SHIMADZU
9TH GLOBAL
PHARMA
SUMMIT 2023
AI-POWERED

The Future Is Present: Into AI-Powered Pharma

Drug discovery and development process can be a slow and painstaking process. But it doesn't have to be – Artificial Intelligence (AI) and Machine Learning (ML) can potentially revolutionize this process by leveraging data-driven insights from vast datasets, allowing for faster development of better medicines that can improve the lives of million of people.

In fact, AI has already demonstrated promising potential, from deciphering complex biological data to identifying possible therapeutic compounds and predicting the safety and effectiveness of potential drugs. This is just the beginning of the AI revolution in the pharmaceutical industry.

With AI also starting to make inroads into personalized medicines and playing an increasingly significant role in various aspects of the pharmaceutical value chain, the future will be shaped by the fusion of AI and Pharma

The term "Pharma 4.0" signifies the rise of digital transformation, integrating digital technologies, data analytics, and automation into pharmaceutical manufacturing and quality control processes. Looking into the future, we may eventually transition into Pharma 5.0, where sustainability would be the core focus amidst the growing environmental awareness.

In this Shimadzu 9th Global Pharma Summit 2023, stay tuned to the insightful presentations and thought-provoking panel discussions as we deep dive into the exciting possibilities that AI can offer. As we gather the industry professionals, global experts, and esteemed speakers to delve into the pharmaceutical landscape, we extend a warm invitation for open collaborations and opportunities with all of you to harness the power of AI.

Join us in paving the way towards AI-Powered Pharma together

Shimadzu 9ᵗʰ Global Pharma Summit 2023 Agenda

23 November, Thursday

Schedule may be subjected to changes

Drug Discovery	
09:00 – 09:10	**Exordium** *Prem Anand, Managing Director, Shimadzu (Asia Pacific) & Corporate Officer, Shimadzu Corporation*
09:10 – 09:20	**Opening Ceremony**
09:20 – 09:30	**Welcome Address** *Yasunori Yamamoto, President & CEO, Shimadzu Corporation*
09:30 – 09:50	**The New Era of Personal and Predictive Bioanalytics** *Dr Kevin Bateman, Associate Vice President, Merck/MSD (Retired)*
09:50 – 10:10	**AI-Driven Peptide and Oligonucleotide Therapeutics** *Shinichiro Fujiie, Director, PeptiStar Inc*
10:10 – 10:30	**Coupling AI Design with Automated Synthesis and Development of Automation Lab** *Andrew Ledgard, Senior Scientist, Exscientia AI Ltd*
10:30 – 10:50	**Shimadzu Living Laboratory: Connect The Next**
10:50 – 11:20	**Refresh & Recharge**

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Pharma 4.0

11:20 – 11:40	**Future Pharma: The Road to AI Transformation** *Higinio P. Porte, Senior VP & Chief Manufacturing Officer, Pascual Laboratories, Inc*
11:40 – 12:00	**Pharma 4.0: The Future Is Now** *Dr Venkatesan Chidambaram Subramanian, Senior Vice President, Gland Pharma Limited*
12:00 – 12:20	**Shimadzu World Lab Network: Sustainable Pharma MoU Signing**
12:20 – 13:20	**Lunch**

Digital Transformation

13:20 – 13:40	**AI Algorithms in Computational Chemistry and Bioinformatics** *Dr Liu Guansai, Vice President, HitGen Inc*
13:40 – 14:00	**Self-Governed Quality Excellence** *Seshasai Kandrakota, President, Caliber Technologies Pvt Limited*
14:00 – 14:45	**AI Kaleidoscope – Marching Towards Pharma 5.0** *Sandy Nargund (Moderator), Andrew Ledgard, Dr Chionh Yok Hian, Fahrizal Dian Nugraha, Dr Kesinee Netsomboon, Dr Kevin Bateman, Dr Pritesh Upadhyay, Dr Rohan Wijesundara*
14:45 – 15:15	**Refresh & Recharge**
15:15 – 16:15	**Experience Shimadzu Living Laboratory**

Wrap Up

16:15 – 16:25	**Token Of Appreciation**
16:25 - 16:35	**Vote Of Thanks** *Masami Tomita, Managing Executive Officer & General Manager, Analytical & Measuring Instruments Division, Shimadzu Corporation*
16:35 – 16:45	**Group Photo Session**

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Welcome Address

It is my pleasure to be here today at the Shimadzu 9th Global Pharma Summit 2023. This is my first time attending, and I'm impressed by the grandness of this event. The presence of industry experts, esteemed speakers, and key opinion leaders here today emphasizes the significance of this Summit.

This year, the Summit is all about AI-Powered Pharma, which is a game-changing solution to address the persistent challenges in the industry. AI holds the potential for faster drug discovery, high-quality manufacturing, and greater efficiency across the entire value chain.

Shimadzu stands here with the dedication to meet your needs in the pharmaceutical industry. With our commitment to pursue the *Well-being of Mankind and the Earth*, we will enhance our unique technological developments to provide the best end-to-end solutions. We pledge to invest in hard work and be the best for our customers.

Throughout the Summit, you will have the opportunity to gain insights from our speakers. They will cover topics such as the power of AI in biopharma, automated synthesis in drug development, and the concept of self-governed quality excellence through AI. I would like to thank the speakers for their invaluable contributions to deepen our customers' knowledge and understanding.

At Shimadzu, we want to overlay Shimadzu and Customer dreams together. Our goal is to become a company that can help achieve dreams. So, let us work together hand-in-hand and make the dream of AI-Powered Pharma a reality.

I hope this Summit will be a memorable experience for you. Thank you all for being with us.

Yasunori Yamamoto

President & CEO
Shimadzu Corporation
Japan

Exordium

We now live in the age of AI, and nowhere are its applications more remarkable than in the pharmaceutical industry, where AI capabilities can bring life-saving drugs and therapies faster to the market.

According to *McKinsey*, more than 50% of global organizations have integrated AI into their operations, in one form or another. From deep learning to machine learning and predictive capabilities, AI is set to remake the pharmaceutical industry.

With this profound transformation in mind, I warmly welcome our distinguished guests and valued partners to the Shimadzu 9th Global Pharma Summit 2023. This Summit is the culmination of 16 years of unwavering dedication, during which we've continuously adapted to meet the ever-evolving demands of the industry. Today, we stand at the forefront of leading-edge technology, transitioning from digitalization to AI-Powered Pharma that will pave the way towards Pharma 5.0.

This is the first-ever Summit to deep dive into AI-Powered Pharma. Shimadzu is not just adapting to the shift in transformative technology; we are pioneering it. Today, more than 200 of you here will gain exclusive insights from our global experts and esteemed speakers, all gathered on this single platform. These valuable insights will offer you unique perspectives that are only available at this Summit.

As we embark on this journey, we will embrace AI and true synergy between Analytical Technologies and Medical Systems to deliver greater patient impact and create enduring value for the society.

Together, let us work towards AI-Powered Pharma and collaboratively enrich people's lives. Thank you very much.

Prem Anand

Managing Director
Shimadzu (Asia Pacific) &
Corporate Officer
Shimadzu Corporation
Singapore

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Executive Message

I would like to express my heartfelt thanks to all of you for joining us at the Shimadzu 9th Global Pharma Summit 2023. This Summit wouldn't be possible without your support, participation, and enthusiasm.

With the theme "AI-Powered Pharma", we will deep dive into the exciting possibilities of AI through the thought-provoking presentations and discussions by our esteemed speakers and industry leaders, which I would like to take this opportunity to thank them for generously sharing their valuable insights.

It is exciting to see how Shimadzu's technologies are contributing to AI-Powered Pharma, particularly the Shimadzu Living Laboratory. Tomorrow, some of you will have the opportunity to explore more during the exclusive lab tour, where you will witness firsthand our end-to-end workflows and AI-driven solutions.

At Shimadzu, we are committed to pushing the boundaries of innovation. We are dedicated in our pursuit of Excellence in Science, and we are excited to work with you towards an AI-Powered Pharma together.

I hope your experience at the Summit will not only be enlightening, but also enriching with the opportunity to build meaningful connections and collaborations.

Once again, thank you for being with us at the Shimadzu 9th Global Pharma Summit 2023. Your presence has made it a grand success!

Masami Tomita

Managing Executive Officer &
General Manager
Analytical & Measuring
Instruments Division
Shimadzu Corporation
Japan

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The New Era of Personal and Predictive Bioanalytics

The ability to forecast future methods and experiments is now made possible with the power of AI. With robust language models built upon well-curated drug quantitation databases, it can enable priori prediction of sample preparation and LC-MS conditions for new molecules before any wet lab experiments are done. Be sure to hear from Dr Bateman as he highlights the game-changing role of AI and machine learning in bioanalysis, where constructed complex models can turn months of method developments into days.

Dr Kevin Bateman

Associate Vice President
Merck/MSD (Retired)
United States

Dr Bateman, with 25+ years in pharmaceuticals, specializes in advancing analytical, automation, and data science in drug discovery. Formerly the Scientific Associate Vice President at Merck Research Laboratories, he drove innovation and capability across the discovery and development pipeline, co-led the AI/ML integration and co-founded the Smart Trials initiative. With 95+ peer-reviewed papers and patents, Dr Bateman retired in 2023 but continues to contribute to the Scientific Advisory Boards.

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AI-Driven Peptide And Oligonucleotide Therapeutics

While peptide and oligonucleotide therapeutics hold promising potential for treatments, they face a notable challenge as the nature of synthesis is time consuming and chemical synthesis risks generating unintended impurities. Tune in to this session as Shinichiro Fujiie explains how PeptiStar collaborates with Shimadzu to streamline the impurity analysis in oligonucleotides. With the established software, the complex task of analyzing, confirming and assessing the safety of those impurities can be easily simplified, effectively addressing the crucial need in this field.

Shinichiro Fujiie

Director
PeptiStar Inc
Japan

Shinichiro Fujiie is the Director of PeptiStar Inc, Japan, a Contract Development and Manufacturing Organization (CDMO), specializing in peptide and oligonucleotide Active Pharmaceutical Ingredients (APIs). Established in 2017, PeptiStar has since quickly established itself as a key player in the pharmaceutical sector, attributing its growth and success partly to the strategic development and operational activities led by Fujiie, who has nearly 23 years of expertise in the pharmaceutical industry.

Coupling AI Design With Automated Synthesis And Development Of Automation Lab

The integration of AI can offer transformative solutions to molecule synthesis, which has long been characterized as a costly, time-consuming, and labour-intensive process. Join Andrew Ledgard as he explores the exciting possibilities brought about by well-designed and connected robotic platforms, combined with AI's predictive capabilities for synthetic pathways and building block reactivity. Get ready to rediscover drug development through fully automated synthesis, analysis, and purification.

Andrew Ledgard
Senior Scientist
Exscientia AI Ltd
United Kingdom

With over 25 years of experience in the pharmaceutical industry, Andrew Ledgard currently holds the role of Senior Scientist and Product Lead at Exscientia AI Ltd where he drives the development of their automated synthesis platform. As the first company to have an AI-designed molecule entering clinical trials, Exscientia AI Ltd seeks to fully automate the pharmaceutical discovery process through the use of AI and robotics, with the aim of significantly shortening the design-make-test-analyze (DMTA) cycle. Andrew is also the inventor of multiple clinical stage molecules to treat Alzheimer's disease and sleep disorders.

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Future Pharma:
The Road To AI Transformation

As the 3rd largest in the ASEAN region, the Philippines pharmaceutical industry is primed for greater growth in the next decade. In this session, hear about the future of AI-Powered Pharma from our distinguished speaker Higinio P. Porte, Vice President of Pascual Laboratories, Inc, which is the nation's 3rd largest local pharmaceutical company. Discover their AI initiatives, from Product Quality Testing using the AI features of Testing Equipment supplied by Shimadzu to the upcoming Auto-Defect Rejection System and the future integration of AI in Product Research and Development (R&D).

Higinio P. Porte

Senior VP and Chief Manufacturing Officer
Pascual Laboratories, Inc
Philippines

Higinio P. Porte, with nearly 37 years in the pharmaceutical and cosmetic industry, is currently leading the Toll Manufacturing Business of Pascual Laboratories, Inc. Over the course of his career, he has held roles as the Division Head for Logistics and Material Management, and at Splash Corporation, where he served as the COO and EVP for Domestic Operations. Beyond his corporate roles, JP serves as the President of the Philippines Pharmaceutical Manufacturers Association, actively contributing to the Advisory Council for the Department of Health (DOH) and Department of Trade and Industry (DTI).

Pharma 4.0: The Future Is Now

The ongoing decline in generic drug prices presents significant challenges for generic drug manufacturers to stay competitive in the market, which makes it crucial to prioritize efficiency and long-term strategies in the business plan. Herein, hear from Dr Venkatesan Chidambaram Subramanian, Senior Vice President of Gland Pharma, as he discusses how Pharma 4.0 can boost productivity, quality, and safety while reducing costs through cutting-edge automation and smart manufacturing. He will also delve into the regulatory challenges in adopting Pharma 4.0, which will be necessary to overcome to achieve greater growth and excellence.

Dr Venkatesan Chidambaram Subramanian

Senior Vice President
Gland Pharma Ltd
India

Dr Venkatesan Chidambaram Subramanian is a seasoned synthetic organic chemist with more than 25 years of involvement in the pharmaceutical sector. Over the course of his career, he has held diverse roles in Research & Development, and he currently serves as the Senior Vice President of R&D at Gland Pharma Ltd in India. His expertise lies in the synthesis and characterization of complex drug substances. Additionally, he also served as a member of the USP Committee of Experts—LMWH (Low Molecular Weight Heparin) for 10 years.

AI Algorithms In Computational Chemistry And Bioinformatics

Discovering new drugs is an increasingly challenging and expensive endeavor, but a promising solution emerges through the integration of DNA-encoded library (DEL) screening and artificial intelligence/machine learning (AI/ML). DEL selection yields large quantities of high-quality data while AI/ML excels in large dataset analysis and deep pattern recognition. Don't miss this session as Dr Liu Guansai elaborates on how DEL+AI/ML can offer a fresh solution to the long-standing challenge of accelerating drug discovery.

Dr Liu Guansai

Vice President
HitGen Inc
China

Dr Liu Guansai, Vice President of HitGen Inc, is a well-versed expert in innovative drug discovery. Acknowledged as a Distinguished Expert of Sichuan Province and Chengdu City, and a recipient of the Distinguished Young Award of High-Tech Zone, Dr Liu holds over 10+ industry experience in early drug discovery and optimization. His expertise also covers DNA-encoded library technology, involving library design, synthesis, and application, and is underscored by a portfolio of over 30 high-impact research papers and a role as co-inventor in over 40 granted patents.

Self-Governed Quality Excellence

In the ever-evolving healthcare and life sciences industries, the need for growth and significance of quality processes has never been more pressing. Join Seshasai Kandrakota to explore the use of AI and ML to achieve data-driven excellence. Furthermore, get actionable tips on fostering a culture of accountability within organizations, along with practical implementation strategies aligning with GxP principles. This presentation is a must-listen for anyone seeking a clear roadmap towards self-governed quality excellence.

Seshasai Kandrakota

President
Caliber Technologies Pvt Limited
India

Seshasai (Sesh) is the President at Caliber Technologies, overseeing Global Business and Client Success. With 29+ years of experience, his expertise includes OT (MES), ERP (SAP), and core Operations and Maintenance. Sesh plays a pivotal role in leading business process-led IT transformations for major global oil companies. As Industry Lead, he drives asset development, innovation, and domain-rich delivery across sectors including Energy, Utilities, Chemicals & Natural Resources, and Products (CGS, Retail, Life Sciences, Travel, Industrial, and Automotive). He is also the QA Director in Sales and Delivery to provide invaluable guidance.

AI Kaleidoscope – Marching Towards Pharma 5.0

In this exclusive panel discussion, our team of industry experts and key opinion leaders will delve into the challenges, solutions, and the journey towards creating an AI-Powered Pharma, as well as the potential for Pharma 5.0.

Our distinguished panel will provide valuable insights that will keep you updated with the latest knowledge to stay ahead of the emerging opportunities in the pharmaceutical landscape.

Sandy Nargund (Moderator)

General Manager, EXPERT Centre, Shimadzu (Asia Pacific), Singapore

Andrew Ledgard

Senior Scientist, Exscientia AI Ltd, United Kingdom

Dr Chionh Yok Hian

Director, Protein Science, GenScript Biotech Pte Ltd, Singapore

Fahrizal Dian Nugraha

QC Sr. Manager, PT Kalbio Global Medika, Indonesia

Dr Kesinee Netsomboon

Deputy Dean, Faculty of Pharmacy, Thammasat University, Thailand

Dr Kevin Bateman

Associate Vice President, Merck/MSD (Retired), United States

Dr Pritesh Upadhyay

Senior Vice President, Lupin Ltd, India

Dr Rohan Wijesundara

CEO, Synergy Pharmaceutical Corporation, Sri Lanka

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Shimadzu World Lab Network: Collaboration For Shared Success

WORLD LAB NETWORK

Over the past 148 years, Shimadzu has formed hundreds of collaborations, partnerships, and Memoranda of Understanding (MoUs) with leading universities and institutions across the globe. It's time to connect globally and combine our technological capabilities together to accelerate global innovations.

In this era marked by unprecedented complexities and rapid advancements, the need for collective effort has never been more critical. Collaboration in the pharmaceutical industry is therefore the key to success and the cornerstone for continuous progress.

By working together, we can leverage our collective knowledge, experience, and resources to overcome the multifaceted challenges that define our times.

In doing so, we can pave the way for a new era of Sustainable Pharma, where cutting-edge technologies and innovative approaches can drive significant advancements.

Let's unite our capabilities and efforts for a common purpose, together towards shared success.

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Shimadzu Living Laboratory: Connect The Next

living laboratory
A Thriving Shimadzu Ecosystem

The first AI-assisted automation laboratory to integrate the leading hardware and all-encompassing software, creating a future-proof laboratory for Analytical Transformation.

Connects Every Part of Laboratory From
Sample Preparation to COA Release

ANALYTICAL INTELLIGENCE

Living Instruments with Advanced Technologies

Living Algorithms for Powerful Data Analysis

Advanced Reporting Tools

Unhindered Data Accessibility

Automation and Integration

Instruments and Software Automation for
Comprehensive Work Flexibility

Work From Anywhere | 2 Days Work Week | Weekend Automation

Balance

Advanced i-Series

Nexis GC

Nexera+LCMS-8060 NX

LabSolutions CS
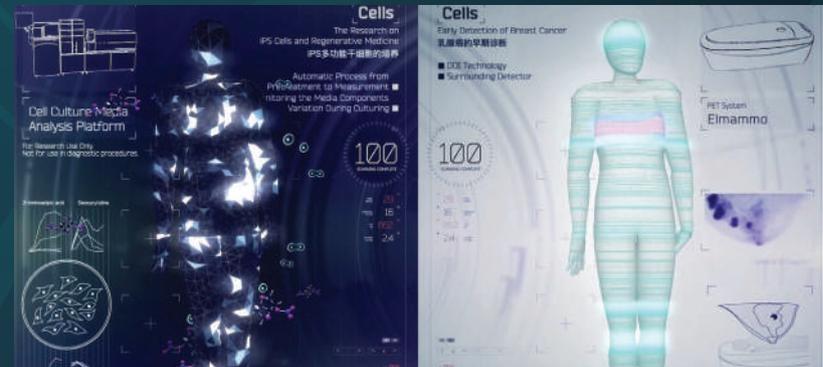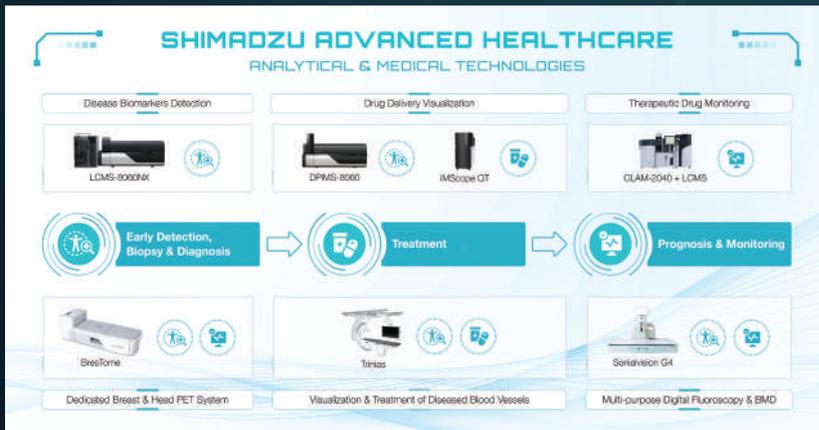
LabSolutions BiX

CaliberLIMS

Peakintelligence™

LabSolutions MD

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Shimadzu Advanced Healthcare: Through Synergetic Innovations

Shimadzu is the only technology company in the world to have Synergistic innovations between Analytical Instruments and Medical Systems.

With the futuristic synergy of these technologies and rich experience in both fields, Shimadzu aims to develop new and unique healthcare solutions with the premise of significantly improving healthcare for all, from disease prevention to early detection, accurate diagnosis, sound treatment, and prognosis monitoring.

Experience the fusion of analytical and medical technology through Shimadzu's 1st interactive display, which responds to your actions, while showcasing Shimadzu's healthcare solutions for different parts of the human body.

Through this hands-on experience, you'll gain a clearer understanding of Shimadzu's contributions to the well-being of mankind through Science and Technology.

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