Research; Research Fellow, AbbVie, Inc.

This session will be a unvarnished view on the current state of quantum computing in the pharma space. We'll discuss examples that have potential, and spend some time on hype-killing and dispelling illusions. We'll talk more importantly about the path forward and the essential nature of collaboration to help keep the future aligned to the potential value and discuss the role that pharma companies need to play in that collaboration.

8:30 Quantum Computing for Precision Medicine: A New Era of Healthcare

Federico Pirovano, CEO, Dynius

In my presentation, I'll explore my quantum computing research in precision medicine, focusing on quantum neural networks. I'll cover two key areas: personalized knee osteoarthritis treatment and early neurodegenerative disease diagnosis via brain MRI. Additionally, I'll delve into the potential impact on precision medicine's future. Lastly, I'll touch on our ongoing R&D project using quantum computing to predict brain age from MRI data in neurodegenerative diseases.

8:50 Quantum Computing: Applications to Healthcare and Pharmaceuticals

LaiaDongo Domngo, PhD, CSO, Igenii

Quantum computing, a novel technology, introduces innovative algorithmic approaches that facilitate the execution of specific computations significantly faster than classical computing. In this talk, we will explore the potential applications of quantum computing in healthcare and pharmaceuticals, including drug discovery, personalized medicine, and medical imaging. Additionally, we will provide an overview of the evolution of the quantum ecosystem and discuss some of the challenges and limitations of quantum computing.

9:10 Presentation to be Announced *(Sponsorship Opportunity Available)*

9:40 Networking Coffee Break

10:00 QuADD—Quantum-Aided Drug Design

Shahar Keinan, PhD, Co-Founder & CEO, POLARISqb

Polaris Quantum Biotech (POLARISqb), is developing QuADD (Quantum-Aided Drug Design), a subscription-based SaaS product that finds your lead-like hits from a library of 10^30 molecules (and growing) in 1-2 days and answers the question "When looking for new drugs, where do you start?" In this presentation, we will discuss the requirements and quantum technology behind QuADD, as well as several case studies and how you can test it.

10:20 Application of Quantum Computing to Cyclic-Peptide Docking

Akihiko Arakawa, Researcher, Discovery Chemistry, Chugai Pharmaceutical Co., Ltd.

Chugai has developed original mid-size molecular drug discovery technologies, which can generate orally bioavailable cyclic peptides. We are exploring invaluable applications of quantum computing technology to our mid-size molecular research. We are planning and conducting POC studies for examining its potential for enhancing our mid-size molecular research. As a case study, we will introduce a POC study of cyclic-peptide docking simulation using a quantum computing-inspired optimization solution.

10:35 Quantum Computing for Solving Complex Biomedical Problems: A Case Study in Multi-Dimensionality in Cellular Regulatory System

Iman Tavassoly, MD, PhD, Director of Quantitative Pharmacology, Repare Therapeutics, USA

Even at smaller scales, the numerical parameters governing cellular regulatory systems span a finite, yet highly multi-dimensional space, where distinct dynamical behaviors give rise to a diverse array of phenotypes. The outcomes of an analysis using quantum computing centered on a complex three-component motif within the cellular regulatory system will be presented. This motif governs a wide spectrum of cellular functions and phenotypes, exhibiting variations under different conditions and treatments.

10:50 CO-PRESENTATION: Quantum Assisted AI/ML for Precision Medicine

Tom Chittenden, PhD, DPhil, PStat, Honorary Professor, Digital Environment Research Institute, Queen Mary University of London; CSO and President of R&D, BioAI Health

Daniel Lidar, Viterbi Professor Of Engineering, University of Southern California

11:30 Transition to Lunch

11:40 Luncheon Presentation *(Sponsorship Opportunity Available)* **or Enjoy Lunch on Your Own**

12:40 pm Session Break

UNVEILING QUANTUM ALGORITHMS IN LIFE SCIENCES: EXPLORING COMPUTATIONAL BIOLOGY'S FUTURE WITH QUANTUM PRECISION

12:55 Chairperson's Remarks

Christopher Bishop, Chief Reinvention Officer, Improvising Careers

1:00 Selected Applications of Quantum Computing in Life Sciences: Optimization and Simulation

Jason Necaise, PhD, Quantum Information Researcher, Dartmouth College

I'll introduce two quantum algorithms with scaling advantages over classical ones. They're great for solving optimization problems and computing molecular properties. The talk will highlight life science applications in these areas, aiming to be easily understood by non-experts in quantum computing. It'll give a clear intro and discuss how these methods in quantum computing relate to computational biology, a hot area of research.

1:20 Breaking through the Hype: Can Quantum Computing Transform Drug Discovery?

Sara Dolcetti, Vice President of Business Development, Qubit Pharmaceuticals

The promise of quantum computing is to solve currently intractable problems. Companies are already making headway to tackle challenges like drug discovery for incurable diseases. That said, there is skepticism around the readiness of quantum computing and the timeline to realization. This session will explore how quantum computing is currently being used, and is being set up to be used, to enable and accelerate drug development in the future.

1:40 Presentation to be Announced

2:00 Networking Refreshment Break

2:20 Presentation to be Announced *(Sponsorship Opportunity Available)*

2:50 CO-PRESENTATION: Quantum Computing to Support Phenotypic Screening

Gregory Barker, PhD, Head, Data Science & Advanced Analytics, Leads Discovery & Optimization, Bristol Myers Squibb Co.

Vineet Jain, IT Partner, Research IT, Bristol Myers Squibb Co.

3:20 CO-PRESENTATION: Beyond Bits: Navigating Quantum Computing and a New Era of Technologies

Robert Albert, Innovation Consultant, AstraZeneca

Zachary C. Coleman, Technology Advisor, AstraZeneca

Alex Voegele, Technology Advisor, AstraZeneca

Scott Wilkins, PhD, Director, Technology Innovation, IT, AstraZeneca Pharmaceuticals

Quantum computing has the potential to transform industries, including drug discovery, molecular simulation, and precision medicine. But amid such promises, it is difficult to distinguish hype from reality, and it is crucial to understand what this technology is, and what it is not. As members of AstraZeneca's Technology Innovation team, we will share our approach to navigating quantum computing.

4:20 Close of Symposium

4:20 Transition to Plenary Keynote

PLENARY KEYNOTE PROGRAM

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6:00 Welcome Reception in the Exhibit Hall with Poster Viewing
(Sponsorship Opportunity Available)

7:15 Close of Day

> "From inception, Bio-IT has gone from strength to strength. It is now the go-to venue for IT and informatics professionals in biopharma."
>
> Susan J. Ward, Founder & Exec Dir, Collaborative Trajectory Analysis Project

SUNDAY, APRIL 14

5:00 pm Registration Open

MONDAY, APRIL 15

7:00 am Registration and Morning Coffee

8:00 Organizer's Remarks

DATA MESH IN ACTION

8:05 Chairperson's Remarks

Mohan Boggara, PhD, Digital Transformation Leader, CMC Process Development & Data Sciences, Sanofi

8:10 Data Mesh Principles in Action: Transforming Oncology Research and Mindsets

Nimisha Asthagiri, Digital Platform Strategist, Data & AI, Thoughtworks

We dive into our journey in building Seagen's Oncology Research Data Hub that leverages data mesh principles to provide real-time access to previously unavailable or undiscoverable data. We share experiences in shifting mindsets towards viewing data as a product and change management techniques for transforming user habits. Our work includes domain mapping guidelines for scalable data ownership and federated governance for researchers in early drug discovery to IND.

8:25 CO-PRESENTATION: Data Mesh with Lakehouse

Pratik Gandhi, Technology Solutions Manager, ZS Associates, Inc.
Vineet Jain, IT Partner, Research IT, Bristol Myers Squibb Co.
Subramanian Natarajan, Senior Solution Architect, Cloud Data, Bristol Myers Squibb Co.

Lakehouse in a Box simplifies data management by abstracting complexities and eliminating manual tasks. It offers ready-to-use platforms, leveraging AWS and BMS practices like Infrastructure as Code (IaC) and Service Catalog. IaC enables consistent, scalable infrastructure management through coded definitions, ensuring repeatability and reducing errors. CloudFormation defines infrastructure requirements, allowing version control and automation for provisioning and maintenance.

EXPLORING OMICs AND NGS

8:40 NGS Lab LIMS and Data Management

Qixin Bei, Principal Research Software Engineer, gRED MPL&NGS, Genentech, Inc.

The multi-tenant NGS LIMS developed at Genentech is a web application that can support multiple departments to manage their NGS workflow and data. The software integrates with existing company-wide sample registries and data analysis pipelines, acts as a crucial link between sample metadata and NGS data analysis results, and contributes to FAIR NGS data. The multi-tenant architecture also achieves cost-savings in software development, deployment, and maintenance.

8:55 Data Harmonization of Omics Data across Novartis Biomedical Research

Abi Lakshmanan, Associate Director, Scientific Products, Novartis Institutes for BioMedical Research (NIBR)

Our omics start2end initiative enhances omics data accessibility and utility in biomedical research. By adhering to FAIR principles, it broadens data applications across studies. The platform streamlines tasks like registration and analysis, benefiting data scientists with consistent access. Upstream metadata quality has notably improved. Community adoption of these workflows and visualizations steadily grows, indicating a shift towards standardized, impactful methodologies.

9:10 Enabling Self-Driving Labs for Autonomous Discovery

Brigitte E. Raumann, Product Manager, Globus, University of Chicago

Digital labs leveraging ML and AI algorithms will become commonplace in the future. Labs of the future will need to automate data management tasks such as data movement and sharing, to access diverse compute resources, and to fluidly cross authorization boundaries. Using AI-directed control of self-driving laboratories as an example, we will highlight how Globus can accelerate your move to modernize your infrastructure by enabling efficient and extensible automated task orchestration.

9:40 Networking Coffee Break

AI, DIGITAL TWINS, AND THE NUANCES OF RESEARCH TO DEVELOPMENT

10:00 Unlocking Efficiency: Exploring Roche's Digital Twin Automation for Seamless Research Workflows

Pedro Ivo Guimarães, PhD, Senior Scientist and Product Manager, Roche

In this talk we will explore a digital lab automation framework used in several initiatives in Roche that is based on the idea of creating digital twins of research entities such as molecules, fermentation processes, and plates; and defining atomic "action blocks" that can be chained together creating an automated end-to-end digital workflow.

10:15 AI-Driven Drug Discovery beyond Kinases: How to Not Get Trapped in a Local Minimum When Designing Drugs for Intractable Targets

Thrasyvoulos Karydis, PhD, Co-Founder & CTO, DeepCure, Inc.

When binding data for a target is not available, limited, or biased, most AI drug discovery companies are not well-equipped to deliver novel, viable starting points for optimization and/or leads. Accessing novel chemical space is made possible by a robotic automated custom synthesis system that allows for the reproducible multi-step synthesis of molecules from 100+ different reaction types.

10:30 Productionizing R&D Data for ML-Guided Drug Generation

Ilja Kusters, Senior Scientist, Generate BioMedicines

Generate Biomedicines is a clinical stage therapeutic drug company that is pioneering an ML-powered generative biology platform that integrates digital and hardware automation to increase efficiency and decrease cycle times. Here, I will discuss how we tackle challenges posed by the flexibility, diversity, and fast pace of our R&D platform to feed data and metadata into Generate's FAIR database.

10:45 CO-PRESENTATION: Enabling Digital Transformation of Pharma Product Development through Full Transformation of End-to-End Workflows: Progress and Challenges

Mohan Boggara, PhD, Digital Transformation Leader, CMC Process Development & Data Sciences, Sanofi

Christelle Le Beaudour, iCMC Digital Transformation Program Leader, Sanofi

CMC process development is facing multiple challenges from the increasing number of projects to higher agility, cost reductions, data integrity & accelerated development timelines. Data generated during drug development is only partially leveraged to further improve our processes or use it for predictive modeling. Building on a multi-year CMC digital transformation program, we embarked on digitizing end-to-end workflows across multiple platforms & lab families.

11:00 Automated Cell Culture Data Pipelines and Digital Transformation

Gabriel Lurz, Principal Research Associate, Sanofi

Advances in analytical technology, combined with robotic high-throughput cell culture systems, have resulted in tremendous volumes of data. To address these growing scientific and digital needs, the end-to-end cell culture digital transformation team has built automated data pipelines that enable near real-time data flow for scientists. Successful deployment has already occurred in Framingham to the automated HiTMaP lab with future rollouts to the hundreds of cell culture scientists at Sanofi.

11:15 Cracking the Code: Transforming Organoid Research into Scientific Gold

Brian Jamieson, Founder & CTO, Diagnostic Biochips, Inc.

This review delves into advanced strategies proven effective in past organoid

research and explores best practices for future insights. The presentation covers notable advances in brain organoid research, highlighting core measurements that companies like DBC focus on for drug development. Managing the complex data from these measurements is a significant challenge, and the presentation aims to convey the importance of novel data analysis method.

11:30 Transition to Lunch

11:40 Luncheon Presentation *(Sponsorship Opportunity Available)* **or Enjoy Lunch on Your Own**

12:40 pm Session Break

WATCHING LAB TV AND NAVIGATING DECENTRALIZED LABS

12:55 Chairperson's Remarks

Brigitte E. Raumann, Product Manager, Globus, University of Chicago

1:00 CO-PRESENTATION: Lab Health TV: Streamlining Science with Real-Time Instrument Status

Vinay C. Desai, PhD, MBA, Senior Director Regeneron IT, Regeneron Pharmaceuticals, Inc.

Michael Georgiadis, Principal Scientific Business Analyst, Research IT, Regeneron Pharmaceuticals, Inc.

John McLoughlin, Associate Director IT, Regeneron Pharmaceuticals, Inc.

Cristian Pelle, Senior IT Engineer, Regeneron Pharmaceuticals, Inc.

The success of any laboratory hinges on efficient operation of instruments and workflows. We present a real-time monitoring system for lab instruments, vendor-agnostic of specific devices. Accessible from any browser and displayed on TV dashboards, this system facilitates improvements in lab productivity. It provides a 'single pane of glass' view of labs, enhancing visibility. The solution, based on a single enterprise platform, provides scalability, manageability, and quick implementation: "Lab Health TV."

1:15 CO-PRESENTATION: How Disruptive Lab Technologies Can Revolutionize the Future of Care Delivery

Talia Grace Haller, Senior AI Strategy Consultant, John Hopkins University, Bioinformatics

Vasu Nadella, CEO, Vital Biosciences

In an era marked by technological advancements, this session explores the evolution of healthcare from centralized laboratories to decentralized home-based diagnostics. Join AI strategy consultant Talia Grace and Vital Biosciences CEO and co-founder Vasu Nadella as they seek to unravel the implications of this paradigm shift, from the empowerment of patients to the reimagining of care delivery.

LAB INSTRUMENTS OF THE FUTURE

1:30 CO-PRESENTATION: Leveraging FMEA to Visualize Laboratory Instrument PC Risks

Vinay C. Desai, PhD, MBA, Senior Director Regeneron IT, Regeneron Pharmaceuticals, Inc.

William Kerilla, Regeneron Pharmaceuticals, Inc.

Decisions affecting lab PCs are often touted being made using a "risk-based" approach. This involves gathering point-in-time data as well as various stakeholders to discuss and agree on the analyzed results. We will present our proof-of-concept that captures risk events, and calculates risk-scoring using real-time monitoring and defined weights based on the Six Sigma Failure Mode Effects Analysis methodology (FMEA) framework.

1:45 PI Data Query for Field Instruments

Jimeng Jiang, PhD, Senior Scientist, Pharmaceutical Commercialization Technology, Merck & Co.

Gathering Pi data feels like a project instead of a simple query. We will share why we needed this tool at Merck and introduce the audience to the technologies and frameworks that we used. By sharing our lessons the audience will be able to identify common pain points, to understand effective strategies and techniques to improve the performance, and to leverage the learnings for their best practices for data organization

2:00 Networking Refreshment Break

2:20 Presentation to be Announced *(Sponsorship Opportunity Available)*

2:50 Using Laboratory Voice Assistance and Automated Animal Identification to Benefit our Researchers within the Labs

Kristian Kolakowski, Scientific Business Analyst, Regeneron Pharmaceuticals, Inc.

Patrick Leblanc, Director Business Relationship Management, Research & Preclinical Development IT, Regeneron Pharmaceuticals, Inc.

Wasim Sadar, Senior Project Manager, Research and Development IT, Regeneron Pharmaceuticals, Inc.

Scientists performing *in vivo* work within vivaria have historically been left on their own for many years. Often times, outdated technologies such as pen and paper, mundane data entry, and even memorization have been used to document information throughout the experimental process. We will present the journey we took to enable scientists using 2D barcoded ear tags, thermal scanners, voice-enabled scientific LabFlows, as well as HoloLens.

3:50 PANEL DISCUSSION: Syncing the Data, the Instruments, and the Lab of the Future Together

Moderator: Talia Grace Haller, Senior AI Strategy Consultant, John Hopkins University, Bioinformatics

Panelists:

Qixin Bei, Principal Research Software Engineer, gRED MPL&NGS, Genentech, Inc.

Vinay C. Desai, PhD, MBA, Senior Director Regeneron IT, Regeneron Pharmaceuticals, Inc.

Michael Georgiadis, Principal Scientific Business Analyst, Research IT, Regeneron Pharmaceuticals, Inc.

Ilja Kusters, Senior Scientist, Generate BioMedicines

4:20 Close of Symposium

4:20 Transition to Plenary Keynote

PLENARY KEYNOTE PROGRAM

4:30 Organizer's Remarks

Cindy Crowninshield, Executive Event Director, Cambridge Healthtech Institute

4:35 Plenary Keynote Introduction WEKA

Speaker to be Announced

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Daniel Stanzione, PhD, Executive Director, Texas Advanced Computing Center (TACC)

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6:00 Welcome Reception in the Exhibit Hall with Poster Viewing *(Sponsorship Opportunity Available)*

7:15 Close of Day

DIGITAL BIOPHARMA

Infrastructure, Processes, and Analytics to Support Digitization of Biologics R&D

SYMPOSIUM S5

SUNDAY, APRIL 14

5:00 pm Registration Open

MONDAY, APRIL 15

7:00 am Registration and Morning Coffee

8:00 Organizer's Remarks

IT ENVIRONMENTS TO SUPPORT INCREASED VOLUME AND COMPLEXITY

8:05 Work Smarter Not Harder—Automating & Digitalizing Novel Modalities R&D

Sebastian Schlicker, Head, Biologics Business Operations, Genedata AG

Biopharmaceutical organizations of every size are undergoing digital transformation driven by requirements of new modalities such as multispecifics, cell and gene therapies, and RNA therapeutics, as well as the steady increase in laboratory automation. We will discuss how biopharma and biotech companies are implementing AI/ML approaches, connecting every part of data and analytics ecosystems to extract maximum value, reduce effort duplication, and empower scientists to make data-driven decisions faster.

8:10 CO-PRESENTATION: Breaking Down Data Silos: BR Biologics Data Federation

Barbara Brannetti, PhD, Director, Data Science, Characterization and Formulation, Novartis Institutes for BioMedical Research (NIBR)

Drazen Nadoveza, PhD, Architect Software Engineering, Novartis

Implementation of commercial data management platforms often appears to be practical, faster, and more cost-effective approach. However, this can result in the creation of yet another data silo. This presentation aims to address the limitations of commercial data management platforms and present our approach for democratizing BR data. We will cover architectural considerations and implementation, as well as how we customize existing platforms to meet specific scientific and technical needs.

8:30 Federated R&D Data Ecosystem for Large Molecule—Data as a Product

Bharti Gajera, Associate Director, IT Business Partner, Biologics & I/O Discovery, Bristol Myers Squibb Co.

Large-molecule R&D data has been captured in multiple systems by various groups. Therefore, it has been very challenging for scientists to find quality data to make informed decisions for selecting drug candidates and applying AI/ML technology. We will show you how to build a federated data ecosystem to provide quality data on-demand for AI/ML projects and biologics drug discovery without centralizing it in a single monolithic data repository.

8:50 CO-PRESENTATION: Modern Data Product Architectures to Support New Modalities

Frederik Kartberg, Technical Associate Director Scientific Products, Novartis

Nick Whalen, Technical Director, Data Engineering, Novartis

Therapeutic tools for drug discovery are continuously changing from small molecules to chemical modalities including RNA therapeutics, peptides, antibody-drug conjugates, and cell and gene therapies. Software tools originally built to address these needs in large have strained to keep up. Learn how Novartis is updating its legacy portfolio in the macromolecule registration space by implementing modern data architectures.

9:10 Talk Title to be Announced

gencove

Joe Pickrell, CEO & Co-Founder, Gencove

9:25 Optimizing Data Management for Drug Development: Navigating Chemoproteomics with Precision

excelra

Sumona Mitra, Head of Customer Solutions, Customer Solutions, Excelra Knowledge Solutions Pvt. Ltd.

In the drug development landscape, rising big data complexity poses challenges for scientists. This presentation explores tailored data management strategies aligned with evolving IT infrastructure. By leveraging cloud-based structures and potent visualizations, the framework streamlines workflows, enhances accessibility, and fosters exploration. Collaboration between data experts and drug scientists is vital in expediting drug discovery timelines. These strategies empower scientists to navigate complex data, like chemoproteomics for milestones like novel Target ID.

9:40 Networking Coffee Break

10:00 The Paradigm Shift in Scientific Data Management

tetrascience

Siping Wang, Founder, President, and Chief Technology Officer, Executive, TetraScience

Scientific data management is currently experiencing a paradigm shift. Attend this session to understand why traditional SDMS is not sufficient anymore and why a vendor neutral-business model is indispensable. Explore the pivot of the industry needs in the era of data science, analytics, and AI and learn how a global biopharma company is working with TetraScience to drive competitiveness with modern cloud-native data management.

10:30 Flagship Pioneering Digital Backbone for Research Science

Sean Murphy, PhD, Senior Director, Cloud Architecture, Flagship Pioneering

Biosciences research is digital, and start-ups depend on software tools that are open-source and newly-released from academia or research labs. Yet, start-ups rarely have the skills to set up and configure these solutions. Flagship has created the Digital Backbone for Research Science to address this challenge, leveraging AWS to create a portfolio of tools that accelerate science across our companies while improving return on investment.

10:50 Leverage Generative AI and LLMs for Biologics and Novel Modalities Discovery

Monica Wang, PhD, Head of Biologics and Novel Modality Discovery Capabilities and Products, Scientific Informatics, Takeda

11:10 Digital Transformation of Bioprocess Development Labs

Diana Bowley, PhD, Associate Director, Data & Digital Strategy, Bioprocessing Development, AbbVie, Inc.

Bioprocess development groups face challenges with complex modalities, faster development cycles, and more experimental data from HT and PAT technologies. Historically, lab experimental data are dispersed in many different instrument software and unstructured file formats requiring substantial manual data manipulation efforts for experimental insights, decision-making, process modeling, and tech transfer. Here, we will share our journey to build and deploy a fit-for-science digital ecosystem within our bioprocess development labs.

11:30 Transition to Lunch

11:40 Luncheon Presentation *(Sponsorship Opportunity Available)* **or Enjoy Lunch on Your Own**

12:40 pm Session Break

WORKFLOW MODERNIZATION & OPERATIONAL EXCELLENCE

12:55 Chairperson's Remarks

David Drake, PhD, Drug Discovery Capability Lead, R&D IT, AstraZeneca R&D

1:00 Digital and Workflow Solutions for Protein Therapeutics

William A. Shirley, PhD, Executive Director, Structural Biology & Chemistry, Gilead Sciences, Inc.

Gain insight into best practices and lessons learned during Gilead's journey implementing new workflows and solutions to digitize biopharma R&D efforts.

1:20 Building Cell Therapy Multimodal Scientific Ecosystem

Jenny Wei, PhD, Head R&D Informatics and Technology, Kite Pharma

As a worldwide cell therapy leader, Kite Pharma's rapid growth and scientific innovation has presented many interesting opportunities for digital transformation. This presentation will share our experience from implementing next-gen lab computing environment, automating single cell/bulk sequencing

and flow cytometry workflows, streamlining pathology and spatial multi-omics imaging data pipelines to deriving insights from multimodal data and LLM-enabled intelligent search using SaaS tools, AWS HealthOmics, and AWS Control Tower.

1:40 Digitalization in Drug Discovery—Addressing the Complexity of New Modality Biotherapeutics

David Drake, PhD, Drug Discovery Capability Lead, R&D IT, AstraZeneca R&D

As we continue on our digitalization journey in drug discovery, the data challenges associated with multi-modal biotherapeutics and the biologics discovery workflow have become an increased focus for IT. This presentation will describe how we centrally capture the information associated with these entities and how we can register them alongside traditional synthetic molecules to provide a central entity repository that supports downstream screening and analysis.

2:00 Networking Refreshment Break

2:20 CO-PRESENTATION: Talk Title to be Announced

Max Petersen, PhD, Lab Data Automation Practice Manager, Zifo Technologies, Inc.

Atul Kakrana, Head of Data Science, Zifo Technologies, Inc.

2:35 Building Data Science Strategy for Translational Insight Generation with Genedata Profiler

Hareesh Chandrupatla, Senior Scientist, Data Science & AI, Genmab

Genmab has implemented a robust data science strategy to help researchers realize their translational research goals in the development of antibody-based oncology treatments. We will showcase how Genmab harnesses Genedata Profiler to streamline multi-sourced data capture, improve data discoverability, and enhance self-service analytics. Scientists use this digital infrastructure to derive scientific insights from complex R&D data, ultimately, making smarter decisions regarding novel disease targets, clinical biomarkers, or therapeutic indications.

2:50 A Strategy to Digitalize Multispecifics Antibodies from Design to Characterization

Mimi Zhou, PhD, Principal Scientist, R&D, Janssen Pharmaceuticals, Inc.

Multispecific mAbs and emerging new modality molecules present unique challenges from ***in silico*** design to activity characterization in a high throughput (HTP) manner. J&J scientists and IT have partnered with Genedata to handle these challenges through customization and expansion of the functionalities of the Genedata Biologics (GDB) platform, especially in the engineering module. This presentation will highlight the HTP digitalization strategy for these complex molecules from design to characterization.

3:10 Digitizing mRNA Development

Yuan Lin, Senior Manager, Global Biologics R&D, Pfizer Inc.

The development of innovative biologics medicine is complex and costly. This session will explore informatics tools and methods used by Pfizer Global Biologics R&D to advance digitization in drug discovery.

3:30 Early Stage Cell Therapy Biotech: Building the Pipeline as You're Flying It

Ohad Manor, PhD, Director Computational Biology & Data Science, Century Therapeutics LLC

Century Tx is an early clinical-stage company that was founded in 2019 to develop allogeneic, off-the-shelf, iPSC-based cell therapies. Being a small biotech startup with limited resources, you have to essentially "build the pipeline as your flying it". This presentation will discuss decisions that were made and lessons learned while building Century's bioinformatics and data science infrastructure and pipelines from the ground up.

3:50 PANEL DISCUSSION: Navigating the Digital Frontier in Biologics R&D

Moderator: David Drake, PhD, Drug Discovery Capability Lead, R&D IT, AstraZeneca R&D

Explore strategies to enable and advance digitization of biologics R&D. Gain insight form our panelists on overcoming challenges to lab and workflow automation, implementing IT infrastructure to enable advanced data management and analytics, and efforts to enable collaboration and innovation to advance scientific discovery.

Panelists:

Hareesh Chandrupatla, Senior Scientist, Data Science & AI, Genmab

Yuan Lin, Senior Manager, Global Biologics R&D, Pfizer Inc.

Ohad Manor, PhD, Director Computational Biology & Data Science, Century Therapeutics LLC

William A. Shirley, PhD, Executive Director, Structural Biology & Chemistry, Gilead Sciences, Inc.

Jenny Wei, PhD, Head R&D Informatics and Technology, Kite Pharma

Mimi Zhou, PhD, Principal Scientist, R&D, Janssen Pharmaceuticals, Inc.

4:20 Close of Symposium

4:20 Transition to Plenary Keynote

PLENARY KEYNOTE PROGRAM

4:30 Organizer's Remarks

Cindy Crowninshield, Executive Event Director, Cambridge Healthtech Institute

4:35 Plenary Keynote Introduction

Speaker to be Announced

4:45 PLENARY KEYNOTE PRESENTATION: Unleashing the Power of Advanced Computing in Biomedical Informatics: A Vision for Transformative Collaboration

Daniel Stanzione, PhD, Executive Director, Texas Advanced Computing Center (TACC)

Embark on a transformative journey with the Texas Advanced Computing Center, where high-performance computing, machine learning, and data analytics converge to revolutionize medicine. Through collaborative efforts, we integrate bioinformatics and computational biology, accelerating personalized patient care and drug discovery. Our commitment to user-friendly interfaces ensures accessibility for industry leaders. We are redefining boundaries of life science computing, shaping a future where innovation and collaboration drive breakthroughs in biomedical informatics.

6:00 Welcome Reception in the Exhibit Hall with Poster Viewing
(Sponsorship Opportunity Available)

7:15 Close of Day

DIGITIZATION OF CLINICAL DEVELOPMENT AND CLINICAL TRIALS

Collect and Transform Raw Data into Actionable Insights to Accelerate and Improve Clinical Outcomes

SUNDAY, APRIL 14

5:00 pm Registration Open

MONDAY, APRIL 15

7:00 am Registration and Morning Coffee

8:00 Organizer's Remarks

PLATFORM AND DATA STRATEGY TO SPEED UP DRUG DISCOVERY

8:05 Chairperson's Remarks

Alan A. Andryc, Director, RWD Engineering & Solutions, Johnson & Johnson Innovative Medicine

8:10 Abiomed's CLEHR Vision to Automate EHR Data Loading into EDC Systems

Jerry Curran, PhD, Director, Academic Research, R&D, Abiomed, Inc.

CLEHR (Clinical from EHR) was developed to reduce the need for manual data entry of structured data elements for clinical trial subjects' EHR records into EDC systems. The team will present the challenges encountered and solution approaches to automate eSourcing of EHR data across Abiomed research sites. The team will share how the many-to-many model of CLEHR can scale the network to scale across studies, sponsors, and sites.

8:30 Artificial Intelligence in Clinical Development for Precision Medicine

Yilin Xu, Principal Data Scientist, Data Science, AbbVie, Inc.

Artificial intelligence revolutionizes clinical research by uncovering data patterns to predict disease and treatment outcomes for individual patients. The global AI in precision medicine market size grows exponentially and is expected to reach 16.91 billion in a decade. In this talk, breakthrough application examples of AI for precision medicine will be discussed.

8:50 Multimodal Data Governance and Analytic Enablement

Alan A. Andryc, Director, RWD Engineering & Solutions, Johnson & Johnson Innovative Medicine

When the healthcare data science community considers the many forms data can take, we traditionally think of clinical trials, claims, electronic health records and/or omics-based data sets. When we apply a data engineering lens, we arrive at the need to not only consider the provenance of the data but the multiple complementary and supplementary modalities as well. This session explores how we manage, protect, and enable use of this data.

9:10 Talk Title to be Announced

Adam Brown, Senior Director, Product Support, QuartzBio

9:40 Networking Coffee Break

10:00 Unlocking Data for Analytics for Enterprise Clinical Development

Michael Farnum, PhD, Senior Director, Global Product Development Data Solution Delivery and Engineering, Pfizer Inc.

There is a tremendous need to gather, standardize, clear for usage, and share data in enterprise organizations to take advantage of the explosion of algorithms and tools for analytic methods. In this talk, I'll present the challenges faced and approach used at Pfizer to put data at researchers' fingertips to drive usage of data assets to serve a large and complex organization.

10:20 Establish Reverse Translation

Sotirios Perdikeas, Leader Data Analytics, R&D Early Research Development, Roche Pharma

The concept is to flip the traditional drug development process that starts from the labs, progresses to clinical trials, getting regulatory approvals and launching the start from the patient and real world insights, and reverse back to the lab. This is a complementary approach to the standard that can further enable patient-centric thinking as well as strengthen the collaboration among market access, medical affairs, and R&D functions.

10:40 Assessing Patient Journeys Using Real-World Data and Graph Databases

Corey Brown, Senior Data Scientist, Information Research, AbbVie, Inc.

We have used a graph database of patient journeys to assess medical events leading up to disease control and medical events that occur after disease control for a given condition. We stratify patients based on their ability to reach disease control or how quickly they can reach disease control to assess if certain events may be driving better or worse patient outcomes.

11:00 PANEL DISCUSSION: The Effective Utilization of Technologies to Speed Up Drug Discovery

Moderator: Bashir Ahmed, PhD, Executive Director, Discovery & Development IT, Incyte Corp.

Panelists:
Alan A. Andryc, Director, RWD Engineering & Solutions, Johnson & Johnson Innovative Medicine
Corey Brown, Senior Data Scientist, Information Research, AbbVie, Inc.
Vaishali Chavan, Senior Manager, Data Management & Analytics Lead, Pfizer Inc.
Jerry Curran, PhD, Director, Academic Research, R&D, Abiomed, Inc.
Sotirios Perdikeas, Leader Data Analytics, R&D Early Research Development, Roche Pharma
Yilin Xu, Principal Data Scientist, Data Science, AbbVie, Inc.

11:30 Transition to Lunch

11:40 LUNCHEON PRESENTATION: How a Data Mesh Accelerates Clinical Research

Dave John, Senior Director, Data Products, Medidata

Life Sciences organizations have invested heavily in translational medicine to accelerate the development of new treatments. Most efforts have been focused on gathering and preparing disparate datasets with little resources left to deeply explore the data. Learn how Medidata is building a Data Mesh that leverages FAIR principles to reduce the burden of preparing data and enable organizations to focus on answering questions that accelerate research.

12:10 pm Luncheon Presentation *(Sponsorship Opportunity Available)* **or Enjoy Lunch on Your Own**

12:40 Session Break

LEVERAGING DATA INSIGHTS AND ANALYTICS SOLUTIONS TO IMPROVE CLINICAL RESEARCH

12:55 Chairperson's Remarks

Julie Gorenstein, Director, Takeda Data Sciences Institute

1:00 CO-PRESENTATION: Protocol Intelligence Tool Solutions

Ophelia Gao, Senior Manager, Business Analytics, Takeda Pharmaceuticals, Inc.
Yan Ge, Director, Data Analytics, Data Science Institute, Takeda Pharmaceuticals, Inc.

The protocol intelligence tool is a cutting-edge solution that aims to equip study teams with competitive intelligence, evaluate clinical trial protocol complexity, and facilitate early engagement with teams. The tool utilizes a multi-step process that involves identifying, extracting, classifying, and reporting the Schedule of Activities (SoA) procedure listings. This process provides valuable insights into the patient burden associated with the protocol, as well as any changes resulting from protocol amendments.

1:20 Optimizing Trial Design for Improved Outcomes

Chelsea Gallagher, Senior Director, Drug Development Innovation & Digital Health, Bristol Myers Squibb Co.

How can you design a trial for reduced amendments? For better patient and site experience? For more cost avoidance? BMS has built a robust study optimization capability through which it effectively and quantitatively evaluates

trial design and provides recommendations for improved outcomes. Over the past three years, these solutions have resulted in upwards of $100MM cost avoidance and on average reduced patient burden by more than ten percent.

1:40 CO-PRESENTATION: People, Process, Technology: Digital Transformation of the Clinical Data Flow

Julia Fox, PhD, Director, Takeda Data Sciences Institute

Julie Gorenstein, Director, Takeda Data Sciences Institute

Challenges abound when preparing translational (preclinical and clinical) data for analytics approaches. There is often little alignment on nomenclature and standards across a multitude of data vendors. Technology can only work with the data it has but must also adapt to new data and how it relates to existing data. Come explore Takeda's approach to connecting people, processes, and technologies for scalable search and extraction to enable downstream translational analytics.

2:00 Networking Refreshment Break

2:20 CO-PRESENTATION: Nurocor Digitalized Clinical Development: Driving Meaningful Change Through Innovation

Barrie Nelson, Executive VP, Clinical Innovation, Nurocor, Inc.

Brent Carlson, Senior VP, Technology & Operations, Nurocor, Inc.

Biopharma Companies are moving toward full automation and harmonization of business processes across the clinical development lifecycle, beginning with digitalized protocol through regulatory approval. This digital automation leads to efficiencies, which will significantly reduce the time and cost of drug development. Customers are realizing full digitalized clinical development through the Nurocor Clinical Platform and key applications such as Specimen Management.

2:50 CO-PRESENTATION: Accelerating Clinical Research: Clinical Trial Integration within Electronic Health Systems

Zainab Doctor, Senior Director, Product Management, ConcertAI

Daniel L. Larsen, Manager, Clinical Analytics, AbbVie, Inc.

The integration of clinical trials within Electronic Health Records (EHRs) has emerged as a crucial aspect of modern healthcare. Clinical trial integration within EHRs enables healthcare providers to seamlessly incorporate research activities into routine patient care, realizing clinical research as a care option, through real-time precision patient-to-trial matching, increased recruitment, and reduced enrollment timelines. This abstract explores the current state of clinical trial integration within EHRs.

3:10 CO-PRESENTATION: Patient Journey Analytics through the Use of AI

Saurin D. Jani, Associate Director, Real-World Data Center of Excellence, Global Evidence & Outcomes & Innovation, Takeda Pharmaceuticals, Inc.

Janel Titus, Real-World Data Engagement Lead, Takeda

During this session, Takeda will share insights and experiences on adopting advanced methodologies to build generalizable frameworks that enable rapid journey analytics, transcending specific data assets and disease areas.

3:30 Machine Learning Modeling to Enable a Biomarker-Driven Clinical Trial Using RNA Sequencing for Kidney Cancer

Anupama Reddy, PhD, Co-Founder & COO, Vindhya Data Science, Prism Bioanalytics

RNA sequencing has shown great promise in enabling precision medicine for kidney cancer patients. However, numerous challenges exist for moving these RNA-seq biomarkers for clinical use, including defining accurate machine learning (ML) models and translating classifiers across different assays/ platforms. Here, we will describe the development and optimization of an ML model to facilitate RNA-seq based biomarker trials.which is being tested in a prospective Phase II trial (OPTIC RCC).

3:50 PANEL DISCUSSION: Innovative Data & Analytics Accelerating & Improving Clinical Research

Moderator: Anupama Reddy, PhD, Co-Founder & COO, Vindhya Data Science, Prism Bioanalytics

Panelists:

Julia Fox, PhD, Director, Takeda Data Sciences Institute

Chelsea Gallagher, Senior Director, Drug Development Innovation & Digital Health, Bristol Myers Squibb Co.

Ophelia Gao, Senior Manager, Business Analytics, Takeda Pharmaceuticals, Inc.

Saurin D. Jani, Associate Director, Real-World Data Center of Excellence, Global Evidence & Outcomes & Innovation, Takeda Pharmaceuticals, Inc.

Daniel L. Larsen, Manager, Clinical Analytics, AbbVie, Inc.

4:20 Close of Symposium

4:20 Transition to Plenary Keynote

PLENARY KEYNOTE PROGRAM

4:30 Organizer's Remarks

Cindy Crowninshield, Executive Event Director, Cambridge Healthtech Institute

4:35 Plenary Keynote Introduction

Speaker to be Announced

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Daniel Stanzione, PhD, Executive Director, Texas Advanced Computing Center (TACC)

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6:00 Welcome Reception in the Exhibit Hall with Poster Viewing
(Sponsorship Opportunity Available)

7:15 Close of Day

*Separate registration required

WORKSHOPS*

MONDAY, APRIL 15 8:00-10:00 AM

W1: Generative AI 101: Demystifying for Drug Discovery Research

Instructor:
Parthiban Srinivasan, PhD, Professor, Data Science and Engineering, Indian Institute of Science Education and Research, Bhopal

This workshop offers a fundamental understanding of generative AI, along with key concepts and technologies. We will delve into essential topics like variational autoencoders, generative adversarial networks, transformer fundamentals, and the significance of large language models within the context of drug discovery in the chatGPT era. The objective is to provide attendees with the essential knowledge and skills required to effectively utilize generative AI in the realm of biomedical research.

W2: Data Science in Practice: Embracing the Challenges, Unleashing the Possibilities

Instructor:
Ari E. Berman, PhD, CEO, BioTeam, Inc.
Simon Twigger, PhD, Principal Consultant, BioTeam, Inc.

To accelerate scientific discovery, many systems need to be in place, including traditional bioIT systems (e.g., HPC systems, national network systems, cloud computing systems, data management systems) to other types of complex systems (e.g., software, organizations, policies, and procedures, and data ecosystems). A key factor in the success of these systems is designing for change—achieving change and accommodating change. This workshop shares best-practice approaches to solving complex technology and data science problems that slow scientific research. Use cases will be shared along with tips and best practices to implement.

W3: Semantic Management Technologies and Processes: An Agile Framework to Enable Innovation

Instructor:
Bimjhana Bishwokarma, MS, ALM, Senior Business Analyst, Takeda Pharmaceuticals

In this workshop, we will focus on holistic integration of data ecosystems by leveraging semantic management to support information sharing and data harmonization and to accelerate improved decision-making. We will explore key prerequisites for analysis and reporting such as data and semantic modeling, ontologies and ontology engineering, integration of ontologies into data models and schema, coordination of use via system-level integration, and delivery of fit-for-purpose point-of-service processes and applications. Semantic management elevates the ecosystem and makes more data available to machine learning and AI development. We will highlight examples of hands-on applications in life sciences informatics workflows such as biomarker data harmonization and clinical trial data flow.

MONDAY, APRIL 15 10:30 AM-12:30 PM

W4: Large Language Models and Their Practical Applications within Novartis: Best Practices and Use Cases

Instructor:
Rishi R. Gupta, PhD, Associate Director, Data Science, Novartis Institutes for Biomedical Research, Inc.
Hubert Misztela, Director, Data Science, AI Researcher, Novartis Institute for Biomedical Research, Inc.

This workshop aims to present state-of-the-art achievements, capabilities and limitations of Large Language Models (LLMs), and explores range of their practical applications, revealing their transformative potential in the dynamic realm of pharmaceuticals. Join us as we delve into practical use cases, showcasing the profound impact of these models on knowledge building, advancing scientific discovery, processes automation and enhancing communication within Novartis and beyond.

W5: Digitalization of Pharma R&D—Master the Marathon

Instructor:
Matthieu Croissant, Senior Solution Architect, Roche Pharma

The digitalization of pharma R&D is not a sprint but a marathon with unique challenges, many pitfalls, and unforeseen side effects. The conversion of healthcare and technology promises game-changing breakthroughs and high rewards and makes the successful digitalization an absolute necessity for tomorrow's R&D organizations. This workshop will showcase the digitalization journey of a pharma R&D organization and critically discuss its setup and impact to increase R&D productivity.

W6: Biomedical Digital Twins

Instructor:
Caroline Chung, MD, MSc, FRCPC, CIP, Vice President, Chief Data Officer and Director of Data Science Development and Implementation of the Institute for Data Science in Oncology, MD Anderson Cancer Center
Dan Isaacs, CTO, Digital Twin Consortium
Kerstin Kleese van Dam, Director Computational Science Initiative, Brookhaven National Laboratory
Eric Stahlberg, PhD, Director, Cancer Data Science Initiatives, Cancer Research Technology Program, Frederick National Laboratory for Cancer Research, Rockville, Maryland, USA
Mariano Vazquez, PhD, Co-Founder and CTO, ELEM Biotech, Barcelona, Spain

With the successful and growing use of digital twin approaches in established industries such as power, propulsion, and aerospace combined with a rapidly developing biomedical ecosystem of computing, modeling, and expanding data has opened the door to develop the role of digital twins in biomedical applications. The workshop will bring together leaders in the use of digital twins and biomedical applications to provide key insights into launching digital twin efforts, factors influencing the present environment, challenges and opportunities expected along the way, and broader questions shaping the future for digital twins in biomedical applications.

MONDAY, APRIL 15 2:00-4:00 PM

W7: Unlocking the Power of Data & AI for Drug Discovery

Instructor:
Vincent J. Beltrani, PhD, Life Sciences Specialist, Google Cloud

In the realm of drug discovery, the power of data and artificial intelligence (AI) is revolutionizing the way we identify, develop, and bring new therapies to patients. This transformative approach is opening up a world of possibilities, accelerating the pace of drug discovery and leading to the creation of more effective and personalized treatments. In this workshop, you'll learn how pharmaceutical and biotech organizations are reimagining R&D by combining leading AI technologies with Google Cloud's scalable and secure infrastructure to accelerate: data harmonization & knowledge extraction, small molecule drug discovery, macromolecule analysis & design and genomics and biomarker discovery. Join us in this exciting journey as we unlock the power of data and AI for drug discovery.

W8: Instrument-Driven Discovery for the 99%: Modern Infrastructure for Research

Instructor:
Rachana Ananthakrishnan, Executive Director, Globus, University of Chicago
Vas Vasiliadis, Chief Customer Officer, Globus, University of Chicago

Instruments including cryo-EM systems, light sheet microscopes, gene sequencers, and X-ray beam lines play a critical role in biomedical research, where discovery is driven by analysis of increasingly large datasets. Managing the data generated by these instruments is complicated and time-consuming, presenting challenges for the facilities that operate the instruments and researchers who use them. The common need is end-to-end solutions that streamline data management throughout the research data lifecycle.

MODERN DATA PLATFORMS AND STORAGE INFRASTRUCTURE

Design, Deploy, and Oversee Data Storage Solutions Optimized for Optimal Speed, Performance, and Cost Efficiency

MONDAY, APRIL 15

8:00 am Recommended Pre-Conference Workshops and Symposia*

On Monday, April 15, 2024, Cambridge Healthtech Institute is pleased to offer eight pre-conference Workshops scheduled across three time slots (8:00–10:00 am, 10:30 am–12:30 pm, and 2:00–4:00 pm) and six Symposia from 8:00 am–4:20 pm. All are designed to be instructional, and interactive and provide in-depth information on a specific topic. They allow for one-on-one interaction and provide a great way to explain more technical aspects that would otherwise not be covered during the main conference tracks that take place Tuesday–Wednesday.
*Separate registration required. See details on the Symposia here and details on the Workshops here.

PLENARY KEYNOTE PROGRAM

4:30 Organizer's Remarks

Cindy Crowninshield, Executive Event Director, Cambridge Healthtech Institute

4:35 Plenary Keynote Introduction WEKA

Speaker to be Announced

4:45 PLENARY KEYNOTE PRESENTATION: Unleashing the Power of Advanced Computing in Biomedical Informatics: A Vision for Transformative Collaboration

Daniel Stanzione, PhD, Executive Director, Texas Advanced Computing Center (TACC)

Embark on a transformative journey with the Texas Advanced Computing Center, where high-performance computing, machine learning, and data analytics converge to revolutionize precision medicine. Through collaborative efforts, we integrate bioinformatics and computational biology, accelerating personalized patient care and drug discovery. Our commitment to user-friendly interfaces ensures accessibility for industry leaders. We are redefining boundaries of life science computing, shaping a future where innovation and collaboration drive breakthroughs in biomedical informatics.

6:00 Welcome Reception in the Exhibit Hall with Poster Viewing *(Sponsorship Opportunity Available)*

7:15 Close of Day

TUESDAY, APRIL 16

7:00 am Registration and Morning Coffee

PLENARY KEYNOTE PROGRAM

8:00 Organizer's Remarks

Allison Proffitt, Editorial Director, Bio-IT World

8:05 Keynote Introduction revvity signals

Josh Bond, Head of Product Management, Product Management, Revvity Signals

8:15 PLENARY KEYNOTE PRESENTATION: Unveiling Tomorrow's Possibilities: Embrace the Power of Digital Twins in Cancer Care and Research

Caroline Chung, MD, MSc, FRCPC, CIP, Vice President, Chief Data Officer and Director of Data Science Development and Implementation of the Institute for Data Science in Oncology, MD Anderson Cancer Center

Explore the transformative potential of digital twins in revolutionizing cancer care and research. Gain insights into how digital twins can help deepen biological understanding, accelerate drug discovery, and personalize therapeutic strategies to optimize treatment outcomes for every individual. Amidst the exciting opportunities are the challenges that must be tackled to harness the power of digital twins to advance precision oncology, empower researchers and clinicians with unprecedented insights, and improve patient outcomes.

9:30 Coffee Break in the Exhibit Hall with Poster Viewing *(Sponsorship Opportunity Available)*

10:15 Organizer's Welcome Remarks

FOUNDATIONS OF MODERN DATA PLATFORMS: ARCHITECTURE AND DESIGN PRINCIPLES

10:20 Chairperson's Remarks *(Sponsorship Opportunity Available)*

10:25 The Promise and Evolution of an Integrated Data Platform

Peng Cheng Zhang, PhD, Technical Associate Director Scientific Products, Integrated Data and Insights/SDP/NX, Novartis Institutes for BioMedical Research, Inc.

While the promise of an all-encompassing and integrated data platform may be clear to the community, the execution and value generation is never a straight line. Faced with decisions from the past, rapid changes in data and technology, a modern data platform must also continue to evolve and adapt based on the needs of the users.

10:55 The IDMP Ontology: Collaborative Implementation of the IDMP Standards in Pharma

JChristian Baber, PhD, Chief Portfolio Officer, Pistoia Alliance

Sheila Elz, Master Data Manager, Bayer AG

Vada A. Perkins, Vice President, Global Head of Regulatory Intelligence & Policy, Boehringer Ingelheim

The Identification of Medicinal Products (IDMP) Ontology is a cross-industry collaboration that shifts the model from reactive to a proactive Pharma-driven development of industry standards in collaboration with ISO standards authors and regulatory agencies. It provides a universal product data model as the backbone for the pharmaceutical industry, enabling patient safety. Thus, the IDMP Ontology bridges the gap between diverse perspectives on medicinal products in an innovative, ontological approach.

11:55 Revolutionizing the Scientific Experience Through Enhanced Connectivity ThermoFisher SCIENTIFIC

William Goodman, Senior Director, Product Management, Digital Solutions, Thermo Fisher Scientific

The scientific landscape is continuously evolving, with researchers and scientists seeking innovative ways to accelerate their discoveries and drive productivity. In this digital age, enhanced connectivity has emerged as a powerful tool to revolutionize the scientific experience. By harnessing the potential of advanced technologies and innovative software, researchers can unlock discovery, accelerate progress and drive productivity to unprecedented levels.

12:25 pm Presentation to be Announced *(Sponsorship Opportunity Available)*

12:55 Session Break & Transition to Lunch

1:05 LUNCHEON PRESENTATION: Luncheon Presentation to be Announced HAMMERSPACE

Speaker to be Announced

1:35 Refreshment Break in the Exhibit Hall with Poster Viewing *(Sponsorship Opportunity Available)*

SCALABILITY AND PERFORMANCE OPTIMIZATION STRATEGIES IN CLOUD COMPUTING

2:25 Chairperson's Remarks *(Sponsorship Opportunity Available)*

MODERN DATA PLATFORMS AND STORAGE INFRASTRUCTURE

Design, Deploy, and Oversee Data Storage Solutions Optimized for Optimal Speed, Performance, and Cost Efficiency

2:30 PANEL DISCUSSION: Life Science Organizations in the Cloud—SNAFUs, FUBARs, and OMG Moments

Moderator: John Damask, Vice President, Data & Systems Engineering, Flagship Pioneering

This session will provide some balance to the abundance of cloud adoption success stories. We'll explore real-world examples from start-ups and big pharma of things that didn't go quite as expected. Some stories may be familiar, some not, but they all contribute to our understanding of how life science organizations can make the best use of the cloud. The experiences presented are with AWS but generalizable to other cloud providers.

Panelists:

Parul Bordia Doshi, Chief Data Officer, Cellarity

Rodney Marable, Senior Director, Scientific Computing & Informatics, Flare Therapeutics

Mike Tarselli, PhD, Chief Scientific & Knowledge Officer, TetraScience, Inc.

Eric Zimmerman, Principal Healthcare & Life Sciences BD, Venture Capital & Startups, Amazon Web Services, Inc. (AWS)

4:00 Presentation to be Announced

4:30 Best of Show Awards Reception in the Exhibit Hall with Poster Viewing *(Sponsorship Opportunity Available)*

5:45 Close of Day

WEDNESDAY, APRIL 17

7:30 am Registration and Morning Coffee

PLENARY KEYNOTE PROGRAM

8:00 Organizer's Remarks

Cindy Crowninshield, Executive Event Director, Cambridge Healthtech Institute

8:05 Innovative Practices Awards

Allison Proffitt, Editorial Director, Bio-IT World

The Innovative Practices Awards recognizes and celebrates technology innovation in the life sciences. Bio-IT World is currently accepting entries for the 2024 Innovative Practices Awards, a competition designed to recognize partnerships and projects pushing our industry forward. For more details about the Awards and to submit an application, visit www.bio-itworldexpo.com/innovativepractices.

8:20 Plenary Keynote Introduction

Deven Atnoor, PhD, Vice President of Scientific Strategy, Clovertex

8:30 PLENARY KEYNOTE PRESENTATION: Lights, Camera, Science: Film and Social Media Influence on Real-World Scientific Progress and Innovation

David Hewlett, Actor/Writer/Director; Creator, The Tech Bandits

David Hewlett has had his share of big screen roles representing science—and science fiction—and he believes it's imperative that the scientific community take back the narrative! With his TechBandits.org, David is meeting this future generation where they are, in schools, on YouTube, and on Twitch, championing real science in all its iterative, messy, exploratory glory, to recruit bright, diverse minds to lead the next generation of real science.

9:45 Coffee Break in the Exhibit Hall with Poster Viewing *(Sponsorship Opportunity Available)*

10:30 Organizer's Remarks

BEST PRACTICES IN TECHNOLOGY INNOVATION

10:35 Chairperson's Remarks *(Sponsorship Opportunity Available)*

10:40 Innovative Practices Awards: Excellence in Technological Innovation

Cindy Crowninshield, Executive Event Director, Cambridge Healthtech Institute

The Innovative Practices Awards recognizes and celebrates technology innovation that advances life sciences research. Winners of the 2024 Bio-IT World Innovative Practices Awards, recognized during the morning plenary keynote session, will give podium presentations during this session that offer attendees an in-depth exploration of cutting-edge solutions and techniques fostering advancements in translational medicine research. For additional details about the Awards and to submit an application, please visit www.bio-itworldexpo.com/innovativepractices.

12:10 pm Building Data Factories to Accelerate Discovery

Michael Hopkins, Principal Product Manager, Product Management, HighRes Biosolutions

Harnessing the power of modern data platforms is key to scientific efficiency and innovation. In this presentation, we will outline the technical aspects of building a modern data factory to accelerate scientific discovery through the examination of case studies and industry trends. By combining optimal workflows, enhanced collaboration, and high quality data assets, laboratories with automation can truly become ecosystems of innovation.

12:40 Presentation to be Announced

12:55 Presentation to be Announced

1:10 Session Break & Transition to Lunch

1:20 LUNCHEON PRESENTATION: Scaling New Heights in Bioinformatics: Harnessing Vast Data Streams with Snowflake & Well-Known Biotech

Jesse Cugliotta, Global Industry GTM Lead, Healthcare & Life Sciences, Snowflake

The modern landscape of therapeutic discovery is inundated with vast and complex data sets. Efficiently managing, processing, and deriving insights from this data at-scale is the cornerstone of impactful research. Discover how a well-known biotech leverages Snowflake's cloud-based infrastructure, built for high-performance and scalability, across their entire business. Attendees will gain insights into the technical innovations that allow for real-time processing of enormous data streams, and how these capabilities are pushing the envelope in drug discovery and bioinformatics performance. Come and witness a showcase of what's possible when scalable data technology meets the frontier of therapeutic research.

1:50 Refreshment Break in the Exhibit Hall with Last Chance Poster Viewing *(Sponsorship Opportunity Available)*

TRENDS FROM THE TRENCHES

2:30 Chairperson's Remarks *(Sponsorship Opportunity Available)*

2:35 Trends from the Trenches

Ari E. Berman, PhD, CEO, BioTeam, Inc.

Since 2010, "Trends from the Trenches" has been one of the most popular annual traditions in the Bio-IT program. The intent of the talk is to deliver a candid (and occasionally blunt) assessment of the best, the most worthwhile, and the most overhyped information technologies (IT) for life sciences. Learn about computing, storage, data transfer, networks, cloud, data science, machine learning, and more that are involved in supporting data-intensive science.

4:05 Close of Conference

DATA MANAGEMENT

Leverage Data for Value Creation in Life Sciences

MONDAY, APRIL 15

8:00 am Recommended Pre-Conference Workshops and Symposia*

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7:15 Close of Day

TUESDAY, APRIL 16

7:00 am Registration and Morning Coffee

PLENARY KEYNOTE PROGRAM

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Josh Bond, Head of Product Management, Product Management, Revvity Signals

8:15 PLENARY KEYNOTE PRESENTATION: Unveiling Tomorrow's Possibilities: Embrace the Power of Digital Twins in Cancer Care and Research

Caroline Chung, MD, MSc, FRCPC, CIP, Vice President, Chief Data Officer and Director of Data Science Development and Implementation of the Institute for Data Science in Oncology, MD Anderson Cancer Center

Explore the transformative potential of digital twins in revolutionizing cancer care and research. Gain insights into how digital twins can help deepen biological understanding, accelerate drug discovery, and personalize therapeutic strategies to optimize treatment outcomes for every individual. Amidst the exciting opportunities are the challenges that must be tackled to harness the power of digital twins to advance precision oncology, empower researchers and clinicians with unprecedented insights, and improve patient outcomes.

9:30 Coffee Break in the Exhibit Hall with Poster Viewing
(Sponsorship Opportunity Available)

10:15 Organizer's Welcome Remarks

DATA SHARING AND KNOWLEDGE MANAGEMENT: PLATFORMS, FRAMEWORKS, AND TOOLS FOR COLLABORATING, INTEGRATING, ANALYZING, AND INTERPRETING

10:20 Chairperson's Remarks *(Sponsorship Opportunity Available)*

10:25 Target to Lead: A Platform for Early Discovery Data Management

Rachana Ananthakrishnan, Executive Director, Globus, University of Chicago

We have grown Globus into a comprehensive platform for research data management that includes services for data description and discovery, protected data management, and automation. The Globus platform-as-a-service is increasingly used to easily build and execute automated data flows in this context. Learn how the platform facilitates end-to-end automation of complex research flows, and hear scenarios from research universities and national facilities that illustrate implementation of common use cases.

10:55 How Generate is Managing Assay Data, and Our Assay Data Working Group

Victor Lobanov, PhD, Vice President, Clinical Informatics & Product Management, Generate Biomedicines

This talk delves into our strategic approach to managing assay data, showcasing the pivotal role of our Assay Data Working Group. Gain insights into the collaborative efforts shaping innovative data management practices. Discover how Generate optimizes the handling of assay data, ensuring efficiency, integrity, and accelerated advancements in biomedical research. Join us in navigating the complexities of data management for transformative breakthroughs.

11:25 Unleashing the Power of Material Properties: Accessing Pharmaceutical Manufacturability Driven by Data

Malte Bogdahn, PhD, Lead Scientist, Global CMC Development, Merck KGaA

This presentation explores the transition from raw data sheets from various departments to a centralized database, enabling the integration of previously disassociated data sets. Emphasizing a data-driven approach, this system empowers formulation and manufacturing decisions in the drug product development process. The application of low-code dashboarding facilitates comprehensive visualization and reveals valuable insights hidden in a scattered data landscape.

11:55 A review of uses of LLMs in discovery bioinformatics, the role of data management & lessons from the field. Genestack

Misha Kapushesky, PhD, CEO & Founder, Genestack Ltd

LMM/AI promises to be the next paradigm shift in life science research however the theory and the reality are very different things. In this presentation we will discuss how we got powerful LLM models up and running quickly using Open Data Manager and some lessons learned along the way.

DATA MANAGEMENT

Leverage Data for Value Creation in Life Sciences

12:10 pm VIVOS: Transforming Life Sciences through Verifiable Interoperability for Velocity

Speaker to be Announced, Quilt Data, Inc.

In the life sciences, integrating technology and human resources effectively is crucial for progress. VIVOS, an open-source tool developed by Quilt Data and others, addresses this by offering real-time, multi-platform workflows, and seamless cloud integration. Its plug-and-play architecture, adherence to FAIR data principles, and data lineage tracking enhance collaboration and data integrity. VIVOS's community-driven development and flexible implementation make it a pivotal tool for advancing life sciences research.

12:25 Harnessing AI to bridge the gap between your data and global research knowledge

Sebastian Schmidt, CEO, metaphacts

The data needed to create new opportunities and drive decisions is abundant, but it is distributed across heterogeneous sources and lacks the context needed to deliver insights. The Dimensions KG powered by metaphactory combines the power of symbolic AI and neural AI to transform data into knowledge, connect internal data with global research knowledge, and augment and scale business decisions. Customers benefit from actionable and explainable insights following a human-in-the-loop approach.

12:55 Session Break & Transition to Lunch

1:05 LUNCHEON PRESENTATION: Luncheon Presentation to be Announced

Speaker to be Announced

1:35 Refreshment Break in the Exhibit Hall with Poster Viewing *(Sponsorship Opportunity Available)*

CHALLENGES AND STRATEGIES OF DATA MANAGEMENT, ACCESSIBILITY, INTEROPERABILITY, AND LEGAL CONSIDERATIONS IN SCIENTIFIC RESEARCH

2:25 Chairperson's Remarks *(Sponsorship Opportunity Available)*

2:30 CO-PRESENTATION: Empowering Users and Driving Adoption of Research Data Management Best Practices

Mark Jackson, Data Engineer, Data Science, Johnson & Johnson Innovative Medicine

Aleksandar Stojmirovic PhD, Associate Scientific Director, Data Science, Janssen Research & Development, LLC

A core challenge when implementing scientific research data management workflows in large organizations is ensuring widespread adoption of best practices for organizing, annotating, and storing data. We developed processes and supporting applications to promote user autonomy in managing translational data ingestion from diverse sources. Findability, Accessibility, Interoperability, and Reuse of ingested digital assets is ensured through automated pipelines that process and enrich their metadata and index it into integrated catalogs.

3:00 Future-Proofing through Open Source and Data Management Policy

Terrell Russell, PhD, Executive Director, iRODS Consortium, Renaissance Computing Institute, University of North Carolina at Chapel Hill

The data management platforms being sold into the bio and pharmaceutical industries are expensive and incentivized to vertically integrate and capture the customer. Data management is best executed when policies are clear and infrastructure is abstracted and swappable. iRODS provides an open-source example of how this approach can be implemented to sustain FAIR data practices, consistency, and cost-savings across your enterprise.

3:30 Decoding EU Privacy Legislation: Data Compliance Challenges and Solutions for Life Sciences

Robert Masson, CEO, The DPO Centre

The laws about data sharing, gaining appropriate consent, and data ownership can create many challenges for organizations and cause project delays or even lead to clinical trial failure. This talk will draw on The DPO Centre's extensive privacy experience across the spectrum of life sciences and healthcare, offering a comprehensive overview of these challenges and providing invaluable information with practical solutions for navigating the complexities of EU privacy regulations.

4:00 Building Data Management & Collaboration Technologies for Large Biomedical Research Organizations

John Wilbanks, Head of Product, Data Sciences Platform, Broad Institute

The Data Sciences Platform at the Broad Institute tackles the challenges of data discovery, data access, and data sharing, and has developed a suite of products that unify the research ecosystem. In this talk, we'll share how one solution, Terra on Azure, co-developed by the Broad Institute, Microsoft, and Verily, brings together the entire lifecycle of biomedical data science and helps to address these challenges.

4:30 Best of Show Awards Reception in the Exhibit Hall with Poster Viewing *(Sponsorship Opportunity Available)*

5:45 Close of Day

WEDNESDAY, APRIL 17

7:30 am Registration and Morning Coffee

PLENARY KEYNOTE PROGRAM

8:00 Organizer's Remarks

Cindy Crowninshield, Executive Event Director, Cambridge Healthtech Institute

8:05 Innovative Practices Awards

Allison Proffitt, Editorial Director, Bio-IT World

The Innovative Practices Awards recognizes and celebrates technology innovation in the life sciences. Bio-IT World is currently accepting entries for the 2024 Innovative Practices Awards, a competition designed to recognize partnerships and projects pushing our industry forward. For more details about the Awards and to submit an application, visit www.bio-itworldexpo.com/innovativepractices.

8:20 Plenary Keynote Introduction

Deven Atnoor, PhD, Vice President of Scientific Strategy, Clovertex

8:30 PLENARY KEYNOTE PRESENTATION: Lights, Camera, Science: Film and Social Media Influence on Real-World Scientific Progress and Innovation

David Hewlett, Actor/Writer/Director; Creator, The Tech Bandits

David Hewlett has had his share of big screen roles representing science—and science fiction—and he believes it's imperative that the scientific community take back the narrative! With his TechBandits.org, David is meeting this future generation where they are, in schools, on YouTube, and on Twitch, championing real science in all its iterative, messy, exploratory glory, to recruit bright, diverse minds to lead the next generation of real science.

9:45 Coffee Break in the Exhibit Hall with Poster Viewing *(Sponsorship Opportunity Available)*

DATA MANAGEMENT

Leverage Data for Value Creation in Life Sciences

10:30 Organizer's Remarks

SCALABLE SOLUTIONS FOR MANAGING DIVERSE MULTIMODAL DATA

10:35 Chairperson's Remarks *(Sponsorship Opportunity Available)*

10:40 The Future of Decentralized Data

Karl Gutwin, Principal Consultant, BioTeam, Inc.

The web is experiencing a renewal of innovative, open platforms that are replacing the "walled gardens" that defined user experiences over the past two decades. This talk explores these trends in the context of scientific data, uncovering assumptions that have hindered the free flow of data. We will discuss both time-tested and novel approaches to building decentralized data mesh architectures that promote interoperability, reusability, and provenance within a data ecosystem.

11:10 PANEL DISCUSSION: Unleashing Data Mesh: Realizing the Power of Decentralized Data Management in Life Sciences

Moderator: Santha Ramakrishnan, PhD, Head, R&D Data Strategy and Operations, Bayer

This session explores the feasibility and potential benefits of implementing a data mesh framework within the life sciences domain. In an era of exploding data volumes, a data mesh approach offers a decentralized, scalable solution for managing and analyzing multimodal data. By addressing data silos and promoting domain-driven data ownership, life sciences organizations can enhance collaboration and foster innovation.

12:10 pm Catalyzing Data Management in Life Sciences: Empowering R&D through Innovative Unified Digital Platforms

Brandon Varela, Principal - Scientific Software Products, Product Development, L7 Informatics

Improvements in instrument proficiency from high frequency measurements to automated high throughput capabilities have led to an exponential increase in the data volumes generated in life sciences. However, leveraging data into actionable insight is impossible without contextualization. The presentation will discuss how unified digital platforms break down data silos to streamline R&D processes, accelerate research, drug discovery, and decision-making, optimizing efficiency and cost-effectiveness.

12:40 Presentation to be Announced

1:10 Session Break & Transition to Lunch

1:20 LUNCHEON PRESENTATION: Talk Title to be Announced

Christof Gaenzler, PhD, Director PreSales and Product Marketing, ZONTAL GmbH

1:50 Refreshment Break in the Exhibit Hall with Last Chance Poster Viewing *(Sponsorship Opportunity Available)*

TRENDS FROM THE TRENCHES

2:30 Chairperson's Remarks *(Sponsorship Opportunity Available)*

2:35 Trends from the Trenches

Ari E. Berman, PhD, CEO, BioTeam, Inc.

Since 2010, "Trends from the Trenches" has been one of the most popular annual traditions in the Bio-IT program. The intent of the talk is to deliver a candid (and occasionally blunt) assessment of the best, the most worthwhile, and the most overhyped information technologies (IT) for life sciences. Learn about computing, storage, data transfer, networks, cloud, data science, machine learning, and more that are involved in supporting data-intensive science.

4:05 Close of Conference

DATA SCIENCE AND ANALYTICS TECHNOLOGIES

Tools and Methods for Extracting Insights and Value from Data to Advance Biomedical Research

MONDAY, APRIL 15

8:00 am Recommended Pre-Conference Workshops and Symposia*

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4:35 Plenary Keynote Introduction

WEKA

Speaker to be Announced

4:45 PLENARY KEYNOTE PRESENTATION: Unleashing the Power of Advanced Computing in Biomedical Informatics: A Vision for Transformative Collaboration

Daniel Stanzione, PhD, Executive Director, Texas Advanced Computing Center (TACC)

Embark on a transformative journey with the Texas Advanced Computing Center, where high-performance computing, machine learning, and data analytics converge to revolutionize precision medicine. Through collaborative efforts, we integrate bioinformatics and computational biology, accelerating personalized patient care and drug discovery. Our commitment to user-friendly interfaces ensures accessibility for industry leaders. We are redefining boundaries of life science computing, shaping a future where innovation and collaboration drive breakthroughs in biomedical informatics.

6:00 Welcome Reception in the Exhibit Hall with Poster Viewing
(Sponsorship Opportunity Available)

7:15 Close of Day

TUESDAY, APRIL 16

7:00 am Registration and Morning Coffee

PLENARY KEYNOTE PROGRAM

8:00 Organizer's Remarks

Allison Proffitt, Editorial Director, Bio-IT World

8:05 Keynote Introduction

revvity signals

Josh Bond, Head of Product Management, Product Management, Revvity Signals

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Caroline Chung, MD, MSc, FRCPC, CIP, Vice President, Chief Data Officer and Director of Data Science Development and Implementation of the Institute for Data Science in Oncology, MD Anderson Cancer Center

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9:30 Coffee Break in the Exhibit Hall with Poster Viewing
(Sponsorship Opportunity Available)

10:15 Organizer's Welcome Remarks

PLATFORM, TOOL, AND SOFTWARE SOLUTIONS TO IMPROVE DATA ANALYSIS, SCALABILITY, INTEGRATION, AND WORKFLOWS

10:20 Chairperson's Remarks

Speaker to be Announced

10:25 Integrative Multiomics Data Analysis in Biopharma: Navigating Scalability, Complexity, and Integration in the Era of Big Data

Michael A. Freitas, PhD, Professor, Cancer Biology & Genetics, Ohio State University

In an era where biopharma is inundated with volumes of multiomics data, challenges extend beyond data collection to robust analysis, scalability, and effective integration. This presentation offers an overview of software solutions that merge cloud computing, data engineering, and custom workflows. Rooted in real-world challenges, we'll explore the trajectory from raw data to actionable insights, ensuring data security, shareability, and enterprise adaptability along with insights gained from customer-led software development.

10:55 Unlocking Data Science Potential: Leveraging LLMs and Software Skills for Accelerated Workflows

Eric Ma, PhD, Principal Data Scientist, Moderna, Inc.

This talk explores the potential of data science through the strategic integration of Large Language Models (LLMs) and software skills. Explore how this symbiotic relationship accelerates workflows, facilitating efficient data analysis and interpretation. Join us to grasp the transformative impact of synergizing LLMs and software expertise, offering a gateway to enhanced productivity and innovation in the dynamic realm of data science.

11:25 Privacy-Preserving Federated Learning-as-a-Service: Building Trustworthy AI Models and Biomedical Insights

Ravi K. Madduri, Scientist, Computation Institute, University of Chicago

In this talk, we will present Advanced Privacy-Preserving Federated Learning as a service (APPFLx), which enables cross-silo Privacy Preserving Federated Learning (PPFL) using easy-to-use web interface for managing, deploying, analyzing, and visualizing PPFL experiments.

11:55 Swamps, hallucinations and how to avoid them: why data quality, technology and expertise matter

ELSEVIER

Frederik van den Broek, Dr, Senior Director, Professional Services and Consulting, Corporate R&D, Elsevier

12:25 pm Presentation to be Announced

illumina

12:55 Session Break & Transition to Lunch

1:05 Luncheon Presentation *(Sponsorship Opportunity Available)* **or Enjoy Lunch on Your Own**

1:35 Refreshment Break in the Exhibit Hall with Poster Viewing
(Sponsorship Opportunity Available)

DATA SCIENCE AND ANALYTICS TECHNOLOGIES

Tools and Methods for Extracting Insights and Value from Data to Advance Biomedical Research

PLATFORM, TOOL, AND SOFTWARE SOLUTIONS TO IMPROVE DATA ANALYSIS, SCALABILITY, INTEGRATION, AND WORKFLOWS

2:25 Chairperson's Remarks *(Sponsorship Opportunity Available)*

2:30 A FAIR-Compliant Cloud Computing Solution for Pharmaceutical R&D

Hugh Salamon, PhD, Scientific Director, Scientific Strategy Bioinformatics, Exelixis, Inc.

A collaboratively architected and implemented flexible platform created by scientists and cloud engineers at Exelixis provides an environment in which bioinformatics services are deployed while ensuring data analysis results and metadata are preserved. The code-first, easily deployable containerized technology covers data and analysis services, enabling bioinformatics staff to focus on data integration and analysis supporting asset evaluation from discovery through to clinical development.

3:00 Advanced Data Science and Visualization Platform to Expedite Clinical Development

Kanishk Singh, Product Manager, Drug Development Data & Analytics IT, Bristol Myers Squibb Co.

The field of data science is characterized by its rapid evolution, marked by daily developments that hold the potential to significantly enhance the expeditious conduct of clinical trials. In this context, the implementation of a dynamic data science platform built upon a polycloud architecture becomes indispensable, as it empowers data scientists to harness the cutting-edge capabilities offered by premier cloud service providers and serves to foster seamless collaboration among researchers.

3:30 New Methods in Enzyme and Drug Characterization

Ryan Walsh, PhD, Research Scholar, Biochemistry, Ronin Institute

This talk discusses methods developed to improve the analysis of biological interactions so that more nuanced understandings of physiological interactions can be produced. Learn about problems that have been caused by incomplete understanding of drug interactions specifically related to Alzheimer's disease drug development. This will be illustrated by describing enzymatic mechanism-of-action studies and how these studies can benefit from automation of the analytical process.

4:00 Presentation to be Announced

discngine

4:15 Presentation to be Announced

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4:30 Best of Show Awards Reception in the Exhibit Hall with Poster Viewing *(Sponsorship Opportunity Available)*

5:45 Close of Day

WEDNESDAY, APRIL 17

7:30 am Registration and Morning Coffee

PLENARY KEYNOTE PROGRAM

8:00 Organizer's Remarks

Cindy Crowninshield, Executive Event Director, Cambridge Healthtech Institute

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Allison Proffitt, Editorial Director, Bio-IT World

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9:45 Coffee Break in the Exhibit Hall with Poster Viewing *(Sponsorship Opportunity Available)*

10:30 Organizer's Remarks

EMPOWERING EARLY RESEARCH: A DATA SCIENCE-DRIVEN COLLABORATION

10:35 Chairperson's Remarks *(Sponsorship Opportunity Available)*

10:40 CO-PRESENTATION: Enabling Early Research through Industry-University Collaboration

Brian Martin, Head of AI, R&D Information Research; Research Fellow, AbbVie, Inc.

Kayvan Najarian, PhD, Professor, Computational Medicine & Bioinformatics, University of Michigan

The level of innovation and research being performed globally at universities and research institutions is critical to the continued growth and success of innovation within the life sciences and healthcare industry as a whole. Join us for a discussion around an example collaboration as part of the Center for Data-Driven Drug Development and Treatment Assessment (DATA) at the University of Michigan, supported by the National Science Foundation.

ELEVATING DATA SCIENCE: EMBRACING PRODUCT-ORIENTED DELIVERY IN THE ERA OF DIGITAL TRANSFORMATION

11:10 Presentation to be Announced

11:40 Product-Oriented Delivery in Data Science: A New Paradigm for Biotech and Pharma

Joshua A. Bishop, Senior Director Research Informatics, Moderna, Inc.

In an era where digital transformation is pivotal, the biotech and pharmaceutical industries must embrace a Product-Oriented Delivery (POD) approach. This talk explores the challenges and opportunities of integrating POD into data science deliverables, emphasizing the crucial roles of both technology development and product management. Delve into the intricacies of forming cross-functional teams, aligning strategic goals, and ensuring customer-centric solutions.

12:10 pm Presentation to be Announced

Illumina GenomOncology

12:40 Leveraging GenomOncology's Clinical Omics Platform: Seamless Integration, In-Depth Analysis, Strategic Data Utilization

Ian Maurer, Chief Technology Officer, GenomOncology

GenomOncology's dockerized, customizable, and scalable solutions streamline precision medicine data integration, analytics, and utilization across the healthcare ecosystem. In the dynamic landscape of precision medicine, evolving data presents challenges, and organizations lacking software that integrates, analyzes, and incorporates this data are disadvantaged. GenomOncology's Precision Oncology Platform and suite of applications,

backed by an extensive knowledge base and robust data framework, offer comprehensive clinical omics support, optimizing workflows and elevating patient care.

1:10 Session Break & Transition to Lunch

1:20 LUNCHEON PRESENTATION: How data management informs data strategy: perspectives using OMERO Plus

Erin Diel, PhD, Head of Product, Glencoe Software

OMERO Plus is an image data management platform designed for storage and analysis of bioimaging data. Backed by Bio-Formats, OMERO Plus natively stores and retrieves image formats from various domains, including High Content Screening and Digital Pathology. Because complex image datasets and their associated sequencing, segmentation, or other analytical results can be stored and retrieved remotely, OMERO Plus is the data engine of choice for data analytics and AI in bioimaging.

1:50 Refreshment Break in the Exhibit Hall with Last Chance Poster Viewing *(Sponsorship Opportunity Available)*

TRENDS FROM THE TRENCHES

2:30 Chairperson's Remarks *(Sponsorship Opportunity Available)*

2:35 Trends from the Trenches

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SOFTWARE APPLICATIONS AND SERVICES

Design Software Application Architecture to Add Value to All Ecosystem Stakeholders

MONDAY, APRIL 15

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TUESDAY, APRIL 16

7:00 am Registration and Morning Coffee

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10:15 Organizer's Welcome Remarks

OPTIMIZING RESEARCH PROJECT MANAGEMENT: INSIGHTS FROM CHECKPOINTS TO IMPLEMENTATION

10:20 Chairperson's Remarks

Gurpreet Kanwar, Senior Manager Programs, Portfolio Delivery Group, NAV CANADA

10:25 Mastering Checkpoints for Enhanced Planning and Delivery Optimization

Gurpreet Kanwar, Senior Manager Programs, Portfolio Delivery Group, NAV CANADA

Creating checkpoints is essential for evaluating the present status, maintaining your project's course, and expediting delivery. This presentation will guide you in establishing appropriate checkpoints for your project/program and enhancing the overall plan for optimization. It will help you analyze the challenges and determine preventive measures for the future and review your plan to consider necessary adjustments or additions.

10:55 Study Tracker: An Open-Source Project Management Tool for Research Teams

William Oemler, Director, Software Engineering, Informatics & IT, Vesalius Therapeutics

Study Tracker is an open-source web application that helps research teams organize their projects, connect disparate systems, and automate tedious workflows. This presentation will highlight how Study Tracker is used to increase productivity and preserve historical records at biotech companies.

11:25 Knowledge Management Frameworks: Harnessing Ecosystem Collaborations for Simplifying Digital Therapeutic Development and Ensuring Organized Project Management

Matthew Schulze, Head, Digital & Regulatory Systems, Pioneering Medicines

In this presentation, we explore the power of shared learning and knowledge within the flagship pioneering ecosystem. We delve into how pioneering medicines leverage knowledge management frameworks to simplify digital therapeutic development. We'll discuss the technical implementation of Study Tracker, our research management platform, and demonstrate how integrative collaborations foster an efficient environment for scaling digital therapeutic initiatives, ensuring streamlined, organized project management.

11:55 Large Language Models and Knowledge Graphs: Better Together

<epam>

Ted Slater, Managing Principal, Scientific Informatics Consulting, EPAM

AI has evolved significantly since the first chatbot in 1964. Today's large language models (LLMs) like OpenAI's ChatGPT can generate accurate responses but can also produce incorrect or "hallucinated" answers. Research shows LLM-generated queries perform better when combined with knowledge graphs (KGs) compared to relational databases. EPAM's DIAL, an AI orchestration platform, leverages this to enhance decision-making in biomedical research, drug discovery and patient care, driving innovation in these crucial fields.

SOFTWARE APPLICATIONS AND SERVICES

Design Software Application Architecture to Add Value to All Ecosystem Stakeholders

12:10 pm The Rational AI Architect - The Path for AI in Life Sciences

Aaron Jeskey, Sr. Cloud Architect, PTP

- AI – the "it" word for 2024
- What is "The Rational AI Architect"
- Best Practices for Early Stage Life Sciences data environments (Whitepaper available for download)
- Current use cases for AI readiness

12:25 SaaS Application Architecture, Why Does it Matter?

Dan Schutzman, Senior SaaS Cloud Technologist, Oracle

SaaS Applications have become the predominant way enterprise applications are delivered. This shift is driven by promises of increased flexibility, access to cutting edge technologies, and cost efficiencies. Learn about the key elements of a SaaS architecture that companies should be looking for and why, and how Oracle's approach allows it to uptake the latest technologies and keep customer data secure.

12:55 Session Break & Transition to Lunch

1:05 LUNCHEON PRESENTATION: Luncheon Presentation to be Announced

Speaker to be Announced

1:35 Refreshment Break in the Exhibit Hall with Poster Viewing *(Sponsorship Opportunity Available)*

EMPOWERING OPERATIONS, TECHNOLOGY, AND LABORATORIES: A HOLISTIC APPROACH

2:25 Chairperson's Remarks *(Sponsorship Opportunity Available)*

2:30 How a Timestamp and Experiment Name Can Tell You a Lot about Your Labs Processes

Ricardo Gaviria, Software Engineer, Roche

This talk explores the benefits of registering a timestamp and experiment name for the molecules/samples being analyzed in a lab. By collecting and organizing this data, we gain valuable insights into the processes happening in our organization. We'll discuss how this information can help us track the journey of the molecule and better understand our lab's processes. Learn practical tips and techniques for implementing this approach in your own labs.

3:00 Graph Databases Are Akin to Top-Notch Car Engines: Phenomenal—But a Lot Less Useful without the Actual Car

Julian West, Graph Database Architect, AbbVie, Inc.

By *combining* graph databases with an open-source full-stack technology (as an example, we discuss BrainAnnex), companies large and small can be vastly empowered and no longer at the mercy of juggling proprietary partial solutions, pushed around by vendors whose primary mission is to build walls, rather than to dismantle them.

3:30 Approaches to Democratize Our Research Framework

Sven Neumeyer, Director, Business Analysis and User Experience, Novartis Biomedical Research

After a discipline has developed and progressed within an organization, it can be operationalized through the addition of OPS. For instance, DEV-OPS, Research-OPS, Design-OPS. Our presentation will focus on our operationalized framework and the democratization of our business analysis, user research, and design capabilities.

4:00 Presentation to be Announced *(Sponsorship Opportunity Available)*

4:30 Best of Show Awards Reception in the Exhibit Hall with Poster Viewing *(Sponsorship Opportunity Available)*

5:45 Close of Day

WEDNESDAY, APRIL 17

7:30 am Registration and Morning Coffee

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David Hewlett, Actor/Writer/Director; Creator, The Tech Bandits

David Hewlett has had his share of big screen roles representing science—and science fiction—and he believes it's imperative that the scientific community take back the narrative! With his TechBandits.org, David is meeting this future generation where they are, in schools, on YouTube, and on Twitch, championing real science in all its iterative, messy, exploratory glory, to recruit bright, diverse minds to lead the next generation of real science.

9:45 Coffee Break in the Exhibit Hall with Poster Viewing *(Sponsorship Opportunity Available)*

10:30 Organizer's Remarks

MODERNIZATION, OPTIMIZATION, AND INNOVATION IN BIOPHARMA RESEARCH WORKFLOWS

10:35 Chairperson's Remarks

Speaker to be Announced

10:40 Streamlining Our Product Portfolio to Increase Delivery Agility and Drive Down Operational Costs

Rachael Holmes, Scientist II, Compound Management, Novartis Institutes for BioMedical Research, Inc.

We're sharing how our Research Informatics group reimagined our drug discovery software portfolio. It includes numerous apps developed or purchased over decades to support research innovation and change. We've shifted from projects to products, applications to capabilities, and business silos to a holistic drug discovery perspective. This shift is driving modernization, cost-efficiency, innovation, and meeting new demand more effectively.

SOFTWARE APPLICATIONS AND SERVICES

Design Software Application Architecture to Add Value to All Ecosystem Stakeholders

11:10 CO-PRESENTATION: Redefining Small Molecule Lead Discovery through Automation and Digital Advancements

Romel Bobby, PhD, Research Informatics Scientist, Roche

Jan Woerner, Senior Scientist & IT Business Analyst, Informatics, Roche Innovation Center Basel

In this talk, we explore the approach taken in our Small Molecule Lead Discovery department to scale automation and digital solutions and how this will lead to new ways of working along the discovery value chain.

11:40 Why One Is Better than Ten: Takeda's Journey of the First Global ELN

David Deng, PhD, Scientific Informatics Technology Lead, Data Sciences Institute, Takeda Pharmaceuticals, Inc.

Replacing a legacy ELN system can be a long and painful process. How about replacing 10 of them together? This presentation will tell the story of Takeda's multi-year journey to decommission 10 fragmented legacy ELNs, and how a team of ELN implementation experts face the obstacles, and manage technical and organizational challenges to deploy a global integrated SaaS ELN solution to 2,000 R&D scientists.

12:10 pm Presentation to be Announced

12:40 An AI Enabled Informatics Platform to Speed Discovery and Development

Rob Brown, Senior Director, Product Marketing, Sapio Sciences

The value of a modern, AI enabled informatics platform to speed discovery and development.

- The power of a modern low-code/no-code platform for ease use and deployment
- The value of a unified LIMS and ELN for seamless experiment, workflow tracking and collaboration
- Scientific data cloud solution to unify and contextualize all research data
- AI assistants for experiment building, search, support and code-gen

1:10 Session Break & Transition to Lunch

1:20 Luncheon Presentation *(Sponsorship Opportunity Available)* **or Enjoy Lunch on Your Own**

1:50 Refreshment Break in the Exhibit Hall with Last Chance Poster Viewing *(Sponsorship Opportunity Available)*

TRENDS FROM THE TRENCHES

2:30 Chairperson's Remarks *(Sponsorship Opportunity Available)*

2:35 Trends from the Trenches

Ari E. Berman, PhD, CEO, BioTeam, Inc.

Since 2010, "Trends from the Trenches" has been one of the most popular annual traditions in the Bio-IT program. The intent of the talk is to deliver a candid (and occasionally blunt) assessment of the best, the most worthwhile, and the most overhyped information technologies (IT) for life sciences. Learn about computing, storage, data transfer, networks, cloud, data science, machine learning, and more that are involved in supporting data-intensive science.

4:05 Close of Conference

CLOUD COMPUTING

Enable Collaboration and Drive Better, Faster Analytics Using Cloud Infrastructure and Applications

MONDAY, APRIL 15

8:00 am Recommended Pre-Conference Workshops and Symposia*

On Monday, April 15, 2024, Cambridge Healthtech Institute is pleased to offer eight pre-conference Workshops scheduled across three time slots (8:00–10:00 am, 10:30 am–12:30 pm, and 2:00–4:00 pm) and six Symposia from 8:00 am–4:20 pm. All are designed to be instructional, and interactive and provide in-depth information on a specific topic. They allow for one-on-one interaction and provide a great way to explain more technical aspects that would otherwise not be covered during the main conference tracks that take place Tuesday–Wednesday.
*Separate registration required. See details on the Symposia here and details on the Workshops here.

PLENARY KEYNOTE PROGRAM

4:30 Organizer's Remarks

Cindy Crowninshield, Executive Event Director, Cambridge Healthtech Institute

4:35 Plenary Keynote Introduction

WEKA

Speaker to be Announced

4:45 PLENARY KEYNOTE PRESENTATION: Unleashing the Power of Advanced Computing in Biomedical Informatics: A Vision for Transformative Collaboration

Daniel Stanzione, PhD, Executive Director, Texas Advanced Computing Center (TACC)

Embark on a transformative journey with the Texas Advanced Computing Center, where high-performance computing, machine learning, and data analytics converge to revolutionize precision medicine. Through collaborative efforts, we integrate bioinformatics and computational biology, accelerating personalized patient care and drug discovery. Our commitment to user-friendly interfaces ensures accessibility for industry leaders. We are redefining boundaries of life science computing, shaping a future where innovation and collaboration drive breakthroughs in biomedical informatics.

6:00 Welcome Reception in the Exhibit Hall with Poster Viewing
(Sponsorship Opportunity Available)

7:15 Close of Day

TUESDAY, APRIL 16

7:00 am Registration and Morning Coffee

PLENARY KEYNOTE PROGRAM

8:00 Organizer's Remarks

Allison Proffitt, Editorial Director, Bio-IT World

8:05 Keynote Introduction

revvity signals

Josh Bond, Head of Product Management, Product Management, Revvity Signals

8:15 PLENARY KEYNOTE PRESENTATION: Unveiling Tomorrow's Possibilities: Embrace the Power of Digital Twins in Cancer Care and Research

Caroline Chung, MD, MSc, FRCPC, CIP, Vice President, Chief Data Officer and Director of Data Science Development and Implementation of the Institute for Data Science in Oncology, MD Anderson Cancer Center

Explore the transformative potential of digital twins in revolutionizing cancer care and research. Gain insights into how digital twins can help deepen biological understanding, accelerate drug discovery, and personalize therapeutic strategies to optimize treatment outcomes for every individual. Amidst the exciting opportunities are the challenges that must be tackled to harness the power of digital twins to advance precision oncology, empower researchers and clinicians with unprecedented insights, and improve patient outcomes.

9:30 Coffee Break in the Exhibit Hall with Poster Viewing
(Sponsorship Opportunity Available)

10:15 Organizer's Welcome Remarks

SETTING UP AND SCALING AGILE DATA AND ANALYTICS ECOSYSTEMS IN THE CLOUD

10:20 Chairperson's Remarks *(Sponsorship Opportunity Available)*

10:25 Developing, Testing, and Evaluating Research and Regulatory Grade AI Systems

Asha Mahesh, Senior Director, Data Science Solutions, Privacy & Ethics, Janssen R&D

The task of developing, testing, and evaluating research and regulatory-grade AI systems is challenging, especially when it involves multi-modal clinical and scientific data. We will discuss our framework, processes, quality system, and technology stack to overcome these challenges and develop and deploy AI systems at scale.

10:55 Question the Cloud: Questions That Cloud Operations Should Answer to Drive Science and Save Money

Valentine Reid, Director of Cloud Operations, Flagship Pioneering

Cloud computing provides vast storage and computing capabilities to life science. However, the teams managing these resources may sometimes feel detached from the actual science. Cloud teams require strategies to help optimize costs, enhance security, and modernize scientific workloads when they lack context. This talk will equip cloud leaders and professionals with tools and techniques for more effective cloud implementation, enabling both scientific innovation and fiscal prudence.

11:25 Agile, Flexible, Scalable Cloud Infrastructure Design

Naga Karthik Ghantasala, Director, Cloud Architecture and Strategy, Vertex Pharmaceuticals, Inc.

This talk is about how Vertex Pharmaceuticals modernized its image segmentation platform using AWS Serverless technologies and explains how it benefited our scientists in their research & development work. We will review how Vertex's legacy system worked and pain points associated with it, discuss the new cloud-based system using AWS Serverless, benefits gained, and lessons learned.

11:55 CO-PRESENTATION: The Power of an Open Source-Approach to Data Standardization and Lab Connectivity

Benchling

Nick Floeck, Head of Automation & Analytics Product Management, Product Management, Benchling

TBD TBD

Every scientific company faces similar challenges when integrating lab instrument data. Scientists are forced to manually transfer data and manage customized data pipelines, preventing use of data at scale, creating IT and automation burdens, and introducing compliance risks. To address chronic data lifecycle challenges, Benchling has taken an open-source, ecosystem-based approach to data standardization and instrument connectivity, applying FAIR practices with our product, Benchling Connect.

12:25 pm Overcoming the Scientific and IT Challenges Associated with Scaling Omics Analysis

aws

Simon Valentine, Chief Commercial Officer, Basepair Inc

Domen Jemec, Senior Product Manager, HealthOmics, AWS

Life sciences organizations looking to leverage omics data to accelerate scientific discoveries often find that the need for scientific creativity and

CLOUD COMPUTING

Enable Collaboration and Drive Better, Faster Analytics Using Cloud Infrastructure and Applications

experimentation is at odds with IT governance and cost management. Attendees will learn how a combination of AWS HealthOmics and Basepair can help to streamline the storage and analysis of omics data at scale, maximizing collaboration and productivity while simultaneously reducing costs and adhering to internal IT best practices.

12:55 Session Break & Transition to Lunch

1:05 LUNCHEON PRESENTATION: Luncheon Presentation to be Announced

Informatica

Richard Cramer, Chief Strategist, Healthcare & Life Sciences, Informatica

1:35 Refreshment Break in the Exhibit Hall with Poster Viewing *(Sponsorship Opportunity Available)*

LEVERAGING CLOUD FOR FASTER, BETTER DATA MANAGEMENT AND ANALYTICS

2:25 Chairperson's Remarks *(Sponsorship Opportunity Available)*

2:30 Data Science in the Cloud: Managing Datasets and Enabling Analysis

Yohann Potier, PhD, Director, Data Platform, Tessera Therapeutics, Inc.

Navigating various data types and multiple compute environments is crucial to modern data science in biotechnology. The session will cover how the cloud plays a pivotal role in enabling scientific research: allowing us to manage diverse datasets, leverage different computational architectures for different needs, as well as crucial tracking and integration demands for our gene writing research.

2:50 A Life Sciences Data Platform to Accelerate Time to Insights for High-Throughput Experiments

Ahmad Haider, PhD, Senior Director, Data and Advanced Analytics, Vertex Pharmaceuticals, Inc.

At Vertex, we have built a unified data platform for high-throughput experiments that provides a 360-degree view of the high-throughput experiment data which can be searched and analyzed for trends, insights, and patterns. The platform consists of a single unified search application backed by a fully connected, flexible, curated data model to provide scientists with the ability to trust, find, and analyze high throughput experimental results in minutes.

3:10 Enabling Machine Learning, Data Pipelines, and CryoEM with Scalable Cloud Infrastructure

Bret Martin, Principal Cloud Architect, Generate:Biomedicines

Generate:Biomedicines is pioneering the field of generative biology—using machine learning models to transform the biological drug discovery process from one of trial-and-error to one that is engineerable, predictable, and repeatable. Our cloud computing infrastructure supports our scientific teams by enabling efficient use of computational tools, highly scalable workloads, secure general accessibility, and commercial and internally developed informatics applications.

3:30 CO-PRESENTATION: Scalable and Flexible Digital Health Data Transformer

Bahador Marzban, PhD, Senior Digital Health Data Engineer, Innovative Medicine R&D, Johnson & Johnson

Vasanth Thirugnanam, Associate Director Data Science, Janssen Pharma

Digital health data collected from biosensors are of high volume. Capitalizing on this digital health data and delivering novel digital biomarkers is a computationally expensive task. Traditionally, these data have been processed sequentially, processing one file at a time, creating a bottleneck in feature extraction. To accelerate the processing of these high-volume data, we have developed a cloud solution for processing raw files simultaneously.

4:00 Presentation to be Announced *(Sponsorship Opportunity Available)*

4:30 Best of Show Awards Reception in the Exhibit Hall with Poster Viewing *(Sponsorship Opportunity Available)*

5:45 Close of Day

WEDNESDAY, APRIL 17

7:30 am Registration and Morning Coffee

PLENARY KEYNOTE PROGRAM

8:00 Organizer's Remarks

Cindy Crowninshield, Executive Event Director, Cambridge Healthtech Institute

8:05 Innovative Practices Awards

Allison Proffitt, Editorial Director, Bio-IT World

The Innovative Practices Awards recognizes and celebrates technology innovation in the life sciences. Bio-IT World is currently accepting entries for the 2024 Innovative Practices Awards, a competition designed to recognize partnerships and projects pushing our industry forward. For more details about the Awards and to submit an application, visit www.bio-itworldexpo.com/innovativepractices.

8:20 Plenary Keynote Introduction

Clovertex

Deven Atnoor, PhD, Vice President of Scientific Strategy, Clovertex

8:30 PLENARY KEYNOTE PRESENTATION: Lights, Camera, Science: Film and Social Media Influence on Real-World Scientific Progress and Innovation

David Hewlett, Actor/Writer/Director; Creator, The Tech Bandits

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9:45 Coffee Break in the Exhibit Hall with Poster Viewing *(Sponsorship Opportunity Available)*

10:30 Organizer's Remarks

UNIQUE BENEFITS OF CLOUD IN BIOPHARMA: CASE STUDIES AND BEST PRACTICES

10:35 Chairperson's Remarks *(Sponsorship Opportunity Available)*

10:40 Scalable Federated Computing: Public Cloud Optional

Vas Vasiliadis, Chief Customer Officer, Globus, University of Chicago

We will present a platform that unifies access to compute and storage resources, both cloud-hosted and on premises, and demonstrate how a familiar interface provides users with a superior user experience which allows users to focus on their research rather than on technology management. We will describe and demonstrate how a novel implementation of functions-as-a-service enables even those with only rudimentary programming knowledge to easily compute at any scale

11:10 Cloud Infrastructure Evolution: Overcoming Challenges While Continuously Building for Scale

Grigoriy Sterin, Senior Principal Engineer, Tessera Therapeutics, Inc.

Join us as we delve into the evolutionary journey of cloud infrastructure at Tessera Therapeutics. Our talk will emphasize how we tackled a range

CLOUD COMPUTING

Enable Collaboration and Drive Better, Faster Analytics Using Cloud Infrastructure and Applications

of challenges encountered on the path to scalability. We'll cover initial infrastructure decisions, strategies for adapting to rapid growth, technology choices, and numerous experiences of overcoming challenges.

11:40 Managing Petabytes of Data and Its Lifecycle

Amit Singh, Director, Data Storage Infrastructure, Novartis Institutes for BioMedical Research, Inc.

With 40+ petabytes of unstructured data under management and roughly half a PB created every year by various scientific sources globally, it is necessary to leverage cloud computing to speed up drug discovery. Moving data to any cloud is the easier part, but achieving the business objectives, including data governance and management, is always the biggest challenge given the scale of the data.

12:10 pm Presentation to be Announced *(Sponsorship Opportunity Available)*

1:10 Session Break & Transition to Lunch

1:20 LUNCHEON PRESENTATION: End-to-End Acceleration for AI & Drug Discovery

ORACLE

Petrina Kamya, PhD, Global Head of AI Platforms, VP Insilico Medicine, Insilico
David Li, CEO and Co-Founder, Meliora Therapeutics
Dan Spellman, Global AI Cloud Director, Oracle
Paul Brake, PhD, Industry Executive Director for Life Sciences, Oracle

Explore how two leading biotech companies and a top cloud company are fast tracking pharmaceutical R&D. Insilico Medicine will discuss the use of generative AI to cut costs/time in producing life-saving medications. Meliora Therapeutics will detail scaling a multi-modal AI-powered mechanism deconvolution platform to change the oncology drug development lifecycle. Oracle ties it all together to share how their partnership with NVIDIA is helping fuel the drug discovery ecosystem.

1:50 Refreshment Break in the Exhibit Hall with Last Chance Poster Viewing *(Sponsorship Opportunity Available)*

TRENDS FROM THE TRENCHES

2:30 Chairperson's Remarks *(Sponsorship Opportunity Available)*

2:35 Trends from the Trenches

Ari E. Berman, PhD, CEO, BioTeam, Inc.

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4:05 Close of Conference

GENERATIVE AI

Harness Data Potential to Drive Innovation and Advance Biomedical Research

MONDAY, APRIL 15

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PLENARY KEYNOTE PROGRAM

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WEKA

Speaker to be Announced

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(Sponsorship Opportunity Available)

7:15 Close of Day

TUESDAY, APRIL 16

7:00 am Registration and Morning Coffee

PLENARY KEYNOTE PROGRAM

8:00 Organizer's Remarks

Allison Proffitt, Editorial Director, Bio-IT World

8:05 Keynote Introduction

revvity signals

Josh Bond, Head of Product Management, Product Management, Revvity Signals

8:15 PLENARY KEYNOTE PRESENTATION: Unveiling Tomorrow's Possibilities: Embrace the Power of Digital Twins in Cancer Care and Research

Caroline Chung, MD, MSc, FRCPC, CIP, Vice President, Chief Data Officer and Director of Data Science Development and Implementation of the Institute for Data Science in Oncology, MD Anderson Cancer Center

Explore the transformative potential of digital twins in revolutionizing cancer care and research. Gain insights into how digital twins can help deepen biological understanding, accelerate drug discovery, and personalize therapeutic strategies to optimize treatment outcomes for every individual. Amidst the exciting opportunities are the challenges that must be tackled to harness the power of digital twins to advance precision oncology, empower researchers and clinicians with unprecedented insights, and improve patient outcomes.

9:30 Coffee Break in the Exhibit Hall with Poster Viewing
(Sponsorship Opportunity Available)

10:15 Organizer's Welcome Remarks

EXPLORING GENERATIVE AI IN PHARMA RESEARCH: SCALING, PERSPECTIVES, AND DEMYSTIFICATION

10:20 Chairperson's Remarks

John Damask, Vice President, Data & Systems Engineering, Flagship Pioneering

10:25 Harnessing the Power of Generative AI: Unlocking Insights from Real-World Data for Data-Driven Decisions in Pharma R&D

Anu Sharma, Principal Scientist, Center for Observational & Real-World Evidence, Merck & Co., Inc.

Real-world data is revolutionizing the pharmaceutical industry by offering valuable insights beyond clinical trials. It allows for the assessment of drug effectiveness, patient outcomes, and safety in real-world scenarios. Heterogeneity of data types, varying degrees of data completeness, and incompatible legacy systems create significant challenges and opportunities to perform any scientific study. Learn how generative AI addresses challenges to enhance data-driven decisions, help identify trends, correlations, and insights aiding researchers.

10:55 AbbVie Intelligence—Building a Suite of LLM-Enabled Tools for the Enterprise

Brian Martin, Head of AI, R&D Information Research; Research Fellow, AbbVie, Inc.

We have developed the AbbVie Intelligence platform, an enterprise-scale suite of capabilities enabled by generative AI and LLMs. It includes Chat (GPT-powered chat assistant), Analyze (capable of summarizing or rewriting entire documents), Translate (machine translation, customized for AbbVie), and Ask a Source (which grounds LLM answers in trusted knowledge sources). This is the first step on a broader roadmap for enabling our teams to leverage generative AI safely and effectively.

11:25 Generative AI: Hype, Hope, and Reality

Rishi R. Gupta, PhD, Associate Director, Data Science, Novartis Institutes for Biomedical Research, Inc.

In this talk, we delve into the hype, hope, and reality of generative artificial intelligence (AI) in the realm of general drug discovery, generative chemistry, and retrosynthetic analysis. Our work explores how AI and machine learning (ML) models, particularly large language models (LLMs), can be effectively utilized for complex retrosynthesis processes and drug discovery tasks.

11:55 Can't ChatGPT Do That? Practical Applications for Generative AI in Drug Development

CERTARA

Christopher Bouton, PhD, Senior Vice President & Head of AI, Software, Certara

The popularity of tools like ChatGPT has brought AI to the forefront of tech investments, but nearly 73% of life science companies still struggle to adopt appropriate AI technologies. This outcome ultimately stems from model accuracy data access and privacy concerns that lead to failed implementation. In this session, attendees will receive an interactive presentation how innovative approaches can overcome these challenges to lead to successful AI use across drug R&D.

12:25 pm Presentation to be Announced

Google Cloud

12:55 Session Break & Transition to Lunch

GENERATIVE AI

Harness Data Potential to Drive Innovation and Advance Biomedical Research

1:05 LUNCHEON PRESENTATION: GenAI Innovations to Revolutionize ClinOps for Transparency and Enhanced Productivity

Atul Joshi, Manager, R&D Data Science, ZS Associates

Bhargava Reddy, Senior Director Ops Productivity Enhancement, Innovative Medicine, Johnson & Johnson

Clinical trial design and operations present formidable challenges, leading to delays and rising costs. The complexity of these processes necessitates extensive coordination among stakeholders and the analysis of structured and unstructured data. While structured data is commonly used for decision-making, the untapped potential of unstructured data is significant. This presentation explores the potential of GenAI to significantly improve productivity in R&D, addressing the time-consuming nature of clinical trial design and operations.

1:35 Refreshment Break in the Exhibit Hall with Poster Viewing *(Sponsorship Opportunity Available)*

REVOLUTIONIZING DRUG DISCOVERY: GENERATIVE MODELS IN PROTEIN ENGINEERING

Rishi R. Gupta, PhD, Associate Director, Data Science, Novartis Institutes for Biomedical Research, Inc.

2:30 Can We Engineer Biology Using Generative AI?

Murthy Devarakonda, PhD, Executive Director and Head of NLP, AI Innovations Center, Novartis Institutes for BioMedical Research, Inc.

Generative AI has ignited creativity, with ChatGPT crafting articles, generating images, and coding. This talk explores the question: can we engineer biology using these generative AI techniques? Evidence suggests viability; AlphaFold 2 predicts protein folding, while foundation models for single-cell RNA sequences have emerged. Engineering a cell with desired characteristics with these models is closer than we think.

3:00 Presentation to be Announced

3:30 CO-PRESENTATION: Protein Design with Evolutionarily Informed Generative Models

Ryan Mork, PhD, Senior Director of Data Science, Evozyne, Inc.

Anisha Zaveri, PhD, Senior Data Scientist, Evozyne, Inc.

We present an overview of the underlying technology enabling Evozyne to design novel proteins for applications in sustainability and therapeutics. We discuss our evolutionarily informed machine learning approach, including our transformer-based model, ProT-VAE, which was co-developed with Nvidia.

4:00 Presentation to be Announced

4:30 Best of Show Awards Reception in the Exhibit Hall with Poster Viewing *(Sponsorship Opportunity Available)*

5:45 Close of Day

WEDNESDAY, APRIL 17

7:30 am Registration and Morning Coffee

PLENARY KEYNOTE PROGRAM

8:00 Organizer's Remarks

Cindy Crowninshield, Executive Event Director, Cambridge Healthtech Institute

8:05 Innovative Practices Awards

Allison Proffitt, Editorial Director, Bio-IT World

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8:20 Plenary Keynote Introduction

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9:45 Coffee Break in the Exhibit Hall with Poster Viewing *(Sponsorship Opportunity Available)*

10:30 Organizer's Remarks

TRANSFORMATIVE POTENTIAL OF GENERATIVE AI IN THE FIELDS OF DRUG DISCOVERY, CLINICAL DEVELOPMENT, AND DATA SCIENCE

10:35 Chairperson's Remarks

Chris Willis, PhD, Associate Director, Research IT, Bristol Myers Squibb Co.

10:40 GenAI Applications for Drug Discovery and Development

Xiaoying Wu, MD, MS, Vice President, Data Science & Digital Health, Janssen Pharmaceuticals, Inc.

This talk explores the transformative landscape where GenAI intersects drug discovery and development. Gain insights into cutting-edge applications, emphasizing responsible data practices. Learn about navigating the evolving role of GenAI, ensuring data privacy and integrity are central to innovative solutions propelling drug discovery efforts.

11:10 Automation of Clinical Study Protocol Authoring Using GenAI

Jenny Wei, PhD, Head R&D Informatics and Technology, Kite Pharma

While the clinical trial value chain is still riddled with inefficiencies owing to the time-consuming, expensive manual way of working, Generative AI has the potential to revolutionize clinical development from optimizing trial design, automating trial document generation to regulatory filling support. We share our experience in automating clinical study protocol generation using Google's Palm2 32k. Our guiding principles for achieving value of GenAI quickly can be leveraged across pharmaceutical industry.

11:40 How Generative AI Can Be Leveraged for Catalogs

Monica Jain, Director, R&D Data Science, Johnson & Johnson Innovative Medicine

Data findability is the most time-consuming activity for data scientists and takes ~70% of their efforts and time. With appropriate use of LLMs, a semantic search of the data can be offered to have a much faster data-to-insights journey.

12:10 pm Harness MemGPT to optimize LLMs for drug discovery & development language tasks, boosting efficiency & effectiveness.

Sreeni Reddy, Mr., Associate Vice President, Life Sciences & Healthcare, Birlasoft

Traditional drug discovery & development is time and resource-intensive, trying to understand mechanisms leading to diseases and the purpose of possible

targets or proteins. Less control over the output sequences can result in lead candidates with suboptimal binding or poor developability attributes. In this session, we demonstrate the potential of zero-shot Generative AI to significantly increase the speed, quality, and controllability of design & automation in the drug development process.

12:25 Presentation to be Announced

12:55 Advancing Drug Discovery across Different Modalities with Physics-Based Modeling, and AI/ML

Ceren Tuzmen Walker, Senior Brand Marketing Manager, Dassault Systèmes/ BIOVIA

This presentation will showcase how BIOVIA solutions are advancing drug discovery, from small molecules to biologics, by combining the power of physics-based molecular modelling, AI and machine learning, and lab informatics. Topics include target characterization through Alphafold2/ Openfold AI models, small molecule therapeutics design through seamless integration of virtual modeling and lab data, and biotherapeutics design and optimization through the utilization of validated ***in silico*** techniques enhanced by AI.

1:10 Session Break & Transition to Lunch

1:20 LUNCHEON PRESENTATION: Luncheon Presentation to be Announced

Speaker to be Announced

1:50 Refreshment Break in the Exhibit Hall with Last Chance Poster Viewing *(Sponsorship Opportunity Available)*

RETHINKING DRUG DEVELOPMENT WITH HUMAN VIRTUAL MODELS

2:30 Chairperson's Remarks

Eric Stahlberg, PhD, Director, Cancer Data Science Initiatives, Cancer Research Technology Program, Frederick National Laboratory for Cancer Research, Rockville, Maryland, USA

2:35 CO-PRESENTATION: Rethinking Drug Development with Human Virtual Models

Priyanka Banerjee, PhD, Principal Investigator & Scientist, Charite University of Medicine, Berlin, Germany

Eric Stahlberg, PhD, Director, Cancer Data Science Initiatives, Cancer Research Technology Program, Frederick National Laboratory for Cancer Research, Rockville, Maryland, USA

Mariano Vazquez, PhD, Co-Founder and CTO, ELEM Biotech, Barcelona, Spain

In the dynamic landscape of life sciences and biomedical IT, the paradigm of drug development is undergoing a transformative shift, marked by the integration of advanced technologies (e.g., Human Virtual Models (HVMs) and AI). By embracing advanced technologies, the life sciences community is poised to accelerate therapeutic breakthroughs, ushering in an era where precision medicine and personalized treatments are not just aspirations but tangible outcomes of innovative biomedical IT strategies.

4:05 Close of Conference

AI FOR DRUG DISCOVERY AND DEVELOPMENT

Leverage Artificial Intelligence and Machine Learning for Optimal Speed and Efficiency in Advancing Drug Discovery and Development Pipelines

MONDAY, APRIL 15

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PLENARY KEYNOTE PROGRAM

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Cindy Crowninshield, Executive Event Director, Cambridge Healthtech Institute

4:35 Plenary Keynote Introduction WEKA

Speaker to be Announced

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6:00 Welcome Reception in the Exhibit Hall with Poster Viewing
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7:15 Close of Day

TUESDAY, APRIL 16

7:00 am Registration and Morning Coffee

PLENARY KEYNOTE PROGRAM

8:00 Organizer's Remarks

Allison Proffitt, Editorial Director, Bio-IT World

8:05 Keynote Introduction revvity signals

Josh Bond, Head of Product Management, Product Management, Revvity Signals

8:15 PLENARY KEYNOTE PRESENTATION: Unveiling Tomorrow's Possibilities: Embrace the Power of Digital Twins in Cancer Care and Research

Caroline Chung, MD, MSc, FRCPC, CIP, Vice President, Chief Data Officer and Director of Data Science Development and Implementation of the Institute for Data Science in Oncology, MD Anderson Cancer Center

Explore the transformative potential of digital twins in revolutionizing cancer care and research. Gain insights into how digital twins can help deepen biological understanding, accelerate drug discovery, and personalize therapeutic strategies to optimize treatment outcomes for every individual. Amidst the exciting opportunities are the challenges that must be tackled to harness the power of digital twins to advance precision oncology, empower researchers and clinicians with unprecedented insights, and improve patient outcomes.

9:30 Coffee Break in the Exhibit Hall with Poster Viewing
(Sponsorship Opportunity Available)

10:15 Organizer's Welcome Remarks

NOVEL MACHINE LEARNING AND AI MODELS FOR TARGETED DRUG DISCOVERY AND DEVELOPMENT

10:20 Chairperson's Remarks GENOMENON

Speaker to be Announced

10:25 Using AI and Machine Learning (AI/ML) to Power Predictive Drug Discovery

Ahmad Haider, PhD, Senior Director, Data and Advanced Analytics, Vertex Pharmaceuticals, Inc.

During the drug discovery process, it is standard practice to test a large library of compounds for their biological activity towards both the intended target molecule as well as peripheral off-target molecules. This process can be very time- and money-consuming. Pharmaceutical organizations are now accelerating this process by employing predictive modeling approaches that are used to generate quantitative predictions of molecular activities in a fraction of the time.

10:55 Data-Driven Drug Discovery: Machine Learning in Drug Discovery @AbbVie

Abhishek Pandey, PhD, Global Lead & Principal Research Scientist, Information Research, AbbVie, Inc.

Traditional drug discovery is costly, time-consuming, and often unsuccessful. Machine learning can enhance cost, speed, and success. In this talk, I'll discuss AbbVie's approach, sharing diverse use cases and insights. Listeners will learn to scale drug discovery with machine learning, with actionable opportunities. The presentation offers a glimpse into current machine learning strategies and a forward-looking perspective.

Wouter Franke, Strategic Data Consultant, The Hyve

11:55 Science in the Loop - An AI-Native Data Journey in Drug Safety Tests tetrascience

Cheng Han, MS, MBA, VP of Applied AI and Data Science, Technology, TetraScience

Evaluating ADME/Tox properties are costly and time-consuming. An innovative, science-driven, and data-centric approach that introduces an in-silico model can accelerate determining compound-transporter interactions. Learn how a data journey with the seamless integration of laboratory instruments, the contextualization and harmonization of heterogeneous data, and the transformation into AI-native data will fuel in-silico models. It promises to deliver scientific insights faster and significantly improve the throughput of drug safety test processes.

12:25 pm Presentation to be Announced WEKA

12:55 Session Break & Transition to Lunch

1:05 LUNCHEON PRESENTATION: Unveiling the Multimodal Frontier: AI-Driven Hypothesis Generation in Drug Discovery QUANTORI

Steven Labkoff, PhD, Global Head, Clinical and Healthcare Informatics, Quantori

The topic in the realm of drug discovery has been active long before ChatGPT and other LLMs. This talk will describe methods used for hypothesis generation using multimodal data sets and their use for cluster analysis across various modalities, including EHR, imaging, genomics, and transcriptomics data. We

AI FOR DRUG DISCOVERY AND DEVELOPMENT

Leverage Artificial Intelligence and Machine Learning for Optimal Speed and Efficiency in Advancing Drug Discovery and Development Pipelines

will also discuss some aspects of work being done at the Division of Clinical Informatics at Harvard Medical School and the AMIA.

1:35 Refreshment Break in the Exhibit Hall with Poster Viewing *(Sponsorship Opportunity Available)*

NOVEL MACHINE LEARNING AND AI MODELS FOR TARGETED DRUG DISCOVERY AND DEVELOPMENT

2:25 Chairperson's Remarks

QSIMULATE

David Pearlman, PhD, Vice President, Product, QSimulate

2:30 CO-PRESENTATION: Unleashing the Power of *in vivo* Pharmacology Data to Advance Drug Discovery at Novartis Biomedical Research

Carl Kuesters, Principal Software Engineer, Novartis Research IT

Stefanie Wanka, PhD, Technical Associate Director, Scientific Products, Novartis Institutes for Biomedical Research, Inc.

Introducing OneInVivo: Structured and Actionable *in vivo* Pharmacology Study Data for Novartis Biomedical Research. This presentation will showcase our community-driven approach to creating a successful product and delve into the product architecture, emphasizing its flexibility and scalability.

3:00 Novel Machine Learning and AI Models for RNA-Targeted Drug Discovery

Kimberly Robasky, PhD, Associate Director of Machine Learning/AI, Arrakis Therapeutics

Arrakis Therapeutics is harnessing the potential of RNA molecules, opening doors to uncharted biological territories. Our unique data provides valuable insights into ligandability, spanning both RNA and the chemical domain. We will showcase the power of deep learning and explainable AI (xAI) in unveiling the chemical attributes governing RNA-friendliness. Join us in revealing these pioneering solutions at the convergence of AI and life sciences, catalyzing a revolution in drug development.

3:30 CO-PRESENTATION: Finding Goldilocks—Can a Marriage of Quantum Mechanics and AI Unlock Successful Covalent Drug Development?

Johannes C. Hermann, PhD, CTO, Frontier Medicines

Han Wool Yoon, PhD, AI Architect, Frontier Medicines

While some of the world's most widely used medicines are covalent drugs most covalent medicines were discovered serendipitously and are often misunderstood. Covalent medicines form an irreversible bond and therein lies the benefits and the challenges, including finding just the right warhead that's not too hot and not too cold. Breaking through the hype, can uniting AI and quantum mechanics unlock a successful future of deliberate exquisitely designed covalent medicines?

4:00 Presentation to be Announced

QIAGEN

4:15 Talk Title to be Announced

Elucidata

Abhishek Jha, Dr., CEO and Co-founder, Elucidata

4:30 Best of Show Awards Reception in the Exhibit Hall with Poster Viewing *(Sponsorship Opportunity Available)*

5:45 Close of Day

WEDNESDAY, APRIL 17

7:30 am Registration and Morning Coffee

PLENARY KEYNOTE PROGRAM

8:00 Organizer's Remarks

Cindy Crowninshield, Executive Event Director, Cambridge Healthtech Institute

8:05 Innovative Practices Awards

Allison Proffitt, Editorial Director, Bio-IT World

The Innovative Practices Awards recognizes and celebrates technology innovation in the life sciences. Bio-IT World is currently accepting entries for the 2024 Innovative Practices Awards, a competition designed to recognize partnerships and projects pushing our industry forward. For more details about the Awards and to submit an application, visit www.bio-itworldexpo.com/innovativepractices.

8:20 Plenary Keynote Introduction

Clovertex

Deven Atnoor, PhD, Vice President of Scientific Strategy, Clovertex

8:30 PLENARY KEYNOTE PRESENTATION: Lights, Camera, Science: Film and Social Media Influence on Real-World Scientific Progress and Innovation

David Hewlett, Actor/Writer/Director; Creator, The Tech Bandits

David Hewlett has had his share of big screen roles representing science—and science fiction—and he believes it's imperative that the scientific community take back the narrative! With his TechBandits.org, David is meeting this future generation where they are, in schools, on YouTube, and on Twitch, championing real science in all its iterative, messy, exploratory glory, to recruit bright, diverse minds to lead the next generation of real science.

9:45 Coffee Break in the Exhibit Hall with Poster Viewing *(Sponsorship Opportunity Available)*

10:30 Organizer's Remarks

10:35 Chairperson's Remarks *(Sponsorship Opportunity Available)*

OPTIMIZING DRUG DISCOVERY: HARNESSING FULLY PIPELINED MACHINE LEARNING ADMET MODELS FOR ENHANCED MOLECULAR DESIGN AND SAFETY PROFILES

10:40 CO-PRESENTATION: Biasing Molecular Design with Fully Pipelined Machine Learning ADMET Models

Leela Sriram Dodda, PhD, Director, Computational Chemistry, Nimbus Therapeutics

Daniel Price, PhD, Vice President, Computational Chemistry & Structural Biology, Nimbus Therapeutics

Explore the synergy of fully pipelined machine learning ADMET models in biasing molecular design for enhanced drug discovery. This research delves into leveraging advanced information systems to predict Absorption, Distribution, Metabolism, Excretion, and Toxicity (ADMET) properties. By integrating cutting-edge machine learning techniques into the drug design process, we aim to optimize molecular structures, minimizing bias and accelerating the development of novel pharmaceutical compounds with improved bioavailability and safety profiles.

INNOVATIVE NEURAL NETWORK APPLICATIONS IN PHARMACEUTICAL DEVELOPMENT AND EVOLUTION-INSPIRED DRUG DISCOVERY

11:10 Accelerating the Selection of Co-Formers for Solid-Form Crystallization Using AI

Jeff Lengyel, PhD, Research and Applications Scientist, The Cambridge Crystallographic Data Centre

Generative neural networks have begun to receive immense attention in the field of pharmaceutical development due to their ability to interpret human-readable representations of data, such as plain-text experimental methods and SMILES strings. This talk shares a specific example of a transformer

AI FOR DRUG DISCOVERY AND DEVELOPMENT

Leverage Artificial Intelligence and Machine Learning for Optimal Speed and Efficiency in Advancing Drug Discovery and Development Pipelines

neural network being used to create a model with potential to accelerate the development and de-risking of pharmaceutical solid forms.

11:40 Harnessing Evolutionary Wisdom: ML-Powered Strategies for Therapeutic Innovation via Natural Animal Models of Disease Resistance

Linda Goodman, PhD, Founder & CTO, Genetics & Genomics, FaunaBio

Some mammals have naturally evolved strategies to prevent or reverse disease pathologies common in humans. At Fauna Bio, we use ML approaches, our unique dataset, and custom Graph Neural Network (GNN) trained on our proprietary biomedical knowledge graph to design therapies allowing humans to tap into the protective and regenerative strategies from 100 million years of mammal evolution. Learn about nonconventional approaches to drug discovery and development, utilizing ML-powered strategies.

12:10 pm AI's Impact in Drug Discovery: What the Future Holds

causaly

Yiannis Kiachopoulos, CEO and Co-Founder, Causaly

LLM technologies, Knowledge Graphs and AI are accelerating R&D transformation in research organizations. This talk will explore the pivotal point we stand at today as LLMs enable us to unlock ever more R&D productivity, and will look ahead at the immense opportunity available, and what it will take to get there.

12:40 Presentation to be Announced

aws

1:10 Session Break & Transition to Lunch

1:20 LUNCHEON PRESENTATION: Utilizing Generative AI for Drug Discovery in the Cloud

aws

Aniket Deshpande, Senior GTM Specialist, HPC for Healthcare and Life Sciences, Amazon Web Services (AWS)

Evozyne used generative AI, built on NVIDIA's BioNeMo platform and AWS, to create two new proteins with supernatural function. The developed LLMs outperform traditional protein engineering approaches by enabling the production of functional synthetic molecules with hundreds of mutations in a single round. The role of large, pre-trained models and libraries to unlock such generative design will be reviewed alongside the benefits cloud computing provides in storage, automation, and parallelization.

1:50 Refreshment Break in the Exhibit Hall with Last Chance Poster Viewing *(Sponsorship Opportunity Available)*

RETHINKING DRUG DEVELOPMENT WITH HUMAN VIRTUAL MODELS

2:30 Chairperson's Remarks

Eric Stahlberg, PhD, Director, Cancer Data Science Initiatives, Cancer Research Technology Program, Frederick National Laboratory for Cancer Research, Rockville, Maryland, USA

2:35 CO-PRESENTATION: Rethinking Drug Development with Human Virtual Models

Priyanka Banerjee, PhD, Principal Investigator & Scientist, Charite University of Medicine, Berlin, Germany

Eric Stahlberg, PhD, Director, Cancer Data Science Initiatives, Cancer Research Technology Program, Frederick National Laboratory for Cancer Research, Rockville, Maryland, USA

Mariano Vazquez, PhD, Co-Founder and CTO, ELEM Biotech, Barcelona, Spain

In the dynamic landscape of life sciences and biomedical IT, the paradigm of drug development is undergoing a transformative shift, marked by the integration of advanced technologies (e.g., Human Virtual Models (HVMs) and AI). By embracing advanced technologies, the life sciences community is poised to accelerate therapeutic breakthroughs, ushering in an era where precision medicine and personalized treatments are not just aspirations but tangible outcomes of innovative biomedical IT strategies.

4:05 Close of Conference

AI FOR ONCOLOGY, PRECISION MEDICINE, AND HEALTH

Enhance Accessibility and Exploration of Comprehensive Multiomics Real-World Data

MONDAY, APRIL 15

8:00 am Recommended Pre-Conference Workshops and Symposia*

On Monday, April 15, 2024, Cambridge Healthtech Institute is pleased to offer eight pre-conference Workshops scheduled across three time slots (8:00–10:00 am, 10:30 am–12:30 pm, and 2:00–4:00 pm) and six Symposia from 8:00 am–4:20 pm. All are designed to be instructional, and interactive and provide in-depth information on a specific topic. They allow for one-on-one interaction and provide a great way to explain more technical aspects that would otherwise not be covered during the main conference tracks that take place Tuesday–Wednesday.
*Separate registration required. See details on the Symposia here and details on the Workshops here.

PLENARY KEYNOTE PROGRAM

4:30 Organizer's Remarks

Cindy Crowninshield, Executive Event Director, Cambridge Healthtech Institute

4:35 Plenary Keynote Introduction

WEKA

Speaker to be Announced

4:45 PLENARY KEYNOTE PRESENTATION: Unleashing the Power of Advanced Computing in Biomedical Informatics: A Vision for Transformative Collaboration

Daniel Stanzione, PhD, Executive Director, Texas Advanced Computing Center (TACC)

Embark on a transformative journey with the Texas Advanced Computing Center, where high-performance computing, machine learning, and data analytics converge to revolutionize precision medicine. Through collaborative efforts, we integrate bioinformatics and computational biology, accelerating personalized patient care and drug discovery. Our commitment to user-friendly interfaces ensures accessibility for industry leaders. We are redefining boundaries of life science computing, shaping a future where innovation and collaboration drive breakthroughs in biomedical informatics.

6:00 Welcome Reception in the Exhibit Hall with Poster Viewing *(Sponsorship Opportunity Available)*

7:15 Close of Day

TUESDAY, APRIL 16

7:00 am Registration and Morning Coffee

PLENARY KEYNOTE PROGRAM

8:00 Organizer's Remarks

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Caroline Chung, MD, MSc, FRCPC, CIP, Vice President, Chief Data Officer and Director of Data Science Development and Implementation of the Institute for Data Science in Oncology, MD Anderson Cancer Center

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9:30 Coffee Break in the Exhibit Hall with Poster Viewing *(Sponsorship Opportunity Available)*

10:15 Organizer's Welcome Remarks

MULTIMODAL DATA FOR PRECISION DIAGNOSTICS AND RESEARCH

10:20 Chairperson's Remarks *(Sponsorship Opportunity Available)*

10:25 Machine Learning in Precision Medicine @AbbVie: Multiomics Perspective

Abhishek Pandey, PhD, Global Lead & Principal Research Scientist, Information Research, AbbVie, Inc.

Delve into the integration of genomics, clinical data, and imaging through machine learning for in-depth insights into complex diseases in preclinical and clinical scenarios. This presentation emphasizes the novel inclusion of imaging data and enhancing the multiomics approach. Discover practical multiomics applications, merging genomics and imaging data, while exploring intriguing advancements in radiogenomics and pathogenomics to gain a holistic comprehension of disease mechanisms.

10:55 A First Look at National-Scale Multimodal Cancer Research in Practice

Prabhu Arumugam, PhD, Director of Clinical Data and Imaging, Caldicott Guardian, Genomics England

Genomics England and its partners are currently building the world's largest multimodal research platform for cancer. Join us to hear about the progress and challenges of making 100PB of data queriable in the cloud; a first look at the sort of insights this platform can provide; and how industry can use it and partner with Genomics England and its participants to advance new therapies.

11:25 Building Trustworthy Biomedical AI Assistants

Ian Maurer, CTO, GenomOncology LLC

Large Language Models (LLMs) represent a transformational technology. Despite their prowess, they face limitations in handling complex data types, like genomics, and in citing references or incorporating the latest findings effectively. This presentation will cover core principles, proven patterns, and common challenges with deploying practical and trustworthy AI Assistants in regulated and rapidly evolving industries.

11:55 Presentation to be Announced

VELSERA

ZS

12:25 pm Integrating Multimodal Data for Computational Phenotyping

Brice Sarver, PhD, Director, ZS Discovery, ZS Associates

Increasingly, clinicians and researchers have access to a variety of complementary data alongside electronic health records. If combined successfully, the integration of diverse data modalities reveals patterns that would not otherwise be captured, such as patient clusters and disease subtypes. This presentation will expand on traditional integration approaches by discussing computational phenotyping, leveraging machine learning to tackle the problem of generating insight into clinical phenotypes and their drivers.

12:55 Session Break & Transition to Lunch

1:05 Luncheon Presentation *(Sponsorship Opportunity Available)* **or Enjoy Lunch on Your Own**

AI FOR ONCOLOGY, PRECISION MEDICINE, AND HEALTH

Enhance Accessibility and Exploration of Comprehensive Multiomics Real-World Data

1:35 Refreshment Break in the Exhibit Hall with Poster Viewing *(Sponsorship Opportunity Available)*

APPLYING DATA TO UNDERSTAND DISEASE PATHOLOGY AND APPLICATION IN THERAPEUTIC AREAS

2:25 Chairperson's Remarks *(Sponsorship Opportunity Available)*

2:30 AI-Based Screening for Lung Cancer Patients

Kamal Rawal, PhD, Professor and Head, Center for Computational Biology and Bioinformatics, Amity University

This talk addresses the global health challenge of lung cancer by developing an AI-driven solution for early diagnosis, particularly in resource-constrained countries like India. We utilize radiological and histopathological features from whole slide images to predict lung malignancy, cancer type, and mutations, focusing on the EGFR gene. The project expands a prototype system into an end-to-end AI pipeline for deployment in oncology hospitals aiming to provide cost-effective early screening.

3:00 CO-PRESENTATION: Optimizing Clinical Data Enablement: Leveraging NLP and OCR for Seamless Data Integration & Utilization with City of Hope's POSEIDON Platform

James Cole, Vice President, Product Innovation, GenomOncology LLC

Samir Courdy, Senior Vice President, Informatics, City of Hope

City of Hope's POSEIDON (Precision Oncology Software Environment Interoperable Data Ontologies Network) stands as an award-winning, enterprise-wide data lake platform and precision medicine initiative designed to output patient-specific insights and recommendations rooted in real-world data and evidence. Explore how City of Hope integrates both structured and unstructured patient and clinical data through HopeIQ—an advanced Natural Language Processing (NLP) data curation solution that leverages GenomOncology's igniteIQ data-enablement solution.

3:30 Transforming Cancer Diagnoses: Pioneering AI Partnerships with the DoD and DoE

Niven R. Narain, PhD, President & CEO, BPGbio

Learn about the remarkable journey of partnership with BPGbio & the US Department of Defense and the Department of Energy, to produce groundbreaking advancements in the field of cancer diagnosis using AI. This unique collaboration, combined with BPGbio's vast biobank of clinically annotated samples and domain-specific AI models, continues to unveil novel diagnostic biomarkers for early detection of challenging diseases, demonstrating the transformative impact of the biology-first AI approach.

4:00 Presentation to be Announced *(Sponsorship Opportunity Available)*

4:30 Best of Show Awards Reception in the Exhibit Hall with Poster Viewing *(Sponsorship Opportunity Available)*

5:45 Close of Day

WEDNESDAY, APRIL 17

7:30 am Registration and Morning Coffee

PLENARY KEYNOTE PROGRAM

8:00 Organizer's Remarks

Cindy Crowninshield, Executive Event Director, Cambridge Healthtech Institute

8:05 Innovative Practices Awards

Allison Proffitt, Editorial Director, Bio-IT World

The Innovative Practices Awards recognizes and celebrates technology innovation in the life sciences. Bio-IT World is currently accepting entries for the 2024 Innovative Practices Awards, a competition designed to recognize partnerships and projects pushing our industry forward. For more details about the Awards and to submit an application, visit www.bio-itworldexpo.com/innovativepractices.

8:20 Plenary Keynote Introduction Clovertex

Deven Atnoor, PhD, Vice President of Scientific Strategy, Clovertex

8:30 PLENARY KEYNOTE PRESENTATION: Lights, Camera, Science: Film and Social Media Influence on Real-World Scientific Progress and Innovation

David Hewlett, Actor/Writer/Director; Creator, The Tech Bandits

David Hewlett has had his share of big screen roles representing science—and science fiction—and he believes it's imperative that the scientific community take back the narrative! With his TechBandits.org, David is meeting this future generation where they are, in schools, on YouTube, and on Twitch, championing real science in all its iterative, messy, exploratory glory, to recruit bright, diverse minds to lead the next generation of real science.

9:45 Coffee Break in the Exhibit Hall with Poster Viewing *(Sponsorship Opportunity Available)*

10:30 Organizer's Remarks

INTEGRATING COMPUTATIONAL PLATFORMS, KNOWLEDGE GRAPHS, AND GENERATIVE AI: UNVEILING SCIENCE INITIATIVES IN DRUG DISCOVERY & DEVELOPMENT

10:35 Chairperson's Remarks *(Sponsorship Opportunity Available)*

10:40 CO-PRESENTATION: Unveiling the Potential of Phytochemicals in Drug Development—Holistic Insights through Digital Twins, *in silico* Design, and Virtual Trials

Priyanka Banerjee, PhD, Principal Investigator & Scientist, Charite University of Medicine, Berlin, Germany

Jaspreet Kaur Dhanjal, PhD, Assistant Professor, Department of Computational Biology, Indraprastha Institute of Information Technology, Delhi

Rajendra Joshi, PhD, Senior Director and Head, High Performance Computing: Medical and Bioinformatics Applications, Centre for Development of Advanced Computing (C-DAC), Pune, India

Cezary Mazurek, PhD, Director, Poznan Supercomputing and Networking Center, Poland

Koninika Ray, PhD, Director, Biomedical Research and Coordinator, Ayurveda Developmental Therapeutic Program (ADTP), Open Health Systems Laboratory (OHSL)

Anil Srivastava, President, Open Health Systems Laboratory (OHSL)

Eric Stahlberg, PhD, Director, Cancer Data Science Initiatives, Cancer Research Technology Program, Frederick National Laboratory for Cancer Research, Rockville, Maryland, USA

Mariano Vazquez, PhD, Co-Founder and CTO, ELEM Biotech, Barcelona, Spain

International Consortium for Technology in Biomedicine (ICTBioMed) was created in 2013 by Open Health Systems Laboratory (OHSL), Poznan Supercomputing and Networking Center (PSNC), and the Centre for Development of Advanced Computing (CDAC) with the purpose of bringing together biomedical researchers on a computational platform for collaborative research. In this session, ICTBioMed team will present some of their ongoing open science projects which would welcome international research partners.

AI FOR ONCOLOGY, PRECISION MEDICINE, AND HEALTH

Enhance Accessibility and Exploration of Comprehensive Multiomics Real-World Data

12:10 pm Cause-and-Effect to Empower Drug Discovery in a Generative AI World Biorelate

Daniel Jamieson, CEO, Biorelate

By incorporating cause-and-effect data into knowledge graphs, researchers can access unique insights. The emergence of generative AI technologies has revolutionized the way we interact with data and explore its potential applications in drug discovery. Dr Daniel Jamieson will demonstrate the power of advanced cause-and-effect capturing methods, coupled with generative AI (genAI), in facilitating groundbreaking conclusions for drug discovery.

12:40 Presentation to be Announced *(Sponsorship Opportunity Available)*

1:10 Session Break & Transition to Lunch

1:20 Luncheon Presentation *(Sponsorship Opportunity Available)* **or Enjoy Lunch on Your Own**

1:50 Refreshment Break in the Exhibit Hall with Last Chance Poster Viewing *(Sponsorship Opportunity Available)*

RETHINKING DRUG DEVELOPMENT WITH HUMAN VIRTUAL MODELS

2:30 Chairperson's Remarks

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4:05 Close of Conference

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BIOINFORMATICS

Harness Computational Tools and Techniques to Transform Extensive Data into Intelligent Insights to Advance Pharma R&D

MONDAY, APRIL 15

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Speaker to be Announced

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Daniel Stanzione, PhD, Executive Director, Texas Advanced Computing Center (TACC)

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Caroline Chung, MD, MSc, FRCPC, CIP, Vice President, Chief Data Officer and Director of Data Science Development and Implementation of the Institute for Data Science in Oncology, MD Anderson Cancer Center

Explore the transformative potential of digital twins in revolutionizing cancer care and research. Gain insights into how digital twins can help deepen biological understanding, accelerate drug discovery, and personalize therapeutic strategies to optimize treatment outcomes for every individual. Amidst the exciting opportunities are the challenges that must be tackled to harness the power of digital twins to advance precision oncology, empower researchers and clinicians with unprecedented insights, and improve patient outcomes.

9:30 Coffee Break in the Exhibit Hall with Poster Viewing
(Sponsorship Opportunity Available)

10:15 Organizer's Welcome Remarks

BIOINFORMATICS FOR PRECISION MEDICINE

10:20 Chairperson's Remarks

Jeffrey A. Rosenfeld, PhD, President, Rosenfeld Consulting

10:25 Using Explainable AI for Patient and Endpoint Selection in Small Multiomic Clinical Trials: Examples from Phase II Studies in Multiple Indications

Mohammad Afshar, President & CEO, Ariana Pharma

Identifying optimal patient selection criteria, endpoints, and dose remain important challenges in drug development, especially when starting from small cohorts of patients. Explainable artificial intelligence (xAI) using formal concept analysis (FCA) as implemented in the KEM platform enables effective analysis of heterogeneous datasets, including small cohorts. KEM systematically explores all variable associations, identifying criteria for patient stratification, surrogate efficacy endpoints, and optimal dose. Examples will be discussed during the presentation.

10:40 Connecting cBioPortal and Open Targets: How to Leverage Both Platforms to Unlock the Full Potential of Your Data

Mirella Kalafati, PhD, Team Leader Genomics and Target Discovery, The Hyve

This project aims to develop an automated pipeline bridging cBioPortal's curated cancer genomics data with Open Targets (OT), facilitating target-disease associations. The pipeline, employing Scala and Python, transforms cBioPortal evidence into OT-compatible scores, effectively integrating evidence into OT with a user-friendly interface. This integration enhances cancer research by enabling a streamlined ranking of drug targets based on advanced genomics, fostering a more interconnected ecosystem for researchers and clinicians.

10:55 Long Read Sequencing and Variant Prioritization of Unexplained Early Onset Colon Cancer Pedigrees

Melissa de la Bastide, Division of Research, Cold Spring Harbor Laboratory

11:10 Thinking through the Models and Data Needed to Answer Your Pharmacogenomics Questions

Benjamin R. Busby, PhD, Director, Solution Science, DNAnexus, Inc.

11:25 Scalable Visual Analytics for Digital Pathology

Robert Krueger, PhD, Senior Research Scientist, Harvard University

With new imaging technology, cancer biology is undergoing a transformation into a digital era. AI has enabled the analysis of such images in unprecedented scale. However, human intervention is essential, as experimental analysis pipelines are rapidly evolving. I will present scalable visual interfaces that integrate machine learning to support biologists and pathologists in their workflows. The approaches help experts to classify cells, find cellular interaction, and annotate cancerous regions.

11:40 Session Q&A with Speakers

Jeffrey A. Rosenfeld, PhD, President, Rosenfeld Consulting

11:55 CO-PRESENTATION: Talk Title to be Announced

Zifo

Ragavi Shanmugam, Senior Bioinformatician, Zifo Technologies, Inc.
Chran Suresh, Scientific Application Consultant, Zifo Technologies, Inc.

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BIOINFORMATICS

Harness Computational Tools and Techniques to Transform Extensive Data into Intelligent Insights, to Advance Pharma R&D

12:10 pm Presentation to be Announced

12:25 Presentation to be Announced

12:40 Presentation to be Announced

12:55 Session Break & Transition to Lunch

1:05 LUNCHEON PRESENTATION: How to Reliably Run Omics Pipelines on AWS Spot Instances with MMCloud
Jing Xie, Sr. Director MMCloud GTM and Partnerships, MemVerge

1:35 Refreshment Break in the Exhibit Hall with Poster Viewing *(Sponsorship Opportunity Available)*

UNRAVELING THE TAPESTRY OF DRUG TARGETS—NAVIGATING DISCORDANCES AND HARNESSING BIG DATA STRATEGIES

2:25 Chairperson's Remarks *(Sponsorship Opportunity Available)*

2:30 Caveat Usor: Data and Annotation Differences between Drug Target Resources
Christopher Southan, PhD, Honorary Fellow, Deanery of Biomedical Sciences, University of Edinburgh

Drug target assessment typically starts with information gathering from major database entries associated with a particular protein. While these generally give a consensus picture, there can be significant differences. This work looked at the BACE1 Alzheimer's target across multiple resources including Open Targets, DrugBank, PubChem, DrugCentral, Pharos, canSAR.ai, and the Human Protein Atlas. Problems of data circularity, consensus reliability, and date divergence for the same targets will be outlined.

3:00 Systems Biology Approaches and Computational Applications in Drug Target Discovery
Lakshmi Kuttippurathu, PhD, Associate Director Computational Biology & Data Sciences, Lexicon Pharmaceuticals, Inc.

Target identification is a critical stage in drug discovery. This talk will highlight two significant aspects of target finding 1) computational techniques can be applied to existing biological and high-throughput omics data to uncover novel drug targets, and 2) application of systems biology approach using bioinformatics methods can aid in understanding the mechanism of action of a specific target or a group of targets.

DECODING COMPLEXITIES: COMPUTATIONAL INSIGHTS INTO ONE HEALTH INTERDEPENDENCIES

3:30 Real-Time Genomics for One Health
Laura Boykin Okalebo, PhD, Senior Scientific Consultant, BioTeam, Inc.

The One Health concept underscores intricate connections between human and environmental health, often not fully grasped. This talk illustrates how real-time genomic analyses offer a revolutionary approach to understanding these complexities. Already globally applied, this disruptive technology enhances genomic sequencing's accessibility and adaptability. Spotlighting real-time studies on various fronts, from zoonotic disease to biodiversity monitoring, the discussion emphasizes critical needs for equitable real-time genomics access within the One Health framework

4:00 Illuminating Disease & Drug Landscapes: Unraveling Data & Insights
Maarten Braspenning, Senior Vice President, Bioinformatics, Excelra Knowledge Solutions Pvt. Ltd.

Amidst BioPharma's evolution, key questions arise in drug discovery, from target selection to preferable modalities that stand out. Understanding disease mechanisms and targets informs indication selection, while biomarkers guide patient stratification for efficacy. Anticipating resistance, researchers seek synergistic combinations. Data richness from sources like GEO and ArrayExpress enriches understanding, yet extracting insights challenges scientists. Delving into metadata extraction and data assets, we navigate the complexities of disease and drug data landscapes.

4:15 Presentation to be Announced *(Sponsorship Opportunity Available)*

4:30 Best of Show Awards Reception in the Exhibit Hall with Poster Viewing *(Sponsorship Opportunity Available)*

5:45 Close of Day

WEDNESDAY, APRIL 17

7:30 am Registration and Morning Coffee

PLENARY KEYNOTE PROGRAM

8:00 Organizer's Remarks
Cindy Crowninshield, Executive Event Director, Cambridge Healthtech Institute

8:05 Innovative Practices Awards
Allison Proffitt, Editorial Director, Bio-IT World

The Innovative Practices Awards recognizes and celebrates technology innovation in the life sciences. Bio-IT World is currently accepting entries for the 2024 Innovative Practices Awards, a competition designed to recognize partnerships and projects pushing our industry forward. For more details about the Awards and to submit an application, visit www.bio-itworldexpo.com/innovativepractices.

8:20 Plenary Keynote Introduction
Deven Atnoor, PhD, Vice President of Scientific Strategy, Clovertex

8:30 PLENARY KEYNOTE PRESENTATION: Lights, Camera, Science: Film and Social Media Influence on Real-World Scientific Progress and Innovation
David Hewlett, Actor/Writer/Director; Creator, The Tech Bandits

David Hewlett has had his share of big screen roles representing science—and science fiction—and he believes it's imperative that the scientific community take back the narrative! With his TechBandits.org, David is meeting this future generation where they are, in schools, on YouTube, and on Twitch, championing real science in all its iterative, messy, exploratory glory, to recruit bright, diverse minds to lead the next generation of real science.

9:45 Coffee Break in the Exhibit Hall with Poster Viewing *(Sponsorship Opportunity Available)*

10:30 Organizer's Remarks

INTEGRATING COMPUTATIONAL PLATFORMS, KNOWLEDGE GRAPHS, AND GENERATIVE AI: UNVEILING SCIENCE INITIATIVES IN DRUG DISCOVERY & DEVELOPMENT

10:35 Chairperson's Remarks *(Sponsorship Opportunity Available)*

BIOINFORMATICS

Harness Computational Tools and Techniques to Transform Extensive Data into Intelligent Insights, to Advance Pharma R&D

10:40 CO-PRESENTATION: Unveiling the Potential of Phytochemicals in Drug Development—Holistic Insights through Digital Twins, *in silico* Design, and Virtual Trials

Priyanka Banerjee, PhD, Principal Investigator & Scientist, Charite University of Medicine, Berlin, Germany

Jaspreet Kaur Dhanjal, PhD, Assistant Professor, Department of Computational Biology, Indraprastha Institute of Information Technology, Delhi

Rajendra Joshi, PhD, Senior Director and Head, High Performance Computing: Medical and Bioinformatics Applications, Centre for Development of Advanced Computing (C-DAC), Pune, India

Cezary Mazurek, PhD, Director, Poznan Supercomputing and Networking Center, Poland

Koninika Ray, PhD, Director, Biomedical Research and Coordinator, Ayurveda Developmental Therapeutic Program (ADTP), Open Health Systems Laboratory (OHSL)

Anil Srivastava, President, Open Health Systems Laboratory (OHSL)

Eric Stahlberg, PhD, Director, Cancer Data Science Initiatives, Cancer Research Technology Program, Frederick National Laboratory for Cancer Research, Rockville, Maryland, USA

Mariano Vazquez, PhD, Co-Founder and CTO, ELEM Biotech, Barcelona, Spain

International Consortium for Technology in Biomedicine (ICTBioMed) was created in 2013 by Open Health Systems Laboratory (OHSL), Poznan Supercomputing and Networking Center (PSNC), and the Centre for Development of Advanced Computing (CDAC) with the purpose of bringing together biomedical researchers on a computational platform for collaborative research. In this session, ICTBioMed team will present some of their ongoing open science projects which would welcome international research partners.

12:10 pm Cause-and-Effect to Empower Drug Discovery in a Generative AI World Biorelate

Daniel Jamieson, CEO, Biorelate

By incorporating cause-and-effect data into knowledge graphs, researchers can access unique insights. The emergence of generative AI technologies has revolutionized the way we interact with data and explore its potential applications in drug discovery. Dr Daniel Jamieson will demonstrate the power of advanced cause-and-effect capturing methods, coupled with generative AI (genAI), in facilitating groundbreaking conclusions for drug discovery.

12:40 Presentation to be Announced *(Sponsorship Opportunity Available)*

1:10 Session Break & Transition to Lunch

1:20 Luncheon Presentation *(Sponsorship Opportunity Available)* **or Enjoy Lunch on Your Own**

1:50 Refreshment Break in the Exhibit Hall with Last Chance Poster Viewing *(Sponsorship Opportunity Available)*

RETHINKING DRUG DEVELOPMENT WITH HUMAN VIRTUAL MODELS

2:30 Chairperson's Remarks

Eric Stahlberg, PhD, Director, Cancer Data Science Initiatives, Cancer Research Technology Program, Frederick National Laboratory for Cancer Research, Rockville, Maryland, USA

2:35 CO-PRESENTATION: Rethinking Drug Development with Human Virtual Models

Priyanka Banerjee, PhD, Principal Investigator & Scientist, Charite University of Medicine, Berlin, Germany

Eric Stahlberg, PhD, Director, Cancer Data Science Initiatives, Cancer Research Technology Program, Frederick National Laboratory for Cancer Research, Rockville, Maryland, USA

Mariano Vazquez, PhD, Co-Founder and CTO, ELEM Biotech, Barcelona, Spain

In the dynamic landscape of life sciences and biomedical IT, the paradigm of drug development is undergoing a transformative shift, marked by the integration of advanced technologies (e.g., Human Virtual Models (HVMs) and AI). By embracing advanced technologies, the life sciences community is poised to accelerate therapeutic breakthroughs, ushering in an era where precision medicine and personalized treatments are not just aspirations but tangible outcomes of innovative biomedical IT strategies.

4:05 Close of Conference

PHARMACEUTICAL R&D INFORMATICS

Drive Precision Medicine through the Digitalization of Pharma R&D

MONDAY, APRIL 15

8:00 am Recommended Pre-Conference Workshops and Symposia*

On Monday, April 15, 2024, Cambridge Healthtech Institute is pleased to offer eight pre-conference Workshops scheduled across three time slots (8:00–10:00 am, 10:30 am–12:30 pm, and 2:00–4:00 pm) and six Symposia from 8:00 am–4:20 pm. All are designed to be instructional, and interactive and provide in-depth information on a specific topic. They allow for one-on-one interaction and provide a great way to explain more technical aspects that would otherwise not be covered during the main conference tracks that take place Tuesday–Wednesday.
*Separate registration required. See details on the Symposia here and details on the Workshops here.

PLENARY KEYNOTE PROGRAM

4:30 Organizer's Remarks

Cindy Crowninshield, Executive Event Director, Cambridge Healthtech Institute

4:35 Plenary Keynote Introduction

WEKA

Speaker to be Announced

4:45 PLENARY KEYNOTE PRESENTATION: Unleashing the Power of Advanced Computing in Biomedical Informatics: A Vision for Transformative Collaboration

Daniel Stanzione, PhD, Executive Director, Texas Advanced Computing Center (TACC)

Embark on a transformative journey with the Texas Advanced Computing Center, where high-performance computing, machine learning, and data analytics converge to revolutionize precision medicine. Through collaborative efforts, we integrate bioinformatics and computational biology, accelerating personalized patient care and drug discovery. Our commitment to user-friendly interfaces ensures accessibility for industry leaders. We are redefining boundaries of life science computing, shaping a future where innovation and collaboration drive breakthroughs in biomedical informatics.

6:00 Welcome Reception in the Exhibit Hall with Poster Viewing
(Sponsorship Opportunity Available)

7:15 Close of Day

TUESDAY, APRIL 16

7:00 am Registration and Morning Coffee

PLENARY KEYNOTE PROGRAM

8:00 Organizer's Remarks

Allison Proffitt, Editorial Director, Bio-IT World

8:05 Keynote Introduction

revvity signals

Josh Bond, Head of Product Management, Product Management, Revvity Signals

8:15 PLENARY KEYNOTE PRESENTATION: Unveiling Tomorrow's Possibilities: Embrace the Power of Digital Twins in Cancer Care and Research

Caroline Chung, MD, MSc, FRCPC, CIP, Vice President, Chief Data Officer and Director of Data Science Development and Implementation of the Institute for Data Science in Oncology, MD Anderson Cancer Center

Explore the transformative potential of digital twins in revolutionizing cancer care and research. Gain insights into how digital twins can help deepen biological understanding, accelerate drug discovery, and personalize therapeutic strategies to optimize treatment outcomes for every individual. Amidst the exciting opportunities are the challenges that must be tackled to harness the power of digital twins to advance precision oncology, empower researchers and clinicians with unprecedented insights, and improve patient outcomes.

9:30 Coffee Break in the Exhibit Hall with Poster Viewing
(Sponsorship Opportunity Available)

10:15 Organizer's Welcome Remarks

BUILDING CONNECTED RESEARCH DATA PLATFORMS TO ENABLE RESEARCH AND DEVELOPMENT

10:20 Chairperson's Remarks

revvity signals

Chris Stumpf, Senior Principal Marketing Professional, Product Marketing, Revvity Signals

10:25 Turning Applications and Platforms into a Product Architecture

Ralph Haffner, Head, Information Products and Data Sciences, Novartis Institutes for BioMedical Research (NIBR)

How can a research informatics unit turn its application landscape into a modern product architecture? This talk will share successes and failures along our journey which hasn't ended yet.

10:55 Building a Connected Research Data Platform from *in vitro* to *in Vivo*

Sean Liu, PhD, Global Head Scientific Assets & Decision Support, R&D IT, Takeda California, Inc.

I will present a Takeda research FAIR data initiative where we are building an end-to-end data platform to support lead identification and validation, *in vivo* PK, PD, tox assessment, and translational research. We started our journey from *in vitro* data and then we extended our effort into animal studies and in-life measurements. Recently, we initiated the effort of building the data infrastructure to support *ex vivo* data.

11:25 How Rebuilding J&J's Small Molecular Discovery Engine Is Informing Its Large Molecule Digital Transformation

Anthony Rowe, PhD, Head, Technology—Global Scientific IT, Johnson & Johnson Technology

11:55 Presentation to be Announced

12:25 pm CO-PRESENTATION: Accelerate Drug Discovery with Secure, Real-Time CRO Collaborations across the DMTA Cycle

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Sabine Ruppel, Vice President, Discovery Research, Ikena Oncology
Tim Cheeseright, CEO, Torx Software

Efficient teamwork across internal teams and external partners is essential to improve productivity across the Design-Make-Test-Analyze (DMTA) cycle. Sabine Ruppel will discuss her experiences identifying and deploying modern, user-friendly technologies to enhance collaborations between chemistry teams and CROs. Considerations include security, scalability, systems integration, and change management. Tim Cheeseright will share how Torx Make (previously chemTraX) has connected chemists and CROs in a chemistry-aware cloud platform for over a decade, addressing key bottlenecks in traditional systems. Together they will explore impact of technology in modernizing processes and collaborations for better insights, a competitive edge, and faster progression through the drug discovery pipeline.

PHARMACEUTICAL R&D INFORMATICS

Drive Precision Medicine through the Digitalization of Pharma R&D

12:40 Focus on Science–Not Data Management–with a Turnkey Integrated Platform

Ralf Felsner, Director Business Development, Sales, Collaborative Drug Discovery

I will discuss my experience working at biotech startups, large pharma, and a CRO and their struggles working without connected research platforms. I will share case studies demonstrating how customers have used CDD vault to help internal and external research teams collaborate, reduce data retrieval times and errors, and manage and present data. I will then highlight examples of how customers have extended the platform via API into their solution ecosystems.

12:55 Session Break & Transition to Lunch

1:05 LUNCHEON PRESENTATION: Enhancing Collaboration between Sponsors and Contract Partners in Drug Discovery

Chris Stumpf, Senior Principal Marketing Professional, Product Marketing, Revvity Signals

In today's drug discovery and development environment, many factors drive the need to outsource some, or even all, of your drug discovery and development workflows to global contractors (e.g., CROs, CDMOs, CMOs, academic labs). This presentation introduces Signals Synergy as a trusted data steward and project management layer for Sponsor and contract partner collaboration and information exchange in drug discovery and development enabling organizations to gain more insight with less oversight.

1:35 Refreshment Break in the Exhibit Hall with Poster Viewing *(Sponsorship Opportunity Available)*

EXPLORING THE ROLE OF AUTOMATION IN RESEARCH AND DECISION-MAKING

2:25 Chairperson's Remarks

James Bonini, PhD, Executive Director, Scientific Business Analysis, R&pD-IT, Regeneron Pharmaceuticals, Inc.

2:30 Chemical Patent Recognition and Analysis with Digital Automation

Yi Lin, PhD, Leader, Head of AI, Data and Digital (AIDD), China Innovation Center of Roche

Chemical patents contain lots of useful chemical structures and help chemists to gain new ideas, while extracting them from images or PDFs is quite challenging. Here we developed a digital end-to-end solution to utilize deep learning and rule-based approaches to recognize and extract chemical structures, integrate an API to do the batch retrieving from the existing database, and build a chemist-friendly web interface for SAR analysis and result downloading.

3:00 Accelerating the Molecule Journey: A Case Study in Automating Molecule Management

Matthieu Croissant, Senior Solution Architect, Roche Pharma

This talk will discuss how a new set of integrated solutions for molecule management and assay requesting brought us toward automated decisions, request automation, real-time tracking, and more collaboration.

LARGE LANGUAGE MODELS: HYPE VS. REALITY IN PHARMA R&D

3:30 PANEL DISCUSSION: Pharma Knowledge Graphs and Large Language Models: Antagonistic or Synergistic?

Moderator: Tom Plasterer, PhD, Director, Bioinformatics, Data Science & AI, Biopharmaceutical R&D, AstraZeneca

While powerful, knowledge graphs require deep expertise to assemble and are challenging to maintain. Conversely, large language models can "learn" from a broad corpus but may hallucinate for under-trained queries. Are these two paradigms incompatible or can they be made synergistic? In 2023, an impromptu expert panel debated the relative benefits/drawbacks of both. A year onwards, substantial synergistic progress occurred. We will debate the landscape's transformation throughout the year.

Panelists:

Benjamin R. Busby, PhD, Director, Solution Science, DNAnexus, Inc.

Helena Deus, PhD, Principal, Technology Consulting, EPAM Systems

Brian Martin, Head of AI, R&D Information Research; Research Fellow, AbbVie, Inc.

4:00 Presentation to be Announced

4:30 Best of Show Awards Reception in the Exhibit Hall with Poster Viewing *(Sponsorship Opportunity Available)*

5:45 Close of Day

WEDNESDAY, APRIL 17

7:30 am Registration and Morning Coffee

PLENARY KEYNOTE PROGRAM

8:00 Organizer's Remarks

Cindy Crowninshield, Executive Event Director, Cambridge Healthtech Institute

8:05 Innovative Practices Awards

Allison Proffitt, Editorial Director, Bio-IT World

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Deven Atnoor, PhD, Vice President of Scientific Strategy, Clovertex

8:30 PLENARY KEYNOTE PRESENTATION: Lights, Camera, Science: Film and Social Media Influence on Real-World Scientific Progress and Innovation

David Hewlett, Actor/Writer/Director; Creator, The Tech Bandits

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9:45 Coffee Break in the Exhibit Hall with Poster Viewing *(Sponsorship Opportunity Available)*

10:30 Organizer's Remarks

CASE STUDIES IN UTILIZING DIGITAL TOOLS TO IMPROVE EFFICIENCY AND INFORM DECISION-MAKING

10:35 Chairperson's Remarks

Speaker to be Announced

PHARMACEUTICAL R&D INFORMATICS

Drive Precision Medicine through the Digitalization of Pharma R&D

10:40 From Ideas to Patients: How AI Is Changing AstraZeneca's Approach to Toxicology

Nick Brown, Executive Director, Imaging & Data Analytics, AstraZeneca

Artificial intelligence offers the ability to not only improve efficiency and reduce costs but also to enhance our ability to detect safety liabilities and mechanistically interpret the signals we identify. This presentation will showcase some of the challenges we face and how we at AstraZeneca are looking to apply AI in toxicology to deliver new medicines to our patients.

11:10 From Lab to Simulation: Unraveling Uncertainties for Enhanced Decision-Making

Andreas Lehmann, PhD, Scientific Associate Director, Digital Sciences, EMD Serono

EMD Serono presents the integration of a self-coded Python application for Design of Experiments in lab experiments, followed by utilization of PBPK modeling to predict drug product performance. This presentation explores a transformative approach that seamlessly integrates digital applications from experimental planning to *in silico* simulations. By leveraging digital tools, researchers can unravel uncertainties, quantify their impact, and gain valuable insights to inform strategic decisions and predictions with increased confidence.

11:40 CO-PRESENTATION: The Evolution of PiG Disco: From the Centralization of HLA Peptide in Groove Data through the Advancements of New Enhancements for Quicker Target Discovery/Validation

Michelle Aponte, Principal Scientific Business Analyst, Regeneron Pharmaceuticals, Inc.

Robert Salzler, Scientist, Bioanalytical & Biomarker Technologies, Regeneron Pharmaceuticals, Inc.

Deciphering the composition of the human immunopeptidome is important to understand the immune system and to guide in the development of next-generation vaccines and immunotherapies against autoimmunity, infectious diseases, and cancers. Mass spectrometry is the only available technology to interrogate the immunopeptidome in an accurate manner, yet we had only had a rudimentary way of searching through all this data. Follow our journey in how we implemented a powerhouse application.

12:10 pm Presentation to be Announced *(Sponsorship Opportunity Available)*

12:25 Advanced Analytics for Accelerating Ion Channel Drug Discovery

Nathan Zahler, PhD, Senior Informatics Scientist, OmniAb, Inc.

High-throughput electrophysiology (HTEP) provides high-content data critical for developing functional antibodies and small molecules targeting ion channels and opportunities to create new therapeutics. For full drug discovery campaigns, complex analysis and QC require large time commitments from Ph.D. scientists. OmniAb's analytics system leverages multiple platforms, custom dashboards and AI/ML for analysis and QC at scale, while maintaining flexibility to rapidly purse new analyses and identify emergent properties in the data.

12:40 Creating your Digital Lab of the Future: Blueprint for Next-Generation Laboratories

Speaker to be Announced

In this presentation, we will explore the essential steps to propel your Lab of the Future (LoTF) vision forward. Our discussion will delve into the primary drivers behind the Lab of the Future trend, encompassing the goals of improving operations, reducing costs, enhancing safety, and accelerating research. We will also focus on the strategic utilization of technology to foster collaboration and innovation within your lab environment. The integration of cutting-edge resources and tools aimed at maximizing scientific research and manufacturing efficiency will be a key aspect of our exploration. Astrix's Digital Lab of the Future (LoTF)™ Blueprint will be introduced, providing insights into the technology architecture and implementation approach crucial for the evolution of your Lab of the Future Strategy. Lastly, we will guide you in creating a comprehensive plan of action, specifically tailored to build a lab informatics strategy. This strategic approach has the potential to transform your Lab of the Future vision into a tangible reality.

1:10 Session Break & Transition to Lunch

1:20 LUNCHEON PRESENTATION: Accelerating Cancer Drug Discovery: g.nome's Impact on Bioinformatic Insights for Benchtop Scientists

Dmitrij Frishman, PhD, Professor for Bioinformatics, School of Life Sciences, Technical University of Munich

Samir Courdy, Senior VP of Informatics, City of Hope Cancer Center

Early decisions during drug discovery determine the success years down the road after hundreds of millions in expenditure. Learn how Almaden Genomics' g.nome® platform accelerates drug discovery by enabling intuitive data exploration and rapid iteration for non-coders. We show how g.nome streamlines colorectal cancer research using Bulk and single-cell RNAseq analyses leveraging curated datasets and advanced visualization tools. This approach significantly enhances early-stage decisions.

1:50 Refreshment Break in the Exhibit Hall with Last Chance Poster Viewing *(Sponsorship Opportunity Available)*

RETHINKING DRUG DEVELOPMENT WITH HUMAN VIRTUAL MODELS

2:30 Chairperson's Remarks

Eric Stahlberg, PhD, Director, Cancer Data Science Initiatives, Cancer Research Technology Program, Frederick National Laboratory for Cancer Research, Rockville, Maryland, USA

2:35 CO-PRESENTATION: Rethinking Drug Development with Human Virtual Models

Priyanka Banerjee, PhD, Principal Investigator & Scientist, Charite University of Medicine, Berlin, Germany

Eric Stahlberg, PhD, Director, Cancer Data Science Initiatives, Cancer Research Technology Program, Frederick National Laboratory for Cancer Research, Rockville, Maryland, USA

Mariano Vazquez, PhD, Co-Founder and CTO, ELEM Biotech, Barcelona, Spain

In the dynamic landscape of life sciences and biomedical IT, the paradigm of drug development is undergoing a transformative shift, marked by the integration of advanced technologies (e.g., Human Virtual Models (HVMs) and AI). By embracing advanced technologies, the life sciences community is poised to accelerate therapeutic breakthroughs, ushering in an era where precision medicine and personalized treatments are not just aspirations but tangible outcomes of innovative biomedical IT strategies.

4:05 Close of Conference

Bio·IT World: VENTURE, INNOVATION & PARTNERING Conference

Wednesday, April 17, 2024
Omni Boston Hotel at the Seaport
Boston, MA
In-Person Only

The Bio-IT World: Venture, Innovation & Partnering Conference—where innovation meets opportunity, and where the future begins today! Join us for an intimate and interactive environment, uniting senior-level investors, corporate leaders, entrepreneurs, start-ups, and strategic providers. Through dynamic panel discussions, we'll explore the crucial trends, challenges, and opportunities in life science informatics. Don't miss your chance to connect, collaborate, and be at the forefront of transformative change!

AGENDA TOPICS INCLUDE:

- Networking: Connect and Collaborate
- Importance of AI/ML in Drug Development and Research
- VC and CEO Perspectives on Raising Capital
- Building a Data Science Organization: Effectiveness and Impact
- Nurturing Innovation: Biotech Incubator Investments
- Investment Lens
- East Coast Biotech Hub—An Investment Powerhouse

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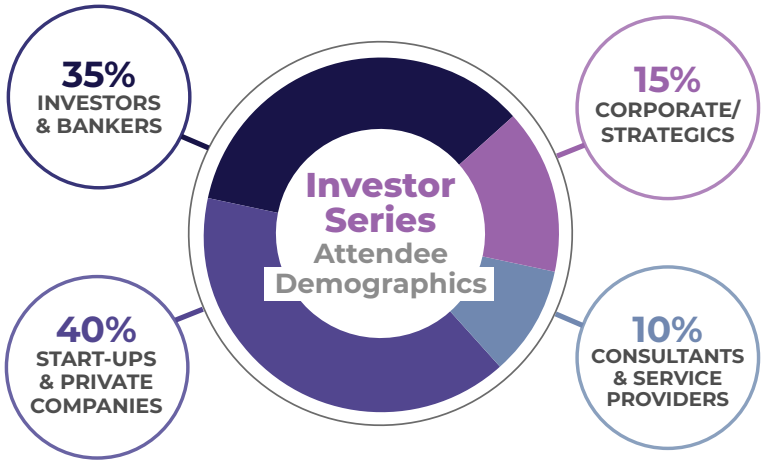

KEY CONTACTS

CONFERENCE CONTENT
Eileen Murphy, MEd
Associate Conference Producer
781-738-0049
emurphy@healthtech.com

PARTNERING & SPONSORSHIP
Brian Caine
Business Development Manager Investor Series
908-809-0946
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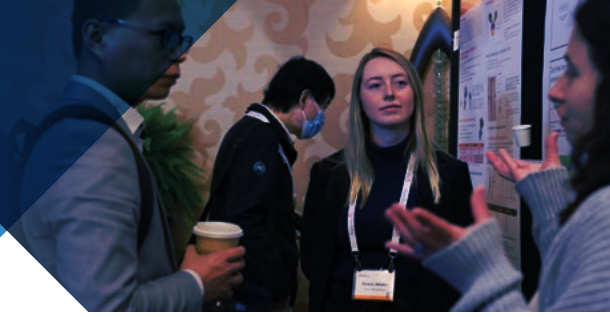

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- Your research will be seen by our international delegation, representing leaders from top pharmaceutical, biotech, academic and government institutions
- Discuss your research and collaborate with other attendees
- Your poster presentation will be published in our conference materials
- Receive $50 off your registration

Cambridge Healthtech Institute encourages attendees to gain further exposure by presenting their work in the poster sessions. To secure an onsite poster board and/or ensure your poster is included in the conference materials, your full submission must be received, and your registration paid in full by **March 8, 2024.**

Register and indicate that you would like to present a poster. Once your registration has been fully processed, we will send an email with a unique link and instructions for submitting your abstract and other materials.

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HOTEL & TRAVEL

Conference Hotel & Venue:

Omni Boston Hotel at the Seaport
50 Summer Street
Boston, MA 02210

Discounted Room Rate:
$329 Artist Tower (single occupancy)
$369 Patron Tower (single or double occupancy)

Discounted Room Rate Cut-Off Date: Friday, March 15, 2024

Cancellation Policy: 14 Days Prior to Arrival.

For more info, go to the travel page at Bio-ITWorldExpo.com ▸▸

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Seaport is a 21st century neighborhood designed for the way people live today. It's fast becoming the most sought-after spot for both Fortune 500s and start-ups to set up shop, one of the top residential areas in the city, and a go-to destination for global travelers.

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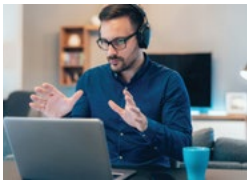

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