SHIMADZU 10TH GLOBAL PHARMA SUMMIT 2026

SUSTAINABLE PHARMA 5.0

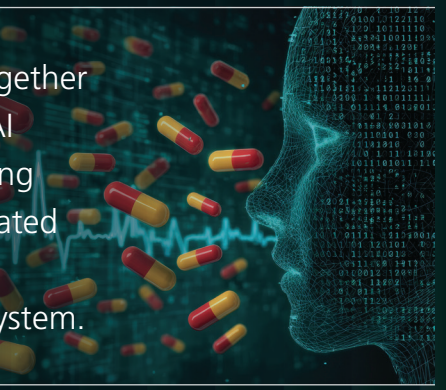


TOWARDS SUSTAINABLE PHARMA 5.0 – THE JOURNEY BEGINS WITH SHIMADZU

The rise of AI opens an exciting path forward — bringing together advanced analytics, intelligent automation, and deep digitalization. This shift arrives at a pivotal moment as companies across the sector face soaring R&D costs, margin pressures, and increasing operational complexity.

According to McKinsey & Company, blockbuster drugs in Pharma are reaching patent expiration, demanding faster innovation and operational agility. For Medtech, modern devices like robotics and connected tools are evolving into complex platforms requiring seamless integration. For Life Science, breakthroughs in cell and gene therapies are driving rapid technological shifts across service pipelines. Facing these combined pressures, companies need practical ways to boost productivity, spur growth, and build resilience. This is where Pharma 5.0 makes the difference.

> “As AI in Pharma evolves, we evolve together with you. Pharma 5.0 drives Agentic AI and robotics to the forefront, combining the power of human insight with elevated technology to unlock a smarter, more sustainable, and patient-focused ecosystem.



Here at the landmark Shimadzu 10th Global Pharma Summit 2026, we invite you to explore how this transformation is taking shape across the entire value chain. Marking nearly two decades of shaping the pharmaceutical industry together, this year’s Summit examines how integrated AI, advanced analytics, automation, and sustainability, paired with human expertise, are accelerating the journey from molecular discovery to industrial production.

Led by our key opinion leaders, our presentations and panel discussions will explore key breakthroughs across the pipeline — from peptide and oligonucleotide innovation to fully human antibody discovery, and from high-throughput experimentation and continuous manufacturing to digital regulatory processes. Together, we will showcase how these emerging technologies turn complex therapeutic concepts into viable, scalable, and sustainable medicines. Let us embrace Sustainable Pharma 5.0 together.

SHIMADZU 10TH GLOBAL PHARMA SUMMIT 2026 AGENDA

**Schedule may be subject to changes*

20 November 2026, Friday	
08:20	Registration
09:00	Exordium *Prem Anand, Managing Director, Shimadzu (Asia Pacific), Singapore*
09:10	Opening Ceremony
09:20	Welcome Address *Yasunori Yamamoto, President & CEO, Shimadzu Corporation, Japan*
Pharma 5.0	
09:30	Navigating Pharma 5.0: Human-Centric AI, Sustainability, And Personalized Therapies For Global Health *Satish Reddy, Chairman, Dr Reddy's Laboratories, India*
09:50	Toward True Real-Time Release: Automated Online SFE-SFC In Continuous Pharmaceutical Manufacturing *Núria Canal Paulí, Business & Operations Leader, Research Center Pharma Engineering (RCPE), Austria*
10:10	High-Throughput Robotic Workflows: The Future Of Pharmaceutical Process Development *Hirohito Kai, Head Of Process Technology Exploration, Astellas Pharma, Japan*
10:30	Tea Break

Sustainable By Design: Small & Large Molecules (R&D And Manufacturing)	
11:00	Pharma 5.0 In Emerging Asian Economies: Transforming Pharmaceutical Manufacturing Through Automation *Maria Rosario B. Barangan, Vice President (Manufacturing), Chairperson Of ISPE, E.L. Laboratories, Inc., Philippines*
11:20	From Resource Scaling To Intelligence Scaling: Towards More Sustainable Clinical Trials *Dr Venu Madhav, Chief Operating Officer (COO), Veeda Lifesciences, India*
11:40	Group Photo Session
12:00	Lunch Break
Advanced Modality And Complex/Personalized Therapeutics (CGT)	
13:00	From Molecule To Industry: Integrated Peptide And Oligonucleotide Innovation Driven By Advanced Analytics And AI *Dr Fabio Barros, Chief Scientific Officer (CSO), Rio BioPharma Brasil, Brazil*
13:20	Accelerating Antibody Discovery Through AI And Integrated Automation *Dr Yanan Guo, Vice President (Antibody Therapeutic R&D), Biocytogen Pharmaceuticals, China*
Sustainability	
13:40	Your Sustainable Journey Towards Excellence In Science: ① Living Laboratory ② LabTotal ③ Advanced Healthcare
14:20	Tea Break
14:50	Panel Discussion: Discovery To Impact *Moderated By Sandy Nargund, General Manager, EXPERT Centre, Shimadzu (Asia Pacific), Singapore*
15:30	Thought Leaders' Perspectives
Wrap Up	
16:05	Token Of Appreciation
16:15	Vote Of Thanks *Masami Tomita, Managing Executive Officer & General Manager, Analytical & Measuring Instruments Division, Shimadzu Corporation, Japan*

WELCOME ADDRESS

First of all, I would like to show my sincere gratitude for your participation at the Shimadzu 10th Global Pharma Summit 2026. It is my great honour to welcome all of you.

I am truly pleased to have this valuable opportunity for global experts, industry leaders, and all of us to come together to explore emerging industry trends, exchange insights on transformative technologies across the pharmaceutical landscape such as AI, and Shimadzu's latest innovations.

With the theme of Sustainable Pharma 5.0, at this Summit, we expect to discuss in depth critical topics, including sustainable-by-design small and large molecules, advanced modalities, and complex, personalized cell and gene therapies.

While Pharma 4.0 focused on leveraging digital connectivity to streamline production, Pharma 5.0 will a far more comprehensive model — prioritizing meaningful integration between human expertise and AI capabilities, which is expected to shape the future of pharma to be more patient-focused, human-centric, and sustainability-driven.

It is our mission to embrace the possibility of these groundbreaking technologies to realize a brighter future, as reflected in our management principle "Realizing Our Wishes for the Well-being of Mankind and the Earth".

In today's uncertain world, Shimadzu wants to be the best for you, for our customers. We strive to respond to your every need, honouring the enduring spirit of our founder Genzo Shimadzu, "We will gladly undertake the manufacture of whatsoever you may want to have."

As your technology-driven, trustful partner, we look forward to working closely with you to provide end-to-end solutions. Together, let's pursue Planetary Health for a sustainable future.

Thank you very much.



Yasunori Yamamoto

President & CEO
Shimadzu Corporation
Japan

EXORDIUM

Welcome to the Shimadzu 10th Global Pharma Summit 2026, our biggest flagship event yet!

2007 was the year we held our very first Summit. Today, we mark a powerful turning point as we convene for our 10th edition.

Over nearly two decades, this exclusive platform has grown from strength to strength, delivering firsthand insights to help our customers stay ahead in an increasingly competitive pharmaceutical landscape.

Your incredible trust, confidence, and continued support have brought us to this defining moment, and for that, we extend our heartfelt appreciation.

This achievement would not be possible without all of you.

To echo this year's theme of Sustainable Pharma 5.0, we are thrilled to feature a very special guest: a Humanoid Robot. This exciting highlight will showcase the essence of Pharma 5.0, demonstrating how human expertise and AI capabilities will be seamlessly integrated as one.

And that's just the beginning. For the first time, we are presenting our comprehensive LabTotal portfolio — alongside our value chain partners — to help you *Own the Bench*. Along with the Shimadzu Living Laboratory, our goal is to Accelerate Your Sustainable Journey Towards Excellence in Science. All of these will be brought to life at our dedicated Customer Experience Zone, so come see it live for yourself!

Throughout your time at this Summit, you will also witness true synergy between our Analytical Technologies and Medical Systems, with AI driving towards Advanced Healthcare.

Shimadzu is the gateway for precision technology from Asia to the world. Let's get ready to immerse yourself in an unforgettable experience right here today, packed with Shimadzu's proprietary innovations, signature hospitality, and an incredible customer experience.

Thank you very much.

Prem Anand

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



NAVIGATING PHARMA 5.0: HUMAN-CENTRIC AI, SUSTAINABILITY, AND PERSONALIZED THERAPIES FOR GLOBAL HEALTH

The global pharmaceutical landscape is undergoing a paradigm shift toward Pharma 5.0, driven by patent cliffs, supply chain realignments, and the convergence of AI and advanced biologics. While Pharma 4.0 prioritized automation and digitalization, Pharma 5.0 shifts the focus towards human-AI collaboration, combining scientific expertise with computational power to build sustainable, patient-centric ecosystems.

This keynote address by Satish Reddy explores how evolving dynamics in trade, technology, regulatory frameworks, and capital flows create a decisive window for major manufacturing leaders, anchored by global powerhouses like India — Pharmacy Of The World — to move beyond volume-driven production and pioneer high-value, next-generation pipelines.



Satish Reddy

Chairman,
Dr Reddy's Laboratories,
India

As Chairman of Dr Reddy's Laboratories, Satish Reddy transformed the company from an API manufacturer into a global leader across 70+ nations. Recognized as a World Economic Forum Young Global Leader, he spearheads the company's push toward innovation, digital transformation, and sustainable care. Beyond corporate leadership, Satish actively shapes global policy — having led key national committees during India's G20 Presidency. Having a background in Medicinal Chemistry, he also chairs the Dr Reddy's Foundation, driving broad social impact worldwide.

TOWARD TRUE REAL-TIME RELEASE: AUTOMATED ONLINE SFE-SFC IN CONTINUOUS PHARMACEUTICAL MANUFACTURING

Modern biopharma facilities increasingly rely on real-time quality monitoring to realize the human-centric, highly automated vision of Pharma 5.0. To address this need, Núria Canal Paulí presents an automated PAT solution integrating online supercritical fluid extraction with supercritical fluid chromatography (SFE-SFC) for continuous direct compression lines.

Designed to overcome conventional spectroscopic PAT limitations, intact tablets containing low-concentration montelukast and cetirizine hydrochloride are sampled directly into a Shimadzu Nexera UC system without offline preparation. Achieving a sub-ten-minute cycle time, the approach enables simultaneous API quantification, proving online SFE-SFC's capacity to enable real-time monitoring of robust, low-dose continuous manufacturing control.



Núria Canal Paulí

Business & Operations Leader,
Research Center Pharma Engineering (RCPE),
Austria

Núria Canal Paulí leads the Next-Generation Manufacturing area at RCPE in Graz, Austria, guiding multidisciplinary teams across continuous manufacturing, PAT, and particle engineering. Drawing on over a decade of pharmaceutical and medical device experience at companies like Beiersdorf and Zoetis, she bridges technical R&D with operational execution. A certified Project Management Professional and Lean Six Sigma Black Belt holding degrees in Chemical Engineering and Molecular Biotechnology, Núria specializes in translating advanced science into scalable pharma manufacturing solutions.

HIGH-THROUGHPUT ROBOTIC WORKFLOWS: THE FUTURE OF PHARMACEUTICAL PROCESS DEVELOPMENT

Shimadzu Corporation and Astellas Pharma jointly developed "AtmosOrchestra", a robotic High-Throughput Experimentation (HTE) automation system designed to eliminate manual experimental bottlenecks in small molecule synthesis workflows.

Join Hirohito Kai as he highlights two transformational initiatives accelerating data-driven CMC (Chemistry, Manufacturing, and Controls) development: an automated HTE platform enabling high-throughput reaction screening for small-molecule process development, and the Future Lab initiative for biologics integrating laboratory automation, advanced analytical capabilities, and scalable experimental workflows. Together, these initiatives aim to enhance experimental efficiency, deepen process understanding, and create a more connected and scalable foundation for future pharmaceutical development.



Hirohito Kai

Head Of Process Technology Exploration,
Astellas Pharma
Japan

Hirohito Kai is Head of Process Technology Exploration, Technology Scouting & Integration Labs at Astellas Pharma, Japan. With over 20 years of experience across drug discovery, viral vectors, and CMC development, he evaluates and implements emerging technologies to advance data-driven CMC development. His focus spans laboratory automation, High-Throughput Experimentation (HTE), data science, and digital transformation, driving operational efficiency, deeper process understanding, and next-generation innovation across pharmaceutical process development.

PHARMA 5.0 IN EMERGING ASIAN ECONOMIES: TRANSFORMING PHARMACEUTICAL MANUFACTURING THROUGH AUTOMATION

What does Pharma 5.0 mean for emerging APAC markets? Herein, Maria Rosario B. Barangan explores how Pharma 5.0 opens a decisive window for regional economies — including Indonesia, Vietnam, Thailand, and the Philippines — to shift towards high-value, capability-based manufacturing.

As global firms diversify away from single-source hubs, this presents a valuable opportunity for APAC economies to deepen integration into the global pharmaceutical value chain by embracing deep-tech innovations. However, implementation requires overcoming challenges in investment, infrastructure, cybersecurity, regulation, and workforce capability. Ultimately, adopting Pharma 5.0 will strengthen regional competitiveness, supply-chain resilience, medicine security, and the broader global ecosystem.



Maria Rosario B. Barangan

Vice President (Manufacturing), Chairperson Of ISPE, E.L. Laboratories, Inc., Philippines

As Vice President for Manufacturing at E.L. Laboratories, Maria Rosario B. Barangan brings over 35 years of expertise in pharmaceutical manufacturing and GMP compliance. She chairs the International Society for Pharmaceutical Engineering (ISPE) Asia Pacific Affiliates Council and serves as Vice President of the ISPE Philippines Affiliate. Beyond corporate leadership, Maria shapes the industry as a Professorial Lecturer at the University of the Philippines Manila College of Pharmacy, advancing manufacturing capability, quality excellence, and competitiveness across emerging Asian markets.

FROM RESOURCE SCALING TO INTELLIGENCE SCALING: TOWARDS MORE SUSTAINABLE CLINICAL TRIALS

Traditional clinical research models scale through people, yet rising complexity and data volumes demand a new approach. Herein, Dr Venu Madhav, unpacks the evolution towards an intelligence-scaled Contract Research Organization (CRO), where AI transforms feasibility, patient identification, site selection, and clinical trial operations.

With hospital electronic medical records linked to AI-driven insights and digital platforms, a continuous learning ecosystem is established across trials and outcomes. Such clinical sustainability drives efficiency, reduces patient burden, and optimizes resources to reduce waste and consumption — enabling research to achieve more with less. This session highlights the indispensable role of human intelligence alongside AI, bringing together intelligence, efficiency, and sustainability to deliver responsible and scalable clinical research.



Dr Venu Madhav
Chief Operating Officer (COO),
Veeda Lifesciences,
India

Dr Venu Madhav, is Chief Operating Officer for Healthy Volunteer Services at Veeda Group. With over 25 years of pharma and CRO experience at organizations like Ranbaxy and Sun Pharma, he has demonstrated deep expertise in executing bio studies from pilot to pivotal stages across diverse formulations, including injectables, nasal sprays, topicals, and conventional dosage forms. Holding a Ph.D. in Pharmacy with an MBA in Finance, Dr Madhav has guided Veeda's leadership for more than a decade. He regularly navigates complex global regulatory frameworks, driving clinical compliance and operational excellence across major international markets.

FROM MOLECULE TO INDUSTRY: INTEGRATED PEPTIDE AND OLIGONUCLEOTIDE INNOVATION DRIVEN BY ADVANCED ANALYTICS AND AI

An integrated approach combining advanced science, scalable manufacturing, AI, and high-performance analytics accelerates complex therapeutics like GLP-1 peptides and oligonucleotides. RBBL and INVi deliver an end-to-end platform bridging molecular design, analytical characterization, formulation, manufacturing, and regulatory strategy, with liraglutide and semaglutide case studies demonstrating efficient, robust, and compliant development. Enhanced through AI-driven discovery, predictive modeling, and strategic collaborations, the platform utilizes Shimadzu's LC, LC-MS/MS, and MALDI technologies for precise structural characterization, impurity profiling, stability, and bioanalysis. Together, this seamless synergy drives a sustainable innovation engine — from initial discovery straight to industrial-scale production.



Dr Fabio Barros

Chief Scientific Officer (CSO),
Rio BioPharma Brasil,
Brazil

As Executive Scientific Director at Rio Biofarma Brasil (part of EMS Group), Dr Fabio Barros leads complex drug development — spanning biologics, GLP-1 peptides, and drug-device combinations. Backed by extensive expertise in bioanalytical sciences and regulatory strategy (ANVISA, FDA, EMA), he bridges scientific innovation with industrial execution.
Dr Barros drives state-of-the-art analytical solutions and global technology partnerships, expanding high-complexity manufacturing capabilities while accelerating next-generation pharmaceutical development from translational R&D through full commercial deployment.

ACCELERATING ANTIBODY DISCOVERY THROUGH AI AND INTEGRATED AUTOMATION

Biocytogen has established an integrated R&D ecosystem spanning target discovery, large-scale generation of fully human antibodies, in vivo pharmacology, and IND-enabling studies. Coupled with translational research and global regulatory expertise, this end-to-end framework accelerates therapeutic programs while reducing development timelines and complexity.

Building on this foundation, Dr Yanan Guo demonstrates how Biocytogen incorporates AI-driven discovery and laboratory automation to optimize candidate selection, improve workflow reproducibility, and enhance data-driven decision-making. With the convergence of integrated discovery platforms, AI, and automation, pharma R&D is now evolving into a more efficient, scalable, and future-ready model for global therapeutic development.



Dr Yanan Guo

Vice President (Antibody Therapeutic R&D),
Biocytogen Pharmaceuticals,
China

Dr Yanan Guo brings over 12 years of biotherapeutic expertise to her role as Vice President of Antibody Therapeutic R&D at Biocytogen. She leads end-to-end antibody discovery and development programs — from target validation and candidate optimization through IND-enabling studies. Bridging scientific innovation with translational execution, she has guided multiple novel antibody pipelines into clinical trials, driving the expansion of next-generation biotherapeutic medicines and robust R&D ecosystems.

PANEL DISCUSSION: FROM DISCOVERY TO IMPACT

AI and automation are reshaping the pharmaceutical journey from discovery to impact. This panel discussion will explore how these advances can accelerate innovation, strengthen quality, and translate scientific progress into accessible and affordable healthcare solutions.



Sandy Nargund
(Moderator)
General Manager,
EXPERT Centre, Shimadzu
(Asia Pacific), Singapore



Elvis Andrade
Manager, R&D,
Prati Donaduzzi,
Brazil



Dr Anita Shripat Desai
Head Of Department,
Formulation Analytical Laboratory,
Cipla Ltd, India



Jayakumar Assanparampil Vasudevan Pillai
President - Quality
Ajanta Pharma Ltd, India



Dr Hai Long Zhang
Senior Analytical Research
Manager, Roquette
Asia Pacific, Singapore

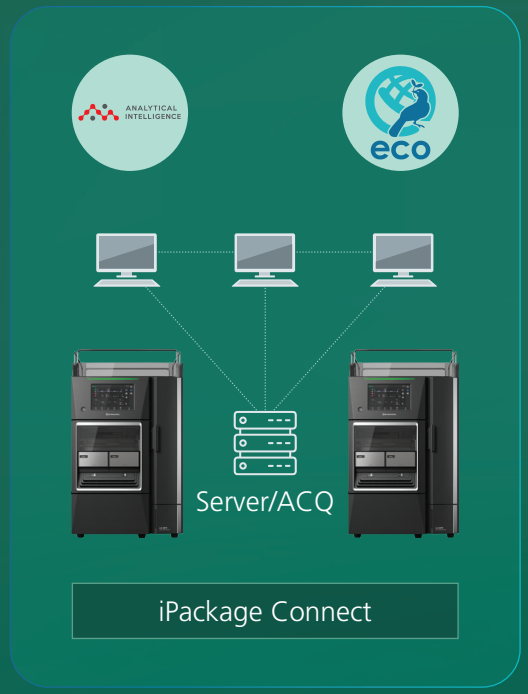


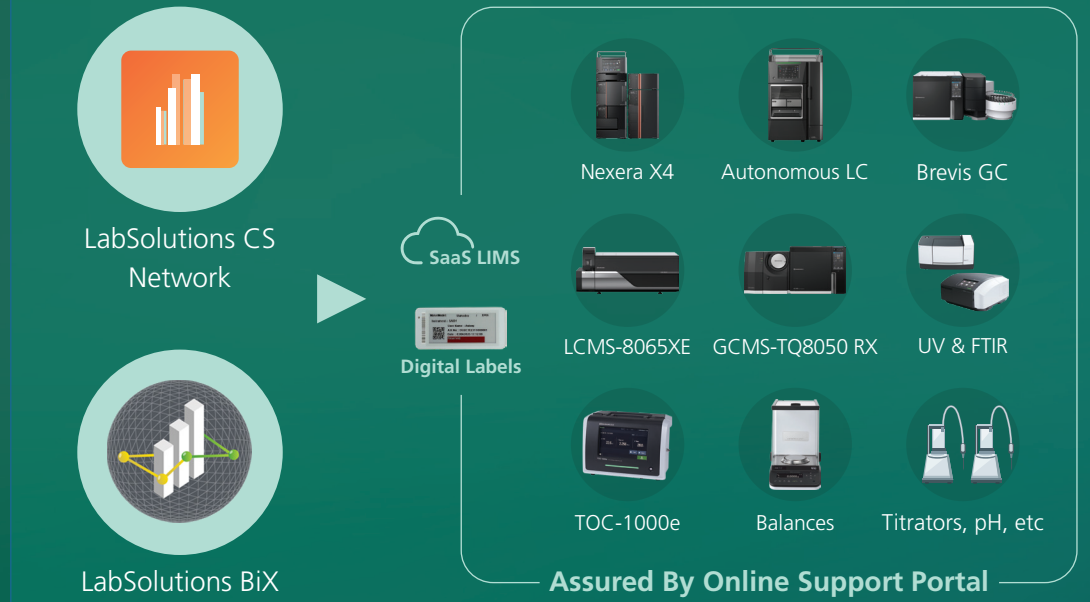
Lalana Setasubun
Senior Vice President,
Berlin Pharmaceutical
Industry Co Ltd, Thailand



Dr Gia Phong Vu
CSO Of Boston Pharma VN
Joint Stock Company, Boston
Pharma Company, Vietnam

SHIMADZU LIVING LABORATORY: WORLD'S FIRST AND ONLY INTEGRATED AI LABORATORY ECOSYSTEM





World's First And Only Integrated AI Laboratory Ecosystem

Scaling Up Through Connecting Multiple Lab Workflows

living laboratory

The first AI-powered, end-to-end intelligent laboratory — integrating advanced analytical hardware, connected software, intelligent automation, and next-generation AI technologies to create a truly Autonomous, Adaptive, Eco-Transformative and Future-Ready Laboratory.

Every Routine Lab Can Be A Living Laboratory.
Supporting Every Stage Of Customer Journey From Start Up To Enterprise Companies

Caliber
Deliver More. Deliver Excellence



BiX BoT (AI)

Enterprise LIMS
QA Suite (EPIQ)

BRM, eLogBook
APQR

- LabSolutions Sync
- LabSolutions Detect
- Peakintelligence
- LabSolutions MD

Robotics

Autonomous

Agentic AI

Method Intelligence

AI Mastery With Automation

Leadership With Autonomous Lab (AX)

BUILDING AN AI LABORATORY WITH TRUSTED SERVICE

Enabling modern laboratories from **Workflow Setup** to **Peak Operations**, **LabTotal** unifies core essential products and proactive service into a single, seamless solution. As your **go-to lab curator**, we supply critical analytical consumables and workflow-enabling products to address your needs, all while safeguarding your laboratory operations with service excellence.



WorkFlow Curation

First-Time-Right Analysis

Eliminates analytical trial-and-error, ensuring baseline purity and uncompromised sample integrity across the runs.

High-Performance Essentials

Jump-start kits and laboratory necessities for everyday lab bench, designed for straightforward onboarding and frictionless integration.

SHIMADZU LabTotal

Continuous Operations With A Peace Of Mind

Maximize Uptime:

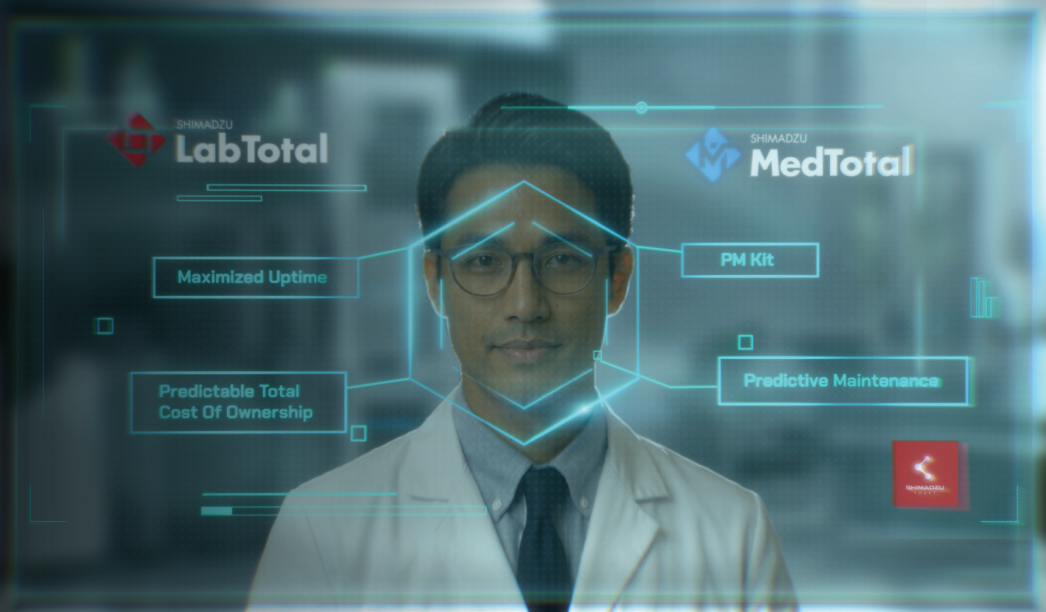
Proactive maintenance and fast-acting support for uninterrupted lab workflows.

Peak Performance From Day 1:

Comprehensive protection plans featuring Standard PM Kits, Extended Warranties, and tailored Service Contracts.

Trusted Expertise:

Backed by an extensive support network of over 1,000 Shimadzu engineers across Asia.



ADVANCED HEALTHCARE CONNECTS WHAT WE SEE WITH WHAT WE MEASURE



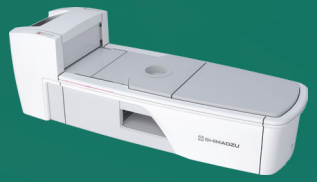
AGEs Sensor

Health Screening
Data Collection



iMScope™ QT

Multiomics And Drug
Delivery Visualization



BresTome

Dedicated Breast &
Head PET System



MobileDaRt Evolution MX9

Digital Radiography Mobile
X-ray System



LCMS-8060NX

Metabolites, Vitamins And
Minerals Analysis



CLAM-2040 + LCMS-QTOF

Therapeutic Drug
Monitoring

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

By combining medical imaging with analytical analyses, Shimadzu helps pharma researchers link phenotype to molecular biology — enabling deeper understanding of disease, treatment response and therapeutic development.







Health Data Collection

Therapeutic Monitoring

Quantitative Bioanalysis

Biomarker Discovery

Diagnostic Imaging/ Assessment

ADVANCED HEALTHCARE

FASTER Decisions | **STRONGER** Evidence | **CONNECTED** Workflows

COMPLETING YOUR WORKFLOW WITH SPECIALIZED STANDARDS

Stable Isotope-Labelled Standards For Confident Quantitation

Shimadzu Chemistry & Diagnostics (SCHD) provides highly pure stable isotope-labelled building blocks, APIs, metabolites and reference standards for pharmaceutical research and bioanalysis. These specialized standards complement Shimadzu LC-MS workflows by supporting reliable identification and quantitative analysis, with product quality controlled from R&D and manufacturing through to final delivery.

Expertise In Carbon-13 Labelling

Carbon-13-labelled compounds provide high-quality internal standards for demanding quantitative applications. Compared with deuterium-labelled alternatives, Carbon-13 labelling avoids deuterium-hydrogen exchange and can provide high isotopic enrichment. SCHD applies its Carbon-13 "Gold Standard" labelling expertise to deliver consistent compound quality for mass spectrometry analysis.



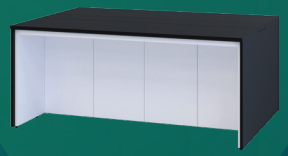
Custom Synthesis For Pharmaceutical R&D

Where a suitable labelled compound is not available from the standard catalogue, SCHD offers custom synthesis and strategic isotope positioning for pharmaceutical intermediates, reference standards, metabolites, peptides and biologically active molecules. This extends the Shimadzu proposition beyond instrumentation to the specialized standards needed to complete the analytical workflow.

ARCHITECTING SUSTAINABLE PHARMA 5.0 LABS: FROM LAYOUT STRATEGY TO BENCH MANUFACTURING

SHIM-Lab

Designed in Japan
Made in India
Serving the World



SHIF-SNL



SHIF-SNL-CA



SHIF-SNL-BF4

Designed for long-term sustainability, **SHIM-L∞B** laboratory environments feature high-quality steel benches with excellent chemical resistance and durability.

01 Laboratory Space Assessment

02 Laboratory Benchwork Proposal

03 2D & 3D Spatial Layout Design

04 Manufacturing Lab Bench Based On Layout & Specifications

SHIMADZU

Excellence in Science