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# PharmaBio World

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**Registered Office:** 26, Maker Chambers VI, 2nd Floor, Nariman Point, Mumbai 400 021, INDIA.
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E-mail: sales@jasubhai.com

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## Bio-Economy is going to spearhead India's future growth story: Dr Jitendra Singh

**New Delhi, India:** "Bio-Economy and Space Economy are going to spearhead India's future growth story" says Union Minister Dr. Jitendra Singh at the launch of 'Impact Report 2024' on National Biopharma Mission at the National Biopharma Mission Conclave celebrating its 5 years journey at the Dr. Ambedkar International Centre.

Union Minister of State (Independent Charge) for Science and Technology, Minister of State (Independent Charge) for Earth Sciences, MoS PMO, Department of Atomic Energy, Department of Space, Personnel, Public Grievances and Pensions, Dr. Jitendra Singh recalled the journey of National Biopharma Mission since its inception along with Biotechnology Industry Research Assistance Council (BIRAC) "National Biopharma Mission (NBM) is Celebrating 5 Years of Pioneering Success" and called it a milestone.

The National Biopharma Mission (NBM)- Innovate in India (I3) is an Industry-Academia Collaborative Mission for Accelerating Discovery Research for development of Bio-pharmaceuticals. BIRAC has the mandate to enable and nurture an ecosystem for preparing India's technological and product development capabilities in bio pharmaceuticals, vaccines, biosimilars, medical devices and diagnostics. The project was sanctioned with a total cost US$ 250 million which is 50% co-funded by the World Bank. Today nearly 150 organizations and 300 MSME's are being benefited from the programme.

Underscoring the impact of Bio-technology, Dr. Singh highlighted that India's bio-economy has grown 13 fold in the last 10 years from $10 billion in 2014 to over $130 billion in 2024.It is projected to reach US$300 billion by 2030. He said "India which ranked 81 in 2015, has risen to 40th rank out of 132 economies in the Global Innovation Index".

Dr. Jitendra Singh mentioned some contributions of NBM such as India's first MRI scanner, first DNA vaccine for Covid ZyCoV-D and India's first Injectable Non-Insulin Antihyperglycemic Biosimilar for type 2-diabetes (liraglutide) during his speech.

The science and Technology Minister shared that NBM has established 21 shared infrastructure facilities for research services and biomanufacturing. These facilities were also leveraged for the COVID vaccine trials during the pandemic and are an important step towards India @2047, saving both cost & time. He also said the existing gaps in biopharmaceutical product development pipeline, National Biopharma Mission has supported more than 200 grantees in three main domains: Vaccines, Biotherapeutics & Medical Devices and Diagnostics while also strengthening the ecosystem. The Mission has introduced over 18 successful products to the market including vaccines, biotherapeutics, medical devices, and diagnostic kits.

According to the Minister Seven technology transfer offices across the nation to support intellectual property management frameworks, training programs and skill development have been established and over 450 Intellectual Property rights awareness campaigns were organized and over 25 technologies have been licensed to industry worth several crore.

Dr.Jitendra Singh remarked the mission as game changer and said that NBM has made the India Biopharma sector globally competitive and addressed unmet medical needs in India. "Even the World Bank has recognized NBM as a hidden jewel in its portfolio." Dr. Singh. According to the minister two things are vital for any StartUP to take off first is Early industry linkage and another not limiting it with government resources and leaving the skepticism that StartUP means IT.

In his address, Dr. Jitendra Singh also highlighted the Genome India Flagship Programme of 10,000 Genome Sequencing and stated that is going to determine the future healthcare strategies across the world, both therapeutically and prophylactically.

## Govt waives clinical trials for drugs approved in major Western markets

**New Delhi, India:** The central government has decided to waive the requirement for some clinical trials in India if the drugs are approved in the United States, United Kingdom, Japan, Australia, Canada, and the European Union, the Central Drugs Standard Control Organisation (CDSCO) said in a circular.

The order said, "As per Rule 101 of New Drugs and Clinical Trials Rules, 2019, the central government has permitted the waiver of "local clinical trials" for approval of new drugs."

These categories are orphan drugs for rare diseases, gene and cellular therapy products, new drugs used in pandemic situations, new drugs used for special defence purposes, and new drugs having significant therapeutic advances over the current standard care.

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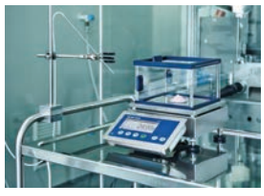

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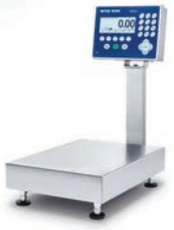

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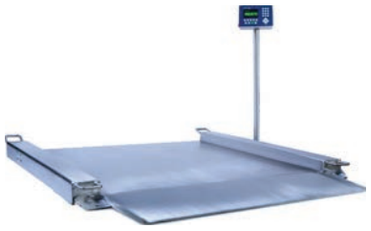

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Anil Matai, Director General, Organisation of Pharmaceutical Producers of India (OPPI) stated, "We welcome the Government of India's decision to notify the list of countries under Rule 101 of the New Drugs and Clinical Trial Rules, 2019 that would, subject to other conditions, enable waiver of the requirements of local clinical trials for several drugs if already approved in well-regulated markets, including the USA, UK, Japan, Australia, Canada, and the EU. This progressive move will significantly benefit both domestic and foreign drug manufacturers by expediting the approval process and facilitating faster access to essential medications for Indian patients."

"OPPI has been advocating for this notification, recognizing its potential to transform both, the pharmaceuticals, and the healthcare landscape in India. The inclusion of specific categories like orphan drugs for rare diseases, gene and cellular therapy products, new drugs used in pandemic situations, those for special defense purposes and new drugs with significant therapeutic advance over the current standard care would address critical and unmet medical needs. This strategic alignment is particularly crucial for accelerating access to innovative therapies to the patients in India, stated Anil Matai.

## CDSCO along with State Drugs Controllers conducts risk-based inspections of 400 premises including MSMEs

**New Delhi, India:** In order to assess the regulatory compliance of drug manufacturing premises in the country, the Central Drugs Standard Control Organization along with State Drugs Controllers (SDCs) have conducted risk-based inspections of 400 premises including MSMEs, stated Union Minister for Chemicals and Fertilizers Shri Jagat Prakash Nadda in Lok Sabha.

In order to assess the regulatory compliance of drug manufacturing premises in the country, the Central Drugs Standard Control Organization along with State Drugs Controllers (SDCs) have conducted risk-based inspections of 400 premises including MSMEs. The firms have been identified based on risk criteria like number of drugs declared as Not of Standard Quality, complaints, criticality of the products etc.

During the inspection number of drug samples were drawn and tested. Certain samples have been found to be "not of standard quality". Based on findings of inspectors, more than 300 actions like issuance of show cause notices, stop production order, suspension, cancellation of licenses /product licenses etc., have been taken by the State Licensing Authorities as per the provisions of the Drugs Rules 1945.

Under the Drug and Cosmetics Act 1940 and the Rules framed thereunder, the regulatory control over the manufacture and sale of the drugs is exercised through a system of licensing and inspection by the State Licensing Authorities appointed by the State Governments. Licensee is required to comply with all the conditions of license including Good manufacturing practices (GMP) as prescribed under Drugs Rules, 1945. State Licensing Authorities are empowered to take action on violation of any conditions of such licenses including prosecution in appropriate Court of Law.

CDSCO and Ministry of Health and Family Welfare have taken following regulatory measures to ensure the quality of medicines in the country:-

The Drugs and Cosmetics Act, 1940 was amended under Drugs & Cosmetics (Amendment) Act 2008 to provide stringent penalties for manufacture of spurious and adulterated drugs. Certain offences have also been made cognizable and non-bailable. States/ UTs have set up special Courts for speedy trial of offences under the Drugs and Cosmetics Act. The number of sanctioned posts in CDSCO has been significantly increased in last 10 years. To ensure efficacy of drugs, the Drugs and Cosmetics Rules, 1945 have been amended providing that applicant shall submit the result of bioequivalence study along with the application for grant of manufacturing license of oral dosage form of some drugs. The Drugs and Cosmetics Rules, 1945 have been amended making it mandatory that before the grant of manufacturing license, the manufacturing establishment is to be inspected jointly by the Drugs Inspectors of the Central Government and the State Government.

The Drugs and Cosmetics Rules, 1945 have been amended, making it mandatory that the applicants shall submit evidence of stability, safety of excipients etc. to the State Licensing Authority before grant of manufacturing license by the Authority.

Central regulator coordinates activities of State Drug Control Organisations and provides expert advice through the Drugs Consultative Committee meetings held with State Drugs Controllers for uniformity in administration of the Drugs and Cosmetics Act.

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State Licensing Authorities are empowered to take action on violation of any conditions of such licenses including prosecution in appropriate Court of Law. As per the Drugs Rules, 1945 the manufacturing premises whether they are MSME or otherwise, are required to comply with the conditions of license including the Good manufacturing practices (GMP) as prescribed under the Schedule M of the Drugs Rules, 1945. Central Government has amended the Drugs Rules 1945 vide G.S.R. 922 (E) dated 28.12.2023 to revise the Schedule M to the said rules related to Good Manufacturing Practices and requirements of premises, plant and equipment for pharmaceutical products under Schedule M. Quality Management System (QMS) has also been prescribed in the revised schedule M.

## Biological E receives WHO's pre-qualification status for its novel oral Polio VaCcine

**Hyderabad, India:** Biological E. Limited (BE), a Hyderabad-based vaccine and pharmaceutical company announced that the World Health Organisation (WHO) has granted Pre-qualification (PQ) status to their Novel Oral Polio Vaccine type 2.nOPV2 is the 10th pre-qualified vaccine of BE.

This next-generation live, attenuated oral vaccine significantly reduces the risk of circulating vaccine-derived Poliovirus type 2 (cVDPV2) outbreaks and it is aimed at immunisation in countries that are affected by cVDPV2 outbreaks, which is a crucial moment in the fight against polio.

The persistent threat of circulating vaccine-derived Poliovirus type 2 (cVDPV2) outbreaks can be tackled with the use of nOPV2 as the vaccine of choice. With its improved genetic stability, nOPV2 has a significantly decreased chance of seeding new outbreaks in low-immunity environments as against its predecessor, the Sabin poliovirus type 2 (mOPV2) vaccine.

Extensive clinical trials have rigorously evaluated the safety and immunogenicity of nOPV2, leading to promising results published in The Lancet (2019-2024). Furthermore, the vaccine's real-world deployment in outbreak regions has shown that it can significantly decrease the incidence of cVDPV2 outbreaks, safeguarding communities from the ravages of polio.

BE has become an important player in the production of the nOPV2 vaccine, having been selected for a grant from the Bill and Melinda Gates Foundation (BMGF) to assist in meeting the growing global demand. In collaboration with PT Bio Farma (PTB) in Indonesia, the first manufacturer of the nOPV2 vaccine to receive WHO Pre-Qualification in January 2024, BE has successfully received technology from PTB and qualified large-scale manufacturing facilities that produce more than 500 million doses of nOPV2 vaccine annually. BE has been approved by the Indian regulatory authorities to manufacture the vaccine for export purposes.

Mahima Datla, Managing Director, Biological E. Limited, said, "We are pleased to be a part of the global effort to eradicate polio. Our collective quest to eradicate polio marks a significant milestone with the WHO pre-qualification of nOPV2. This vaccine has been specifically designed to address concerns about Vaccine-Associated Paralytic Polio (VAPP), which has occurred in approximately 2 to 4 cases per million births with the traditional OPV due to the vaccine virus reverting to a virulent form."

## Government implements several schemes to encourage startups in pharmaceutical sector

**New Delhi, India:** The Government of India has implemented several schemes to encourage startups across various sectors including the pharmaceutical sector, according to press information bureau release.

It is also pertinent to mention that Department of Pharmaceuticals has launched a Scheme for Promotion of Research and Innovation in Pharma-MedTech sector (PRIP). Under Component BIII of the PRIP scheme, 50 of 125 research projects in the identified six priority areas are for the startups in the pharmaceuticals sector.

As of 30th June 2024, the Department for Promotion of Industry and Internal Trade (DPIIT) has recognized a total of 1,40,803 entities as startups, of which 2,127 are from the pharmaceutical sector.

These include Startup India Initiative, launched on January 16, 2016, which aims to foster innovation and encourage investments across various industries, including the pharmaceutical sector.

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Biotechnology Industry Research Assistance Council (BIRAC) under Department of Biotechnologies offers funding assistance through initiatives such as the Biotechnology Ignition Grant (BIG), Sustainable Entrepreneurship and Enterprise Development (SEED), and Launching Entrepreneurial Driven Affordable Products (LEAP) schemes. The funding ranges from INR 30 Lakhs to INR 100 Lakhs per startup, enabling them to refine their ideas, establish proof-of-concepts, pilot, and commercialize their products and technologies. BIRAC also promotes innovation and research in biotechnology through the i4 programme and the PACE programme.

The number of new industries established under Pharma Sector in Uttar Pradesh during last three years is 214, of which 176 units are in medical devices and 38 units are in drugs and formulations.

Union Minister of Chemicals and Fertilizers Jagat Prakash Nadda shared information in Rajya Sabha.

## ICRA sees 7-8 per cent revenue growth for Indian API Sector in FY2025

**Mumbai, India:** In its recently released research note, rating agency ICRA highlighted the encouraging growth prospects of the Indian active pharmaceutical ingredients (API) industry. ICRA expects the revenues of its sample set of companies to expand at a CAGR of 7-8% between CY2023 and CY2029 from an estimated size of USD 13-14 billion in CY2023. This will be driven by a steady ramp-up in the pharmaceutical formulations industry, which in turn, will be aided by an increasing geriatric population, higher prevalence of chronic diseases, and rising demand for contract manufacturing with global customers looking to diversify their supply chain along with greater focus on domestic sourcing. ICRA forecasts the operating profit margin (OPM) of its sample set of companies to improve mildly in FY2025.

Indian API industry players faced considerable volatility in earnings over FY2021-FY2023 on account of multiple headwinds such as rising raw material costs due to elevated crude oil prices and pandemic-induced lockdowns in China, resulting in a shortage of key starting materials (KSMs) and APIs globally, inflationary pressures and increased energy costs in Europe, as well as heightened volatility in foreign exchange rates. Nonetheless, raw material prices have softened post FY2023. The container availability issues during the lockdowns were further accentuated by the Russia-Ukraine war, which led to a considerable increase in global freight rates.

Commenting on the industry performance, Deepak Jotwani, Vice President & Sector Head – Corporate Ratings, ICRA said: "Given the subsequent remission in many of these headwinds, ICRA expects revenues of its sample set of companies[1] to grow by 7-8% in FY2025, post an estimated increase of 3-5% in FY2024. Given the lower input costs, along with growth in revenues, ICRA expects the earnings improvement recorded in FY2024 to sustain in FY2025 and the OPM to enhance to 12-14% from 11-13% in the previous fiscal. However, the impact of subdued demand from some key export markets such as Europe and tensions in the Red Sea impacting supply chain and freight costs will continue to be monitored."

India imported APIs and bulk drugs worth ~ ₹ 377 billion in FY2024, accounting for ~35% of its total API requirement, of which China accounted for ~70%. Moreover, dependence on Chinese imports of APIs for certain essential medicines is as high as 80-100%. Almost the entire requirement of certain fermentation-based APIs like ciprofloxacin and norfloxacin is sourced from China. The cost advantages with the Chinese API industry and the volatility in the prices of APIs have made domestic production of certain APIs unviable for Indian manufacturers, resulting in continued dependence on China. Even where APIs are manufactured locally, KSMs are primarily sourced from China. The Chinese API industry, which accounts for ~40% of the global requirement, is supported by higher economies of scale, subsidies, and fiscal incentives offered by the Chinese Government, along with lower power, fuel, and borrowing costs.

India has witnessed favourable traction in the production linked incentive (PLI) scheme launched by the Central Government for the bulk drugs industry. The scheme particularly focuses on select molecules such as Penicillin G and 7-ACA, which require sizeable investments and involve high energy consumption during the manufacturing process.

Commenting on the updates on the PLI scheme, Mr. Jotwani said, "As of now, ~62% of the originally envisaged investment of ~₹ 6,500 crore has been made in 32 commissioned projects out of a total of 48 envisaged projects. One of the key products approved under the scheme is penicillin-G, for which India remains highly dependent on China. A leading Indian API manufacturer is likely to commission its penicillin-G manufacturing facility under the PLI scheme in FY2025, helping reduce India's dependence on China for this bulk drug. Domestic manufacturing will also help formulations

manufacturers reduce their inventory carrying cost through efficient supply chain management. However, the overall lowering of dependence on China for APIs will ultimately depend on the ramp-up in production of various approved products and price competitiveness of the Indian manufacturers".

## Cohance Lifesciences merger with Suven Pharma receives approval from NSE & BSE

**Hyderabad, India:** Suven Pharmaceuticals Limited, India's one among the largest integrated contract development and manufacturing organization (CDMO), recently received approval from both the exchanges National Stock Exchange (NSE) and Bombay Stock Exchange (BSE) for the proposed merger with Cohance Lifesciences. A joint application by Suven Pharmaceutical and Cohance Lifesciences has been filed before NCLT. Expected timelines for the completion of the merger process as indicated prior: 12-15 months. -

The newly formed company will operate three main verticals: Pharma CDMO, Agrochemicals CDMO, and Active Pharmaceutical Ingredient (API) manufacturing. The combined entity will emerge as an integrated CDMO player with robust development and manufacturing capabilities.

The management expect growth in revenue and EBITDA for the full year of FY25, with growth accelerating in FY26. At a combined platform level, the company look forward to organically doubling the business over the next five years and adding further growth traction from M&A opportunities over a similar time frame.

Cohance is a leading CDMO and Merchant API platform with global leadership in select low-mid volume molecules as well as unique capabilities in the form of its antibody drug conjugates (ADC) platform. The CDMO segment has grown at healthy CAGR of 30%+ over FY20-23 and contributes ~42% to its Gross Profits for FY24.

Merged platform has best-in-class financial metrics: 37%+ EBITDA margins, 30%+ RoCE, sturdy cash flow generation. Potential to drive ~10% of incremental EBITDA from various revenue and cost synergy initiatives, over the next 2-4 years.

Leading PE equity player Advent currently owns 50.1% stake in Suven Pharma and 100% in Cohance. Following the proposed merger, Advent will own 66.7 % of the equity in the combined entity.

## Marksans Pharma's arm receives Marketing Authorization for Levonorgestrel tablets

**Mumbai, India:** Marksans Pharma Limited announced that its wholly owned subsidiary Relonchem Limited has received Marketing Authorization for the product Levonorgestrel 1.5 mg Tablets from UK MHRA. Levonorgestrel, also known as the morning-after pill, is a first-line oral emergency contraceptive pill. It is to be used within 72 hours of unprotected sexual intercourse or when a presumed contraceptive failure has occurred

Marksans Pharma Limited (www.marksanspharma.com) headquartered at Mumbai, India is engaged in Research, Manufacturing & Marketing of generic pharmaceutical formulation in the global markets. The company's manufacturing facilities located in India, USA and UK are approved by several leading regulatory agencies including USFDA, UKMHRA and Australian TGA.

## Shilpa Pharma Lifesciences Karnataka facility clears COFEPRIS-Mexico GMP inspection

**Hyderabad, India:** Shilpa Medicare Limited announced that its 100% subsidiary, Shilpa Pharma Lifesciences Limited's Active Pharmaceutical Ingredient (API) manufacturing facility, Unit II, situated at Raichur in Karnataka state has undergone a GMP inspection by COFEPRIS-Mexico from November 6-10, 2023.

Following a successful inspection, the Unit has been issued GMP Certification from COFEPRIS-Mexico. The facility is involved in manufacturing various oncology and nononcology APIs. The company remains committed to maintain the GMP status and quality standards as per the expectations and standards of Global Regulatory Authorities.

## Emcure Pharma signs PPA with Sunsure Energy for solar power

**Pune, India:** Emcure Pharmaceuticals Ltd., one of the leading Indian pharmaceutical company with a differentiated product portfolio, together with its subsidiary Gennova Biopharmaceuticals Limited announces the signing of a 22.78 MWp DC Solar Power Purchase Agreement (PPA) with Sunsure Energy, one of India's leading renewable power producers. Through this partnership, Emcure and Gennova will receive

approximately 36 million units of clean, renewable energy annually for their Pune plants.

The partnership will significantly advance their sustainability initiatives by meeting around 67% of their power requirements for these plants with green power and offsetting 29,765.71 metric tons of CO2e annually. This agreement represents a substantial step forward in Emcure's commitment to sustainability. Pursuant to the PPA, Emcure and Gennova have signed a Shareholders Agreement to acquire stake in Sunsure Solarpark Twelve Private Limited, for the purchase of solar power under a group captive scheme as per the Electricity Act, 2023 and applicable rules thereunder.

With a strong presence in over 70 countries, Emcure Pharmaceuticals has been a trusted name in the pharmaceutical industry, consistently focusing on improving lives through innovative and quality pharmaceutical solutions. Sunsure will be supplying this power from its 150 MWp DC solar plant in Solapur, Maharashtra. This new agreement will further strengthen Emcure's commitment to integrating sustainability across operations in its plants to minimize environmental impact.

Commenting on the PPA agreement, Sunil Mehta, Whole-time Director of Emcure Pharmaceuticals Ltd., said: "At Emcure, we are dedicated not only to improving lives through innovation and research for our differentiated portfolio but also through efficient and environment-friendly manufacturing processes. Our partnership with Sunsure Energy is a testament to promoting innovative solutions in the pharmaceutical industry to reduce the industry's carbon footprint by embracing the power of renewable energy. Emcure is proud to be leading the adoption of solar power in the pharmaceutical industry in India. We look forward to continuing our collaboration with Sunsure Energy to achieve new milestones in our green energy journey."

Shashank Sharma, Founder and CEO of Sunsure Energy, commented: "We are thrilled to onboard Emcure Pharmaceuticals, a global leader in the pharmaceutical industry, to our esteemed family of customers. This PPA demonstrates Sunsure's dedication to facilitating the renewable energy transition for leading corporations in the pharmaceutical sector. By working together, we are not only powering Emcure's facilities with clean energy but also driving broader environmental stewardship within the industry."

Emcure Pharmaceuticals has always been deeply committed to environmental sustainability, integrating green initiatives and eco-friendly practices across all operations. Besides adhering to current good manufacturing practices (cGMP) and international regulatory standards, Emcure's facilities have energy-efficient equipment, follow advanced waste management and pollution control systems, and undertake rainwater harvesting. True to its philosophy of Reduce, Reuse and Recycle, Emcure's R&D team has been exploring measures for solvent recycling and recovery for reuse. In addition, Emcure's 13 manufacturing plants are equipped to ensure Zero Liquid Discharge systems and Effluent Treatment Plants along with ensuring treatment of 100% of waste generated. These measures reflect Emcure Pharmaceutical's dedication to protecting the environment and promoting sustainable development.

## Amgen to open new site in Hyderabad

**Thousand Oaks, California:** Amgen announced plans to open a new technology and innovation site in Hyderabad, India. The site, known as Amgen India, will accelerate digital capabilities across the global organization to further advance Amgen's pipeline of medicines.

Amgen India will be located in HITEC City, a suburb of Hyderabad, occupying six floors of the RMZ Spire Tower 110. The city of Hyderabad, located in the state of Telangana, was selected for its world-class talent across medicine, life sciences and data sciences and the rapidly advancing field of artificial intelligence (AI). The site can accommodate up to 3,000 people and will be operational in Q4 2024.

"At a time when a quickly aging global population needs more innovation, the convergence of biotechnology and technology is enabling Amgen to work with greater speed, confidence, and efficiency — an incredibly exciting milestone for which we have been preparing for over a decade," said David M. Reese, M.D., executive vice president and chief technology officer at Amgen. "Amgen has been a leader in biotechnology for over 40 years and establishing this new site in India, a country known for its world-class technology and life sciences talent, marks a significant step forward in our journey to deliver on our mission to serve patients."

Amgen India will initially build and accelerate new technology solutions and digital capabilities at scale that will enhance efficiencies across the enterprise. The site will offer roles that strengthen key areas of Amgen's business, including AI, data science, life science and other additional global capabilities over time.To lead Amgen's expanded presence in India, Som Chattopadhyay has been appointed national executive for India.

"Amgen's new site in Hyderabad underscores the city's position as a hub for innovation and technology," said Chief Minister Sri Anumula Revanth Reddy. "We are proud to welcome a global trailblazer of the biotechnology industry. Amgen's unwavering mission to serve patients will be incredibly inspiring for the world-class technology talent seeking to make a meaningful impact on people around the world."Amgen has nearly 27,000 employees and has a presence in approximately 100 countries and regions worldwide, including India.

## Morepen Labs raises ₹ 200 crore through QIP

G**urugram, India:** Morepen Laboratories Limited announces the successful subscription of a Qualified Institutional Placement (QIP) for ₹. 200 crores. This strategic move underscores Morepen's commitment to accelerating growth, enhancing institutional,lparticipation, increasing market presence, and improvement in its financial position on the way to fortifying its leadership in the field of Medical Devices and APIs.

The issue was subscribed 1.68 times with bids of ₹ 335 crores against the ₹ 200 crores offering, demonstrating strong confidence reposed by institutional investors. Marquee global investors like Bank of America Securities Europe (BOFA), Samsung India, Citigroup, Societe Generale, Nomura, BNP Paribas, Morgan Stanley and Eminence are some of the select names that have partnered with Morepen, paving the way for a promising future. Motilal Oswal Investment Advisors Limited was the book running lead manager (BRLM) for the issue.

Sushil Suri, Chairman and Managing Director of Morepen Laboratories, commenting on this significant milestone stated, "First of all I would like to thank all the shareholder and other stakeholders, particularly all the institutional investors for expressing their unrelented support always, and particularly this fund raise via QIP which marks a pivotal moment in the long-term value creation journey of the company. The company's unique business model backed by an excellent leadership team will ensure that momentum for Revenue and EBITDA growth keep growing at same pace, rewarding our stakeholders including our investors over the long-term."

"The infusion of equity capital will empower us to enhance our manufacturing capabilities, explore untaped markets and grow in different geographies reaffirming our position as a market leader in Home Medical Devices and a preferred partner in the global pharmaceutical landscape".

This QIP issue was approved by shareholders in an extraordinary general meeting on March 18, 2024. The company has issued 36.785 million equity shares of the company with a face value of ₹ 2.00 at ₹ 54.37 per equity share, including a share premium of ₹ 52.37 per share in accordance with the SEBI ICDR Regulations. The company has been growing consistently at 19.6% CAGR based only on the robust internal accruals and has focused on the maximizing the revenue and EBITDA margins. Now, the additional fund raise of ₹ 200 crores through this QIP, would accelerate the growth journey and help build large capacities and backward integration, cementing company's leadership position in Glucometers and BP Monitors markets feeding directly to the consumers.

## Rubicon Research files DRHP with SEBI

**Mumbai, India:** Rubicon Research Limited has filed its Draft Red Herring Prospectus ("DRHP") with market regulator Securities and Exchange Board of India ("SEBI"). Rubicon Research is a pharmaceutical formulations company, driven by innovation through focused research and development, with an increasing portfolio of specialty products and drug-device combination products targeting regulated markets and in particular the United States.

Based on the peer set (of six listed Indian companies assessed by F&S, and the company), Rubicon Research is the only Indian pharmaceutical player with a complete focus on regulated markets. (Source: F&S Report)

The company's initial public offering comprises a fresh issue of up to ₹ 5,000 million and an offer for sale aggregating up to ₹ 5,850 million by the promoter selling shareholder, General Atlantic Singapore RR Pte Limited.

The company proposes to utilize the Net Proceeds from the fresh issue offer towards prepayment or scheduled repayment of all or a portion of certain outstanding borrowings availed by the company, funding inorganic growth through unidentified acquisitions and other strategic initiatives and general corporate purposes. The proceeds from the offer for sale shall be received by the selling shareholder, General Atlantic Singapore RR Pte Limited.

Axis Capital Limited, IIFL Securities, and SBI Capital Markets Limited are the Book Running Lead Managers to the issue.

## Fischer Medical Ventures enters into agreement with Nanyang Biologics

**Mumbai, India:** Fischer Medical Ventures Ltd (Fischer MV), a pioneering force in the healthcare industry, announced its collaboration with Singapore company, Nanyang Biologics (NYB), a leading drug discovery company dedicated to create transformative nutraceuticals derived from natural plants & herbs. This strategic partnership aims to revolutionize healthcare industry by delivering innovative, evidence-based products that enhance overall health and wellbeing, guided by rigorous scientific research and data-driven methodologies.

NYB started its drug discovery journey from 2019 and signed a Master Research Collaborative Agreement with the renowned Nanyang Technological University in Singapore in 2021 for a SG$20M research plan dedicated to develop next-generation AI drug discovery platform. To date, NYB has successfully filed 4 patents; identified 2 cancer drug candidates and developed 4 nutraceutical products. NYB is commercializing its nutraceuticals products this year and plan to start clinical trials for its cancer drug candidates early 2025.

The company also entered into collaboration with Bio Angle Vacs Sdn Bhd (BAV), a leading Biotechnology company in Malaysia that develops, manufactures and distributes vaccines to small and large-scale farming owners worldwide; focusing on health and disease prevention for livestock and aquaculture.

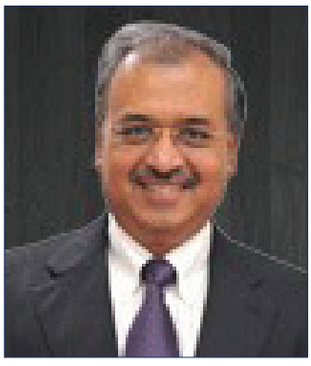
Founded in 2013, BAV has revolutionized the animal vaccination industry with its ground-breaking delivery methods that prioritize quality, safety, and efficacy. Its flagship innovation, the Spray Technology Vaccine (STVAC) leverages advanced recombinant technology and intranasal administration to elicit both mucosal and systemic immune responses, demonstrating enhanced protection for small ruminants, especially goats and sheep, against bacterial infections with high mortality rates.

## Bayer India introduces Saridon Woman, India's first ever solution for pain relief

**New Delhi, India:** Saridon, the iconic pain relief brand from Bayer's Consumer Health Division in India, introduces 'Saridon Woman,' an innovative first-of-its-kind period pain solution to provide holistic relief from abdominal cramps, backache, headache every month. The launch campaign, #NoPainPeriod Campaign, encourages women to get relief from monthly pains and continue life without disruption.

Saridon Woman marks a significant breakthrough in the OTC sector, offering a unique solution for menstrual discomfort combining the efficacy of Paracetamol with plant-based molecule Hyoscine Butylbromide. It acts fast and offers long lasting relief with dual mode of action. This formulation is recommended by well-known global gynaecologists' association Royal College of Obstetricians and Gynaecologists. Sandeep Verma, Country Head for India, Bangladesh, and Sri Lanka at Bayer Consumer Health Division, emphasized, "With over 50 years of trusted efficacy in headache relief, Saridon® has been a trusted household name for Indians. Today, we proudly unveil Saridon® Woman—a true industry disruptor addressing monthly pains. Over the years women have found ways to deal with monthly pains – hot water bags, massages etc. However, today's competitive environment where women are equal participants, Saridon® Woman offers quick and longer lasting relief as they go about achieving their daily or life goals. Saridon® Woman empowers women to prioritize their well-being with a self-care solution. This launch underscores our unwavering commitment to women's health."

## Sun Pharma Q1 net profit rises 40%



Dilip Shanghvi, CMD, Sun Pharma

**Mumbai, India:** Sun Pharmaceutical Industries Limited reported financials for the first quarter ending June 30th, 2024. The company's Gross sales stood at ₹ 125,245 million, growth of 6.3%, while Net profit for Q1FY25 was ₹ 28,356 million, up 40.2% YoY; up 20.9% over adjusted net profit of Q1FY24.

Formulation sales in India were ₹ 41,445 million, up by 16.4%, while Formulation sales in the US were USD 466 million; accounting for over 31.1% of total consolidated sales. Formulation sales in Emerging Markets sales were USD 284 million for Q1FY25, a growth of 8.8% and accounted for 18.9% of total consolidated sales. The company continue to focus on increasing API supply for captive consumption for key products.

Dilip Shanghvi, Chairman and Managing Director of the Company said, "Sun has recently attained several milestones with the approval of Leqselvi in the US, the filing of Nidlegy in Europe and the completion of acquisition of Taro minority shares. These steps advance our innovative as well as generic business offerings, and will help us serve patients better."

"Our R&D efforts span across both specialty and generic businesses and we continue to invest in strengthening product pipeline for various markets. Our specialty R&D pipeline comprises 6 New Active Substances undergoing clinical studies. We have a comprehensive product offering in the US market consisting of 537 approved ANDAs while filings for 103 ANDAs await US FDA approval, including 28 tentative approvals. Additionally, the portfolio includes 51 approved NDAs while 14 NDAs await US FDA approval. For the quarter, 1 ANDA was filed and 3 approvals were received," the company said.

The company announced that the U.S. Food and Drug Administration (FDA) approved LEQSELVI (deuruxolitinib) 8 mg tablets for the treatment of adults with severe alopecia areata. Alopecia areata affects around 700,000 people in the United States, and 300,000 have severe alopecia areata.2,3 Alopecia often leads patients to self-treat before seeking professional help, driven by dissatisfaction with the slow progress of existing treatments.

## Dr. Reddy's Laboratories Q1 net profit stood at ₹ 13.9bn

**Hyderabad, India:** Dr. Reddy's Laboratories Ltd announced its consolidated financial results for the quarter ended June 30, 2024. The company's Q1FY25 net profit stood at ₹ 13.9 billion, a YoY decline of 1 % and a QoQ growth of 7%. The company's Q1FY25 consolidated revenues at ₹ 76.7 billion, YoY growth of 14% and QoQ growth of 8%. The growth was largely driven by growth in global generics revenues in North America as well as India. The company's global generics revenue stood at Q1FY25 revenues at ₹ 68.9 billion, YoY growth of 15% and QoQ growth of 13%. YoY growth was primarily volume led, aided by new launches and integration of recently in-licensed vaccine portfolio in India, partially offset by price erosion.

The company's India Q1FY25 revenues at ₹ 13.3 billion, YoY growth of 15% and QoQ growth of 18%. YoY growth was mainly on account of new product launches including the recently in-licensed vaccine portfolio. As per IQVIA, our IPM rank was at 10 for the quarter. During the quarter, we launched 13 new brands in the country, in addition to exclusive rights to promote and distribute Sanofi's vaccine brands. The company's Pharmaceutical Services and Active Ingredients (PSAI)Q1FY25 revenues at ₹ 7.7 billion, with a growth of 14% YoY and a decline of 7% QoQ. YoY growth was mainly driven by improved volumes in base business, and contribution from new products, QoQ decline was driven by decrease in volumes of certain existing products.

The company announced that the European Medicines Agency's (EMA) Committee for Medicinal Products for Human Use (CHMP) has adopted a positive opinion recommending the launch of its proposed biosimilar Rituximab candidate DRL_RI (ITUXREDI®) in European markets. Dr. Reddy's had previously received the EU GMP certificate for its Rituximab drug substance and drug product manufacturing facility located in Hyderabad, India. As part of the established approval process, the CHMP positive opinion will now be reviewed by the European Commission (EC), following which a decision will be made on the grant of marketing authorisation in the European Union (EU) member countries, and the European Economic Area (EEA) member states of Norway, Iceland, and Liechtenstein. A Marketing Authorisation Application (MAA) for submission to the UK Medicines and Healthcare products Regulatory Agency (MHRA) will be made separately in keeping with the reliance route under the International Recognition Procedure (IRP). DRL_RI is being developed as a biosimilar of MabThera (Rituximab), a cluster of differentiation 20 (CD20) directed cytolytic antibody. ITUXREDI / DRL_RI (rituximab) is a proposed biosimilar to reference medicinal product MabThera® and the intended indications are the same as those currently approved for MabThera®: Non–Hodgkin's Lymphoma (NHL); Chronic Lymphocytic Leukaemia (CLL); Rheumatoid Arthritis (RA); Granulomatosis with Polyangiitis (GPA) (Wegener's Granulomatosis) and Microscopic Polyangiitis (MPA); Pemphigus Vulgaris (PV).

## Biocon Q1 revenue rises 30%

Kiran Mazumdar-Shaw, Executive Chairperson, Biocon and Biocon Biologics

**Bengaluru, Karnataka, India:** Biocon Limited, an innovation-led global biopharmaceuticals company, announced its consolidated financial results for the fiscal first quarter ended June 30, 2024.

The company's Q1FY25 Revenue was up 30% at ₹ 4,567 Crore, while Net Profit stood at Rs 660 Crore. The company's EBITDA was up 117% at Rs 1,755 Crore.

"Biocon has reported consolidated revenues of Rs 4,567 crore for Q1FY25, delivering a strong 30% YoY growth, with EBITDA growing 117% to Rs 1,755 crore and a Net Profit of Rs 660 crore. This strong performance was primarily on account of a one-time gain from the strategic collaboration between Biocon Biologics and Eris Lifesciences. The underlying business performance of Biocon has been in line with our expectations. Post integration, the Biosimilars business has delivered a healthy performance with 11% like- for- like growth, as it consolidates business across global markets. This has helped offset the challenges of pricing pressures in the Generics segment and the difficult U.S. Biotech funding

environment, which has impacted the growth trajectory of our Research Services business. "The outlook for this fiscal remains positive as we anticipate stronger growth in H2FY25, with new

product launches in the Biosimilars and Generics businesses, including Liraglutide for diabetes and obesity in the UK and other markets. Additionally, we expect improved business prospects for Syngene, supported by a resurgent biotech funding environment in the U.S," stated Kiran Mazumdar-Shaw, Executive Chairperson, Biocon and Biocon Biologics.

"Having successfully integrated the acquired business last year, Biocon Biologics' focus in FY25 now shifts to consolidation and setting up the business for growth. We began the fiscal year on a strong note with the business delivering year-on-year growth of 11% on a like-for-like basis. This growth was underpinned by an increase in market shares, tender wins in Europe and Emerging Markets and 15 new product launches. This quarter YESAFILI, our bAflibercept, became the 1st interchangeable biosimilar to be approved

by the U.S. FDA. Our manufacturing facilities in Bengaluru, India and Johor, Malaysia received GMP certifications from leading regulatory agencies such as the European Medicines Agency (EMA) and Therapeutic Goods Administration (TGA), Australia. These milestones will serve as growth catalysts and allow us to expand our reach to millions of patients globally, stated Shreehas Tambe, CEO & Managing Director, Biocon Biologics Limited.

The company's Generics business reported a subdued first-quarter performance with demand challenges on its base products impacting revenues, while Biocon Biologics' Q1FY25 revenue* stood at Rs 2,083 crore reported a YoY growth of 11% on a like- forlike basis after adjusting** Q1FY24 revenue for Branded Formulations,

India business.

## Lupin Q1 net profit rises 77%

Nilesh Gupta, Managing Director, Lupin Limited

**Mumbai, India:** Pharma major Lupin Limited reported its financial performance for the quarter ending June 30, 2024. The company's Gross Profit stood at ₹ 37,697 Mn compared to ₹ 33,213 mn in Q4 FY2024, with gross margin of 68.4%.The company's PAT stood at ₹ 8055mn, a growth of 77%.

Commenting on the results, Nilesh Gupta, Managing Director, Lupin Limited said, "We have had a strong quarter on the back of the momentum we built through FY24, with performance driven by new products, key geographies, and improvement in our operating margin and profitability. We are on track for strong, sustainable growth and margin improvement backed by growth in sales, commercial and operating efficiencies, and a strong compliance story."

India formulation sales for Q1 FY2025 sales were ₹ 19,259 Mn, up 20.3 % compared to ₹ 16,015 Mn in Q4 FY2024; up 17.5% compared to ₹ 16,384 Mn in Q1 FY2024; accounting for 35% of Lupin's global sales. The company's Growth Markets sales for Q1 FY2025 were ₹ 5,151 Mn up 1.1% compared to ₹ 5,093 Mn in Q4 FY2024; Up 26.7% compared to ₹ 4,066 Mn in Q1 FY2024; accounting for 9% of Lupin's global sales.

The company has received approval for 6 ANDA from the U.S. FDA in the quarter. Cumulative ANDA filings with the U.S. FDA stand at 430 as of June 30, 2024, with the Company having received 325 approvals to date. The Company now has 50 First-to-File (FTF) filings including 17 exclusive FTF opportunities. Cumulative U.S. DMF filings stand at 157 as of June 30, 2024.

## Zydus Lifesciences Q1 net profit rises 31%

Dr. Sharvil Patel, Managing Director - Zydus Lifesciences Limited

**Ahmedabad, India:** Zydus Lifesciences Limited announced its unaudited consolidated financial results for the first quarter ended June 30th, 2024. The company's Revenue from operations stood at ₹ 62,075 mn, up 21% YoY, while Net Profit for the quarter was at ₹ 14,199 mn, up 31% YoY. The company's EBITDA for the quarter was ₹ 20,840 mn, up 38% YoY. EBITDA margin for the quarter stood at 33.6% which is an improvement of 430 bps on a YoY basis.

The company's Formulations business registered revenues of ₹ 13,758 mn, up 12% y-o-y. The business accounted for 23% of consolidated revenues, while company's India business Registered revenues of ₹ 22,124 mn, up 15% YoY. The company's US formulations business registered revenues of ₹ 30,929 mn, up 26% YoY and 23% QoQ. The business accounted for 51% of consolidated revenues.

"Sustained growth momentum across our businesses along with enhanced profitability drove our strong Q1 performance. Execution success of our differentiated pipeline in the US and outperformance of our India Geography business were particularly noteworthy. With a focus on quality excellence, we will continue to align our processes and strengthen compliance. We are on course to achieve our growth aspirations for FY25 and are committed to investing in sustainable growth initiatives and innovative solutions for the future," stated Dr. Sharvil Patel, Managing Director - Zydus Lifesciences Limited.

The company announced that the Mexican regulatory authority COFEPRIS (Federal Commission for the Protection Against Sanitary Risk), has granted marketing approval for Mamitra, a Trastuzumab biosimilar. The drug will be marketed in different strengths of 150 mg and 440 mg and used in the treatment of patients with HER2 overexpressing metastatic breast cancer (MBC), HER2 overexpressing early breast cancer (EBC) and advanced gastric cancer. Breast cancer has become the most diagnosed cancer in Mexico, overtaking prostate and colorectal cancers.

## Cipla Q1 Net profit rises 17%

Umang Vohra MD and Global CEO, Cipla Ltd

**Mumbai, India:** Cipla Limited announced its unaudited consolidated financial results for the quarter ended June 30th, 2024.

The company's net profit rises to ₹ 1178 crore for the quarter, while Income from operations stood at ₹ 6694 crore. The company's India Branded Prescription Business grew at a healthy rate of 10% YoY. Overall One India growth was offset by softness in Trade Generics Business owing to distribution model change. The company's R&D investments stand at ₹ 353 crore or 5.3 % of sales, higher by 1% YoY driven by product filings and developmental efforts.

"I am pleased to share that we continue to make considerable progress across our focused markets. In Q1 FY25, we recorded revenue growth of 7% over last year with EBITDA margin of 25.6% driven by mix and other operational efficiencies. Our One-India business continued on its growth trajectory during the quarter, led by Branded Prescription which grew at 10%. Our concentrated focus and execution in differentiated portfolio have further strengthened the US business which yet again posted all-time high quarterly revenue at $ 250 Mn. In South Africa, we recorded a solid growth of 19% YoY in local currency terms, led by Private Market. Going ahead, focus will be on growing our key markets, further building our flagship brands, investing in future pipeline as well as focusing on resolutions on the regulatory front", stated Umang Vohra MD and Global CEO, Cipla Ltd.

## Piramal Pharma Q1 revenue up 12%

Nandini Piramal, Chairperson, Piramal Pharma

**Mumbai, India:** Piramal Pharma Limited, a leading global pharmaceuticals company, announced its standalone and consolidated results for the First Quarter (Q1) ended 30th June 2024.

The company's Revenue from Operations grew by 12% YoY in Q1FY25, driven by robust high-teen growth in the CDMO business and steady double-digit growth in the ICH business, while EBITDA grew by 31% YoY with EBITDA margin of 11%. The company closed the USFDA inspections at Lexington facility (US) with an EIR and at PPDS facility (Analytical Services, India) with zero observations.

Nandini Piramal, Chairperson, Piramal Pharma Limited said, "We have had a good start to the financial year with a steady all-round performance. We delivered a healthy revenue growth accompanied by over 170bps YoY expansion in EBIDTA margin driven by favorable revenue mix and cost optimization initiatives. Our CDMO business continues to witness sustained order inflows, especially for on-patent commercial manufacturing. We are also seeing good demand for our differentiated offerings with increase in customer enquiries and visits. In our CHG business, our planned expansion for inhalation anesthesia portfolio is on track and is expected to get commercialized in FY26. Our India Consumer Healthcare business is also delivering steady growth driven by power brands and strong traction in e-commerce channel.

As a responsible organisation, we are taking good strides in our journey towards building sustainable operations. Our continuous efforts in quality and compliance bore fruits with successful closure of USFDA inspections at two of our facilities at Lexington (USA) and PPDS (Analytical Services, India).Historically our H2 outperforms H1, both in terms of revenue and profitability, and we expect this trend to continue in FY25. We intend to further build on to the good start that we have had to the financial year."

## JB Pharma Q1 net profit rises 25% to ₹ 177 crore

Nikhil Chopra, CEO and Whole-time Director, JB Pharma

**Mumbai, India:** JB Chemicals & Pharmaceuticals ltd (JB Pharma), one of the fastest growing pharmaceutical companies in India, announced its financial results for the quarter ended 30th June, 2024. JB Pharma recorded revenue of INR 1004 crores in first quarter of FY25 registering growth of 12% from ₹ 896 crores in Q1 FY24. Operating EBITDA* (Earnings before Interest Depreciation and Taxes) improved by 20% to ₹ 292 crores in Q1 FY25 as compared to ₹ 243 crores in Q1 FY24. Profit after Taxes registered strong growth of 25% to ₹ 177 crores in Q1 FY25 as against ₹ 142 crores in Q1 FY24.

Commenting on the financial results. Nikhil Chopra, CEO and Wholetime Director, JB Pharma mentioned, "Our overall performance in the first quarter has been robust. We have reached a new milestone of ₹ 1,000 crores in quarterly sales for the first time during any quarter, with improvement across all parameters — revenue, gross profit, operating profit and operating profit margin.

Strong performance in the domestic business has continued, with each of the big brand franchises witnessing market-beating growth. We expect the international business including CDMO business to pick-up in the second half of the financial year. The good start in the first quarter augurs well for the balance fiscal year. We are confident about meeting our operating and strategic goals for the year and remain focused on making the organisation progressive and future ready."

## Strides Pharma Science Q1 revenue rises 16.7%

Arun Kumar, Founder & Executive Chairperson, Strides Pharma Science

**Bangalore, India:** Strides Pharma Science Ltd announced its consolidated financial results for the quarter (Q1FY25) ended June 30, 2024.

The company's Revenues stood at ₹10,875m and grew 16.7% YoY in line with FY25 Outlook, while company's Gross Margin improved by 264bps YoY to 61.3%. The company's EBITDA grew by 28.7% YoY to ₹2,170m with EBITDA margin at 20%, a growth of 187bps YoY. The company reported PAT at ₹683mn.

Arun Kumar, Founder & Executive Chairperson, and Badree Komandur, MD & Group CEO, commented on the performance and said, "Our emphasis on profitability, efficiency and growth has led to a strong performance across markets, allowing us to deliver superior returns ahead of the projected timelines for our FY25 outlook. The company achieved critical thresholds of 20% EBITDA margin, ₹683m of reported PAT and 2.3x Debt/EBITDA ratio. We are confident of sustaining the momentum with continuous improvement in the quality of business. The company has increased its focus on digitization, automation, and ESG for better compliance and business outcomes."

Strides, a global pharmaceutical company headquartered in Bengaluru, India, is listed on the BSE Limited (532531) and National Stock Exchange of India Limited (STAR). The Company mainly operates in the regulated markets and has an "in Africa for Africa" strategy and an institutional business to service donor-funded markets.

## Syngene International Q1 net profit stood at ₹ 76 crore

Sibaji Biswas, ED & CFO, Syngene International

**Mumbai, India:** Syngene International Limited announced its first quarter results. Reported revenue from operations declined 2% year-on-year to ₹ 790 crores. The company's profit after tax declined 19% year-on-year to ₹ 76 crores.

Commenting on the first quarter, Jonathan Hunt, Managing Director and Chief Executive Officer, Syngene International Limited, said, "First quarter performance was broadly flat, in line with our expectations, reflecting the dip in funding for US biotechs that has impacted our sector over the last two years. However, the value of US biotech funding has seen a marked improvement in the first half of 2024. It will take a while for this funding to flow through into outsourcing activities and Syngene is in a strong position to capture a significant share of the upturn in biotech spending in the months ahead."

Sibaji Biswas, Executive Director and Chief Financial Officer, Syngene International Limited added, "The current industry dynamics, particularly the geopolitical shifts, present a substantial opportunity for our organization. We continue to generate strong cash flows and our balance sheet is robust. We are investing in technology and capabilities that will position us favorably to leverage the opportunity and capture an increased market share. Based on the current dynamics, we are on track to hit our guidance range for the year with momentum expected to build in the second half of the year."

The company's Dedicated Centers and Biologics Manufacturing Services reported steady growth. During the quarter, the Company introduced a protein production platform, which reduces development timelines by months for a variety of biologics - including monoclonal antibodies, biosimilars, antibody drug conjugates and other recombinant proteins - gaining time for clients and enabling medicines to reach patients more quickly.

The company's Discovery Services revenue was hit by the dip in funding for US biotechs. Nonetheless, the

quarter was marked by the start of several pilot projects for pharma clients exploring outsourcing options beyond China. Successful delivery of these projects will build a foundation for larger scale future collaborations, while Development Services continued to attract repeat business from existing clients, reflecting high standards of service delivery.

## Glenmark Pharma Q1 consolidated revenue up 6.9%

Glenn Saldanha, CMD, Glenmark Pharmaceuticals

**Mumbai, India:** Glenmark Pharmaceuticals Limited (Glenmark), a leading researchled, global pharmaceutical company, today announced its financial results for the quarter ended June 30, 2024.

For the first quarter of FY25, Glenmark's consolidated revenue from operations was at ₹ 32,442 Mn as against ₹ 30,361 mn in the corresponding quarter last year, recording overall year-on-year (YoY) growth of 6.9%.EBITDA was at ₹ 5,882 Mn in the quarter ended June 30, 2024, with YoY growth of 34.5% and EBITDA margin of 18.1%.

The company's Profit After Tax (PAT) for the quarter ended June 30, 2024 was at ₹ 3,402 Mn, registering PAT margin of 10.5%. The Sales from the formulation business in India for Q1 FY25 was at ₹ 11,962 Mn as against ₹ 10,693 Mn in the corresponding quarter last year, recording a growth of 11.9%.

Glenn Saldanha, Chairman and Managing Director, Glenmark Pharmaceuticals Ltd. said "Our strong start to the new financial year reflects our robust revenue growth across key regions and solid operational performance, leading to a significantly improved margin profile. Our India business continues to excel, outpacing the Indian Pharma Market with our expertise in our core therapeutic areas, while Europe build on its FY24 success with further growth in the branded segment. RYALTRIS® remains a major global growth driver, achieving high double-digit market shares in multiple regions. As we look ahead, we are committed to launching innovative products, including Envafolimab and Winlevi®, and are confident of our trajectory towards meeting our FY25 objectives."

## Indoco Q1 revenues stood at ₹ 3942 mn

Aditi Panandikar, MD, Indoco Remedies Ltd.

**Mumbai, India:** During the first quarter of FY 2024-25, revenues of Indoco Remedies are at ₹ 3942 mn, as against ₹ 4132 mn, same quarter last year. EBIDTA to net sales for the quarter is 13.1 % at ₹ 516 mn, as compared to 15.2 % at ₹ 629 mn, same quarter last year. The company's Profit After Tax to net sales is 3.8 % at ₹ 150 mn, compared to 6.3 % at ₹ 259 mn, same quarter last year.

Commenting on the results, Aditi Panandikar, Managing Director, Indoco Remedies Ltd. said, "From licensing out products to front-ending in the US and from a 95% ethically driven domestic business, to selectively chosen products in OTC business, we are undergoing significant strategic transitions at Indoco. Our performance this quarter is reflective of these various strategic moves and I am confident that these will give Indoco a major gain in the long term."

## Torrent Pharma net profit jumps 21% to ₹ 457 crore in Q1FY25

**Ahmedabad, India:** Torrent Pharma Ltd posted results for the first quarter ended 30th June, 2023. The company's revenue stood at ₹ 2,859 crores grew by 10%, while Net Profit after tax was at ₹. 457 crores, up by 21%. The company's India revenues at ₹1,635 crores were up by 15% led by outperformance in focus therapies.

The company's US business revenues at ₹ 259 crores, were down by 12%, while Brazil revenues was at ₹ 196 crores, were up by 3%, while Germany revenues at ₹ 284 crores, were up by 10%.

## Alembic Pharmaceuticals Q1 net profit up 12%


Shaunak Amin, MD, Alembic Pharmaceuticals

**Vadodara, India:** Alembic Pharmaceuticals Limited reported its consolidated financial results for the first quarter ended 30th June, 2024.

For the Quarter, the company's Net Sales increased 5% to ₹1562 crores, while Net Profit was up 12% to ₹135 crores. The company's EBITDA was up 14% to ₹ 239 crores.

Shaunak Amin, MD, Alembic Pharmaceuticals Limited said "India Branded Business continues to work on improving the execution ability both in quality & scale. The Specialty and Animal health segment witnessed robust growth. The USFDA conducted an audit at our Formulation facility F1, without any observations, underscoring our dedication to compliance and quality. The US business grew by 18% during the quarter".

India Branded Business grew 9% to ₹ 572 crores for the quarter, while US Generics grew 18% to ₹ 461 crores for the quarter.The company has recorded robust growths in specialty therapies like Gynecology, Gastrointestinal, Anti Diabetic and Ophthalmology therapies and performed relatively better than the market in acute therapies.

The company's Animal Health business grew 23% for the quarter with basket of strong brands driving outperformance.

The company has received final approval from the US Food & Drug Administration (USFDA) for its Abbreviated New Drug Application (ANDA) Fluphenazine Hydrochloride Tablets USP, 1 mg, 2.5 mg, 5 mg, and 10 mg. The approved ANDA is therapeutically equivalent to the reference listed drug product (RLD), Prolixin Tablets, 1 mg, 2.5 mg, 5mg, and 10 mg, of Apothecon Inc. (Apothecon). Fluphenazine hydrochloride tablets, USP are indicated in the management of manifestations of psychotic disorders. Refer label for a detailed indication. Alembic has a cumulative total of 210 ANDA approvals (182 final approvals and 28 tentative approvals) from USFDA.

## Granules India Q1 revenue rises 20%


Dr Krishna Prasad Chigurupati, CMD, Granules India Ltd

**Hyderabad, India:** Granules India Ltd., a vertically integrated pharmaceutical company, announced its financial results for the quarter and financial year ended June 30, 2024. The company's revenue from Operations of Q1FY25 stood at ₹. 11,799 Mn., a growth of 20% YoY, while PAT stood at ₹ 1,346 Mn. up 181% YoY.

The company's Revenue share from the North America increased to 74% in Q1 FY25 as compared to 61% in Q1 FY24. The company's Active Pharmaceuticals Ingredients (API), Pharmaceutical Formulation Intermediates (PFI), and Finished dosages contribute 14%, 10%, and 76% of revenue from operations respectively for Q1FY25. The company's Net debt stood at ₹.7,941 mn and Net debt to EBITDA at 0.77x.

Commenting on the results, Dr Krishna Prasad Chigurupati, Chairman & Managing Director of Granules India Limited said, "With our robust quarterly performance, we are back on our planned trajectory after a few setbacks last year. Q1 performance highlights include continued growth in our formulation segment, strong North America business, and product diversification, which offset the Paracetamol API/ PFI decline, promising a brighter future driven by our formulations offering and new product pipeline."

## Mankind Pharma Q1 net profit up 10%

**New Delhi, India:** Mankind Pharma, India's fourth largest pharmaceutical Company announced its financial results for the first quarter ended 30th June 2024.

The company's Revenue from Operations at ₹ 2,893 Crore, up by 12% YoY, while Domestic revenue stood at ₹ 2,634 crore, up 9% YoY; Exports at ₹ 259 Crore, up 62% YoY. The company's net profit stood at ₹543 crore, up 10%.

The company's Domestic revenue grew 8.9% YoY and 9.8% YoY and in exports, the company witnessed a growth of 62% YoY driven by increase in our base business, and new launches. During the quarter, the

company has launched 2 new products in US taking the total launched products to 41.

Mankind Pharma is one of the largest pharmaceutical company in India, which focuses on the domestic market with its Pan India presence. Mankind operates at the intersection of the Indian pharmaceutical formulations and consumer healthcare sectors with the aim of providing quality products at affordable prices. The company is a leading player in the domestic pharmaceuticals business present across acute and chronic therapeutic areas including anti-infectives, cardiovascular, gastrointestinal, antidiabetic, neuro/ CNS, VMN and respiratory, among others with a strategy to increase chronic presence going ahead.

## Lincoln Pharmaceuticals Ltd Q1 net Profit up 24.51 % Y-o-Y

Mahendra Patel, MD, Lincoln Pharmaceuticals Ltd

**Ahmedabad, India:** Lincoln Pharmaceuticals Limited, one of India's leading healthcare companies has continued to report excellent operational and financial performance for Q1 FY 2024-25 ended 30th June 2024.

The company has reported a standalone net profit of ₹ 23.67 crore for the Q1 FY 2024-25 as compared to the net profit of ₹ 19.01 crore reported in Q1 FY2023-24, growth of 24.51% Y-o-Y. Total income for the quarter ended June 2024 was reported at ₹ 157.69 crore, higher by 10.03 % Y-o-Y over total income of ₹ 143.31 crores in Q1 FY2023-24. EBITDA for Q1FY25 was reported at ₹ 33.14 crore as compared to EBITDA of ₹ 28.41 crore in Q1FY24, growth of 16.65 % Y-o-Y. EPS for Q1FY25 was at ₹ 11.37 per share.

During FY24, Net Profit of the company rise 28.6% Y-o-Y to ₹ 93.37 crore, EBITDA up 20.3% to ₹ 134.33 crore and Total Income rise 15.43% to ₹ 614.97 crore. For FY24, company has reported its Best-ever results in a financial year with highest - Revenue, EBITDA and Net Profit. With focused growth strategies and business expansion plans for value added products and expanding to newer markets, company is targeting revenue of ₹ 750 crore in FY26. As of June 2024, Foreign Institutional Investors (FIIs) have also steadily raised their holding in the company to 3.95% from 1.74% as on June 2023.

Mahendra Patel, Managing Director, Lincoln Pharmaceuticals Limited, said, "Company has delivered exceptional operational and financial results in the first quarter of the fiscal year 2025. Both domestic and export operations have shown robust growth. We are confident to enhance profitability and margins going forward while sustaining strong growth trajectory. With a pipeline of new product launches for both domestic and international markets, coupled with strategic expansion into new territories, company aims to strengthen its market position and achieve its revenue target of ₹ 750 crore by the end of the fiscal year 2026."

Lincoln's commitment to expanding its global footprint while meeting diverse healthcare needs. Going forward, the company is focusing on enhancing offerings in lifestyle, chronic, women's healthcare, and dermatology, alongside the existing acute care lineup. Lincoln showcases its dedication to innovation and growth through a robust portfolio boasting over 1,700 registered products, with 700 more in development.

Over the last 5 years, company has delivered over 13% CAGR in profits and higher single digit growth in sales. The company has been successful in increasing its profit margins from around 13% in FY19 to over 16% in FY24. Company is also ranked among a very few companies to achieve a profit growth every single year from FY13 to FY23. It is among only 16 companies out of 4,200 plus listed companies in the Indian stock exchange to do so as per the analysis of Morningstar.

Lincoln exports to 60+ countries spanning East & West Africa, Central & North America, Latin America, and Southeast Asia. With recent entry into the Canadian market and approvals from TGA - Australia and EU GMP, the company is poised for further global expansion, while also aggressively pursuing product registration for its Cephalosporin plant in Mehsana. These initiatives align with the company's revenue target of ₹ 750 crore for FY26.

## Neuland Laboratories Q1 income stood at ₹.444.4 crore, up 21.7% YoY

**Hyderabad, India:** Neuland Laboratories Limited (NLL), a pharmaceutical manufacturer providing active pharmaceutical ingredients (APIs), complex intermediates and custom manufacturing solutions services to customers located in around 80 countries, announced financial results for the first quarter ended June 30, 2024.


Saharsh Davuluri, Vice Chairman and Managing Director, Neuland Laboratories Ltd

Commenting on the performance, Sucheth Davuluri, Vice-Chairman and Chief Executive Officer of the Company said, "We recorded our highest ever quarterly revenues in Q1FY25 led by growth in the CMS business even as we recorded healthy EBITDA margins. We continue to maintain that FY25 will be a year of normalisation of revenue growth and subsequently margins as we continue to invest for growth. We expect our business to regain momentum from FY26 onwards basis our visibility from our portfolio of projects and products."

In addition, Saharsh Davuluri, Vice Chairman and Managing Director, Neuland Laboratories added" The CMS revenues were driven by commercial molecules in line with our expectations as we outline our strategy over the years. As we evaluate our pipeline of projects and the flow of new projects, we remainenthusiastic on the strong potential of the CMS business over the long term. The GDS business continues to build on the strong base we have with quality focussed customers, even as our R&D team is working on an exciting set of molecules to add to our portfolio."

## Ipca Laboratories Q1 net profit rises 18%

**Mumbai, India:** Ipca Laboratories Limited announced its unaudited financial results for the first quarter ended 30th June, 2024 of the financial year 2024-25.

The company reported 18% rise in net profit to ₹.192.24 crores, while Net total Income was up 30% at ₹. 2113.24 crores. The company's EBITDA margin (before forex (gain)/loss, other income and exceptional items) was at 18.52 % in QI FY25 as against at 18.57 % in QI FY24.

Ipca is a fully integrated pharmaceutical company with a strong thrust on exports. Ipca is vertically integrated and produces Finished Dosage Forms (PDFs) and Active Pharmaceutical Ingredients (APIs).

The company also announces the launch of Diulcus, a novel product for Diabetic Foot Ulcer (DFU) in the Indian market. Diulcus is a novel topical formulation of an active pharmaceutical ingredient which was originally approved for the treatment of Tachycardia as an intravenous injection. NovaLead has been granted patents for it in several countries including regulated markets of USA. EU and Japan. Diulcus will be made available to the patients of DFU by Ipca through an exclusive IP licensing arrangement with NovaLead for Indian market. The product is priced at ₹1,350 (MRP) in India in the form of a 15 gm tube.

## Indegene Q1 revenue up 11%


Manish Gupta, Chairman & CEO, Indegene Ltd

**Bengaluru, India:** Indegene Limited, a leading digital-first commercialization services company, announced financial results for the quarter ended June 30, 2024. The company achieved revenue of ₹.6,765 million in Q1FY25 with growth of 11.4% as against Q1FY24. The company posted robust EBITDA growth of 14.5% in Q1FY25 as against Q1FY24 with net profit of ₹. 877 mn.

"In Q1FY25, we achieved revenue growth of 11.4% and robust EBITDA growth of 14.5% vs Q1FY24. We continue to see momentum and growth with our largest client and a few of our Top 20 clients with increased activity and volume levels tracking the larger pipeline of impending new product launches", said Manish Gupta, Chairman and CEO, Indegene Limited. "Based on our conversations with our top clients, we anticipate similar momentum across the industry. Further, compared to last year, our pipeline is heathier and the quality of conversations with clients is much better, which gives us confidence about driving robust growth in the medium term." "Our Q1FY25 EBITDA margin of 19.6% and PAT margin of 13.0% is an improvement of 50 bps and 170 bps vs Q1FY24. Indegene is now a zero-debt company with repayment of loans, and we anticipate the financial leverage to drive stronger PAT growth going forward", said Suhas Prabhu, CFO, Indegene Limited. "Also, we continue to strengthen our technology and automation initiatives, which we believe will have a positive impact on the margin in the future. Further, we anticipate that the EBITDA margin would have a similar trajectory as FY24 with a stronger H2 compared to H1."

## Gland Pharma Q1 cons revenue rises 16%

**Hyderabad, India:** Gland Pharma Limited , a generic injectable-focused pharmaceutical company, announced its financial results for the first quarter (Q1FY25) ended on June 30th, 2024.For Q1 FY25, the company's consolidated revenue surged 16% YoY to ₹ 14,017 million, while Consolidated EBITDA decreased 11% YoY to INR 2,654 million. The company's Consolidated EBITDA margin was at 19% as against 25% in Q1FY24.

Commenting on the results, Srinivas Sadu, Executive Chairman and CEO of Gland Pharma, said, "We reached ₹14,017 million in total revenue, a 16% increase from Q1FY24. This growth aligns with our projections and is primarily driven by the US market, which saw a 27% revenue increase led by existing and certain new products. The company's base business EBITDA margins were at 29%, and consolidated EBITDA margins for the quarter were 19%, mainly affected by Cenexi. We're confident in our ability to meet our fiscal year goals and are excited about the growing opportunities and even stronger results expected in the coming quarters."

The company stated that its biologics facility in Genome Valley is attracting advanced-stage interest from multiple players for contract manufacturing of monoclonal antibodies and novel plasma-based proteins. In addition, company is in discussions with a leading biologics company for a potential strategic collaboration. This collaboration could involve large-scale contract manufacturing of key biosimilars, with a possible inlicensing opportunity for Gland in specific markets of interest. Although this discussion is in the early stages, it represents promising avenues for Gland to maximize its value in both CDMO and complex portfolio expansion."

Gland Pharma Limited, a generic injectable-focused pharmaceutical company, has received tentative approval from the United States Food and Drug Administration (USFDA) for Latanoprostene Bunod Ophthalmic Solution, 0.024%.

The Product is bioequivalent and therapeutically equivalent to the reference listed drug (RLD), Vyzulta Ophthalmic Solution, 0.024%, registered by Bausch & Lomb Inc. (Bausch & Lomb).

## Emcure Pharmaceuticals Q1 revenue up 16%

Satish Mehta, CEO & MD, Emcure Pharmaceuticals

**Pune, India:** Emcure Pharmaceuticals announced its unaudited consolidated financial results for the quarter ended June 30th, 2024. The company demonstrated robust performance across geographies, achieving significant growth in both revenue and EBITDA.

The company's Revenue from operations stood at ₹ 1,815 crore, up 16.6% YoY, while PAT was at ₹ 153 Crore, up 8.2% YoY.

The company's domestic business, which accounts for 50% of overall revenues, grew by 14% to ₹ 909 Crore., led by steady base business performance and aided by distribution partnership for Sanofi's Cardiovascular brands. The Sanofi brand portfolio and team are now fully integrated into Emcure's chronic team, and the performance is in line with the company's expectations.

On the international front, Europe saw a steady growth of 8.6%, led by an increase in the market share of the company's base business. In Canada, Emcure's subsidiaries Marcan and Mantra are witnessing strong traction and robust growth. Emcure is one of the Top 10 generic playersin the Canadian market. In Rest of World (RoW) markets, the company continues to see traction in its key focus markets.

Commenting on the results, Satish Mehta, CEO and Managing Director, Emcure Pharmaceuticals Ltd., said, "Emcure witnessed a robust performance in Q1. We are experiencing the benefits of our investments in both domestic and international business. Both our recent inorganic additions – Sanofi in India and Mantra in Canada, are now fully integrated. Going ahead, our focus will be on growing our India business and accelerating our product launches in international markets to drive strong growth."

## Innova Captab Q1 net profit rises 68%

Vinay Lohariwala, MD, Innova Captab Ltd

**Mumbai, India:** Innova Captab Limited is an integrated pharmaceutical company in India with a presence across the pharmaceuticals value chain including research and development, manufacturing, drug distribution and marketing and exports has announced its financial results for the first quarter ended June 30,2024.

The company's Revenue from operation is ₹ 294.3 Crore in Q1'FY 25 as against ₹ 233.2 Crore of Q1'FY 24 registering a growth of 26%, while the Company's EBITDA stood at ₹ 44.3 Crore in Q1'FY 25 against ₹ 32.4 Crore of Q1'FY 24 registering a growth of 37%.

Profit After Tax (PAT) stood at ₹ 29.5 Crore in Q1'FY 25 against ₹ 17.6 Crore of Q1'FY 24 registering a growth of 68%.

Commenting on the results, Vinay Lohariwala, Managing Director, - Innova Captab Limited said, For Q1FY25, we reported a total income of Rs 296 crores, a 27% growth compared to same quarter previous year. All business areas are experiencing healthy growth and are

expected to maintain this momentum in the coming quarters.Over the past 3-4 years, our revenue has grown at a robust growth rate. With the new Jammu facility, we are optimistic about sustaining this growth trajectory over the next few years. As a company, we remain committed to driving sustainable growth by exploring new opportunities and focusing on value-added products. The Indian pharmaceutical sector is

poised for significant growth in the mid to long term, with both domestic and global MNCs are increasingly seeking reliable and sustainable suppliers like us.

## Chandipura Outbreak in Gujarat: Chandipura virus confirmed 51 cases

**New Delhi, India:** Since early June 2024, Acute Encephalitis Syndrome (AES) cases have been reported from Gujarat in children under 15 years of age. As on 31st July 2024, 148 AES cases (140 from 24 districts of Gujarat, 4 from Madhya Pradesh, 3 from Rajasthan & 1 from Maharashtra) have been reported, out of which 59 cases have died. Chandipura virus (CHPV) has been confirmed in 51 cases. The situation was reviewed jointly by Director General of Health Services (DGHS) & Director, National Center for Disease Control (NCDC) and DG Indian Council of Medical Research (ICMR). MD NHM of Madhya Pradesh, Integrated Disease Surveillance Program (IDSP) units and Regional offices of Health and Family Welfare of Rajasthan, Maharashtra & Gujarat, NJORT members from NIV, NCDC and faculty from NCDC, ICMR & National Center for Vector Borne Diseases Control (NCVBDC) participated in the review meeting.A declining trend of the daily reported new cases of AES is evident since 19th July 2024. Gujarat has undertaken various public health measures such as insecticidal spray for vector control, IEC, sensitization of medical personnel and timely referral of cases to designated facilities.

A National Joint Outbreak Response Team (NJORT) has been deployed to assist the Gujarat State Government in undertaking public health measures and for conducting a detailed epidemiological investigation into the outbreak. A joint advisory from NCDC and NCVBDC is being issued to guide the neighboring States reporting AES cases.

CHPV is a member of Rhabdoviridae family and known to cause sporadic cases and outbreaks in western, central and southern parts of the Country especially during the monsoon season. It is transmitted by vectors such as sand flies and ticks. Vector control, hygiene and awareness are the only measures available against the disease. The disease affects mostly children under 15 years of age and can present with a febrile illness that may progress to convulsions, coma and in some cases, may result in death. Although there is no specific treatment available for CHPV and management is symptomatic, timely referral of suspected AES cases to designated facilities can improve outcomes. ■

## DOP implements ₹ 15,000 Crore Production Linked Incentive Scheme for Pharmaceuticals

**New Delhi, India:** The Department of Pharmaceuticals is implementing the Production Linked Incentive (PLI) Scheme for Pharmaceuticals with a total financial outlay of ₹ 15,000 crore and scheme tenure up to FY 2027-28, stated Union Minister of State for Chemicals and Fertilizers Anupriya Patel in Lok Sabha.

The scheme provides for financial incentive to 55 selected applicants for manufacturing of identified products under three categories for a period of six years.

The product Category 1 covers drugs such as bio-pharmaceuticals, complex generics, gene therapy drugs, complex excipients, orphan drugs etc. Orphan drugs are those drugs which are used for treatment of rare diseases.

Under the scheme, total 8 orphan drugs have been approved for manufacturing.The orphan drugs approved under the PLI scheme for Pharmaceuticals includes Nitisinone indicated for the treatment of Hereditary Tyrosinemia Type 1, Nusinersen to treat Spinal Muscular Atrophy, Rufinamide to treat Lennox-Gastaut syndrome, Sodium Phenyl Butyrate to treat Urea Cycle Disorders. The other drugs includes Tiopronin for the Prevention of Cystine Nephrolithiasis, Trientine Hydrochloride indicated for the treatment of Wilson's disease, Eliglustatindicated for the treatment of Gaucher's disease, Cannabidiol, Dravet-Lennox Gastaut syndrome.

## Novo Nordisk announces USD 4.1 billion investment to expand US manufacturing capacity

**Bagsværd, Denmark:** Novo Nordisk today announced plans to invest 4.1 billion US dollars (approx 27 billion Danish kroner) to build a second fill and finishing manufacturing facility in Clayton, North Carolina, and grow its ability to produce current and future injectable treatments for people with obesity and other serious chronic diseases.

Marking one of the largest manufacturing investments in Novo Nordisk's history, the expansion will add 1.4 million square feet of production space for aseptic manufacturing and finished production processes, doubling the combined square footage of all three of the company's existing facilities in North Carolina. It will also add 1,000 new jobs, besides the nearly 2,500 Novo Nordisk employees already working in the region, a central hub for innovation and biotechnology in the United States.

"It took us a century to reach 40 million patients, but through this expansion and continued investment in our global production, we're building Novo Nordisk's ability to serve millions more people living with serious chronic diseases in the future," said Lars Fruergaard Jørgensen, president and CEO of Novo Nordisk.

Utilising state-of-the-art technology, roof-top solar panels and innovative water strategies, the facility is designed in an efficient and environmentally sustainable way to deliver the highest-quality products to patients around the world. The goal is to obtain LEED Gold certification, recognised as a standard of excellence in constructing healthy, efficient, carbon and cost-saving green buildings.

"Clayton was the first manufacturing site for Novo Nordisk in the US, and this new, large-scale investment confirms the continued importance of our production facilities there as cornerstones of our company's growth," said Henrik Wulff, executive vice president, Product Supply, Quality & IT, Novo Nordisk.

Early clearing and foundational work are already underway to prepare the 56-acre facility footprint. Construction will gradually be finalized between 2027 and 2029. Around 2,000 external contractors will be engaged at the height of the project.

## Vivint Pharma to establish injectables facility in Hyderabad

**Hyderabad, India:** Vivint Pharma is planning to establish an injectables manufacturing facility in Genome Valley, Hyderabad.

The company will also invest ₹ 400 crore for setting up its first manufacturing plant. The company added that it has acquired 5.5 acres of land in Genome Valley and would create employment for about 1,000 people.

The announcement was made during a high-level meeting with the Chief Minister of Telangana, A Revanth Reddy and his team in the US. ■

# "The Contract Research and Manufacturing Services (CRAMS) sector is poised for significant growth in the coming years"

**Bafna Mahaveer Chand**
Chief Executive Officer
Bafna Pharmaceuticals Ltd

**Bafna Mahaveer Chand, Chief Executive Officer, Bafna Pharmaceuticals Ltd** discussed about the overview of the Pharma industry and Contract Research and Manufacturing Services (CRAMS) business. He also emphasizes about the company's expansion and investment plans.

**Brief us about the Overview of the Pharma Industry.**

The pharmaceutical industry is a vital sector dedicated to the discovery, development, production, and distribution of medications for medical use. It encompasses a wide range of activities, from basic research into new drug compounds to manufacturing and marketing pharmaceutical products.

The Key aspects include stringent regulatory oversight, substantial investment in research and development (R&D), and a focus on ensuring safety and efficacy of medicines. The industry plays a crucial role in healthcare by providing treatments for various diseases and conditions, contributing to public health improvements globally.

**What are the market trends do you see for CRAMs business?**

Contract Research and Manufacturing Services (CRAMS) refers to the outsourcing of research and manufacturing activities in the pharmaceutical and biotechnology industries. This business model allows pharmaceutical companies to focus on their core competencies such as drug discovery and marketing, while leveraging the expertise and resources.

The market trends include increasing Outsourcing, rise of biologics, technological advancements, globalization and Strategic Partnerships.

The increased demand for biologics and biosimilars is driving growth in CRAMS for specialized manufacturing capabilities and technological advancement includes Adoption of advanced technologies like AI, machine learning, and automation in research and manufacturing processes. The company is also looking to expand in newer markets particularly in emerging economies.

The CRAMS business is a critical component of the pharmaceutical and biotechnology industries, offering numerous benefits such as cost efficiency, specialized expertise, and faster time-to-market. With the growing trend towards outsourcing, technological advancements, and expanding global markets, the CRAMS sector is poised for significant growth in the coming years.

**What are the challenges do you face as far as CRAMS business is concerned?**

The major challenges includes Quality and Compliance, Intellectual Property (IP) Protection, Supply Chain Management and Market Competition.

The Quality and Compliance includes ensuring adherence to stringent quality and regulatory standards across different regions and managing complex supply chains and ensuring timely delivery of services.

There is intense competition among CRAMS providers, driving the need for continuous innovation and improvement.

**How do you see growth for CRAMS business?**

CRAMS is a sector within the pharmaceutical industry that has shown significant growth potential.

Several factors contribute to this growth such as increasing R&D Costs, Time-to-Market Pressure, specialization and expertise, Regulatory Challenges, Focus on Core Competencies, emerging markets and Strategic Partnerships and Collaborations.

Pharmaceutical companies face rising costs in research and development. Outsourcing to CRAMS providers helps manage these costs more efficiently. The need to bring new drugs to market quickly incentivizes companies to use CRAMS providers, who can often speed up the process due to their specialized expertise and resources.

CRAMS companies often have specialized skills and technologies that are not available in-house for many pharmaceutical companies. This includes capabilities in areas such as biologics, biosimilars, and niche therapeutics.

Navigating complex regulatory environments requires significant expertise. CRAMS providers often have the knowledge and experience to handle these challenges, making them valuable partners for pharmaceutical companies.

By outsourcing research and manufacturing tasks, pharmaceutical companies can focus more on their core competencies such as marketing and distribution.

The global nature of drug development and manufacturing means that pharmaceutical companies are increasingly looking for partners who can operate in multiple regions. CRAMS providers often have a global footprint that can meet these needs.

There is an increasing trend of forming strategic partnerships and collaborations between pharmaceutical companies and CRAMS providers, leading to integrated services and shared risk.

Overall, the outlook for the CRAMS business is positive, driven by the need for cost efficiency, speed, specialized expertise, and the ability to navigate complex regulatory environments.

**What are the opportunities do you see for CRAMs in Asian countries?**

There are significant opportunities for CRAMS (Contract Research and Manufacturing Services) in Asian countries. Several factors contribute to this potential:

The factors driving CRAMS Opportunities in Asia includes Cost Efficiency and Skilled Workforce.

The CRAMS sector in Asia presents significant growth opportunities due to cost advantages, a skilled workforce, supportive government policies, and expanding domestic markets. Countries like India, China, South Korea, Singapore, and Malaysia are particularly well-positioned to capitalize on these opportunities, making Asia an increasingly attractive destination for CRAMS investments and partnerships. Europe is significant market for CRAMS due to the presence of numerous pharmaceutical and biotech firms.

**Brief us about your expansion plans and investment?**

The expansion plans and investment strategy are focused on geographic and service portfolio expansion, technological advancements, strategic partnerships, and sustainable practices. By allocating capital towards infrastructure, technology, R&D, M&A, and market penetration, the company aims to strengthen its market position, drive innovation, and achieve long-term growth.

The company's capacity for tablets is about 1000 million and Capsules about 456 million. The company is capable of developing 5-10 Molecules and so far has developed about 32 Molecules from 2021 to 2024.The company is eyeing revenue of ₹ 1650 mn during FY 2025.

**What outlook do you see for global pharmaceuticals market?**

The outlook for the global pharmaceuticals market is generally positive, driven by several key factors and trends like continued expansion.

The global aging population is driving demand for medications, particularly for chronic diseases such as diabetes, cardiovascular diseases, and cancer. The prevalence of lifestyle-related diseases like obesity, diabetes, and hypertension is increasing, leading to higher demand for pharmaceutical interventions.

The Innovations in biotechnology are leading to the creation of novel biologics and biosimilars, expanding treatment options. ■

# APIs in Pharma: Balancing Quality, Sustainability, and Innovation

Active Pharmaceutical Ingredients (APIs) are the cornerstone of the pharmaceutical industry. These potent compounds are the driving force behind therapeutic efficacy and safety. As the industry navigates a complex landscape of technological advancements, regulatory shifts, and global challenges, the role of APIs becomes increasingly critical.

**Kushal Suri, Director - API Sales and Marketing, Morepen Laboratories** emphasizes the role of active pharmaceutical ingredients (APIs) in the pharmaceutical industry and current trends in API Manufacturing.

**Current Trends in API Manufacturing**

- **Technological Transformation** : The integration of biotechnology and synthetic chemistry has unlocked the potential for complex molecule creation. Green chemistry's emphasis on sustainability is gaining traction, while continuous manufacturing and Process Analytical Technology (PAT) are streamlining production processes.

- **Global Supply Chain Dynamics:** Outsourcing API production to regions like India and China has become commonplace due to cost-effective solutions. India, in particular, has emerged as a global leader, backed by robust infrastructure and a skilled workforce. Companies like Morepen Laboratories Ltd. are at the forefront of leveraging these advantages to deliver high-quality APIs at competitive prices.

- **Regulatory Evolution :** Adherence to stringent regulations like GMP and ICH guidelines is paramount. Regulatory bodies worldwide are constantly adapting to address emerging challenges and incorporate scientific advancements. Manufacturers must navigate this evolving landscape to ensure compliance.

### Challenges and Solutions

- **Quality Assurance** : Maintaining consistent API quality across multiple production sites is a formidable challenge. Advanced analytics, real-time monitoring, and robust quality management systems are essential to address this. Investments in cutting-edge infrastructure and processes are necessary to guarantee product excellence.

- **Environmental Impact** : The industry's environmental footprint necessitates a shift towards sustainable practices. Green chemistry principles and waste reduction initiatives are gaining prominence. Many companies are committed to minimizing their environmental impact through eco-friendly operations.

- **Supply Chain Resilience** : Global disruptions underscore the need for resilient supply chains. Diversifying sourcing and investing in local manufacturing capabilities are crucial strategies. Strategic positioning and robust infrastructure contribute to a stable supply chain.

### Future Directions

The industry is embracing biologics, biosimilars, and personalized medicine, driving the demand for specialized APIs. AI and machine learning are accelerating drug discovery and optimizing manufacturing processes. Continued research and development are essential to address these evolving needs. Additionally, green chemistry principles and eco-friendly practices will define the future of API manufacturing. Companies are committed to sustainable operations, reducing environmental impact while maintaining profitability.

APIs are the lifeblood of the pharmaceutical industry. Navigating the complex landscape of trends, challenges, and future opportunities requires a strategic approach. Industry leaders are playing a pivotal role in shaping the future by focusing on quality, sustainability, and innovation. As the industry evolves, the commitment to delivering safe, effective, and accessible medications will remain paramount. ■

## Author

**Kushal Suri**
Director - API Sales and Marketing,
Morepen Laboratories

# Internet of Things in Pharma

The Internet of Things (IoT) refers to the interconnected web of devices around us. These devices gather and exchange data with each other to process and present a myriad of information to users, enabling the "smart" in technologies that touch all facets of our lives.

**Akshay Ray, Senior Manager, Technology Research & Advisory, Aranca** emphasizes how IoT brings value to healthcare in improving patient health through remote monitoring, personalized treatment and enhanced diagnostics.

Over the past century, advancements in medical science have more than doubled human life expectancy from 32 years in 1900 to 71 years in 2021. Even though rapid industrialization and urbanization have created a new set of health challenges, access to better drugs and healthcare regimens has contributed significantly to the longevity. Adhering to a prescribed regimen of drugs and diet is the cornerstone of modern medicine, and it is ably supported by advances in non-invasive and rapid diagnostics and patient monitoring.

IoT has the potential to address several challenges in healthcare, including patient monitoring, patient compliance, decision making, engaging patients and infrastructure costs. The IoT ecosystem consists of data collection devices (such as smart watches, fitness trackers, ingestible sensors, implants), connectivity technology (such as Bluetooth, Wi-Fi, 5G network), and computing systems to analyze the data and provide decision-making insights and data points.

IoT brings value to healthcare by improving patient health through remote monitoring, personalized treatment and enhanced diagnostics, improving healthcare professionals' productivity and healthcare facility workflow by accessing, analyzing, and making available electronic health records on a real-time basis.

**The use cases of IoT are as follows:**
**Remote monitoring & personalized treatment**

Using IoT devices facilitates continuous monitoring of patients suffering from chronic diseases such as cardiac disease, hypertension, and diabetes. Smart devices track vitals and report them back to health professionals in real-time, enabling timely life-saving interventions as and when required. Continuous glucose monitoring systems, such as Dexcom G6, help track diabetic patients' blood sugar levels and relay the data to healthcare providers in real-time. Remote monitoring reduces the cost burden of hospital facilities while ensuring that the caregivers receive current vital stats for the patients.

Specialized wearable devices, such as ECG monitors (AliveCor and KardiaMobile), pulse oximeters (Masimo Rad-5v), smart blood pressure monitors (Omron), and neurological monitors (NeuroSky), widen the data points that can be monitored remotely to facilitate timely actions by the healthcare providers.

### Healthcare professional productivity

IoT helps streamline administrative processes, reducing wait times and improving patient flow within healthcare facilities. Telehealth came into sharp focus during COVID-19, where the communicable nature

of the pandemic necessitated remote consultations. Underpinned by advances in communications technology, IoT helped increase healthcare professionals' reach and efficiency to attend to a substantial portion of patients remotely, particularly in rural and underserved regions.

Amwell is an example of a telehealth platform that facilitates virtual visits and has integrated devices like TytoCare, which augment virtual consultation with the ability to perform remote physical exams such as measuring temperature and heart rates, and performing non-invasive examinations of the skin, lungs, and heart. Another example is XRHealth that helps healthcare professionals remotely administer physical and mental health therapy through immersive virtual reality platforms individualized for physical, occupational, and mental health therapies.

### Healthcare facility workflows

IoT helps optimize healthcare facility workflows and day-to-day operations by aiding workflow automation, medication management, asset tracking, patient and environmental monitoring and enhanced communications.

Hospitals use RFID and IoT based systems, such as GE Healthcare's AssetPlus, to track medical equipment and supplies, ensuring availability and proper maintenance of critical equipment, and reducing the time spent by hospital staff searching for the equipment. On the other side, remote patient monitoring systems, such as Medtronic's Vital Sync™, help hospitals manage patient data more efficiently, reducing wait times and improving care coordination.

Hill-Rom, a leader in hospital bed systems, developed a smart bed – Centrella Smart+ bed, which monitors patient movement and adjusts to prevent bed sores and alerts the nursing staff of patient attempts to get up to significantly reduce fall risks.

Vocera communications developed wearable badges that allow instantaneous communication between hospital staff to improve response time and coordination. Several hospitals now use IoT sensors and systems to automate day-to-day activities such as administrative tasks, predictive maintenance for equipment, and patient care.

### Artificial intelligence (AI) and machine learning (ML) integration

The rapid increase in computing power made available in the small forms enables powerful AI and ML tools to be developed and applied to healthcare, where health data collected by IoT devices is analyzed to predict health issues and provide personalized recommendations. Computer-assisted diagnostics or CAD is an emerging field that relies on automated visual analysis of tissue samples for early detection of diseases and generating prognoses. Aidoc is one such platform used to analyze medical images to detect abnormalities. The output helps prioritize urgent cases for radiologists, improving diagnostic efficiency.

Other examples of AI use for analyzing large volumes of medical data are IBM's Watson Health which analyzes patient health data to improve diagnosis and Google's DeepMind Health that analyzes data gathered by IoT devices to predict patient deterioration. Babylon Health provides personalized health assessments, triage, and consultations based on AI through its app.

### Outlook

With technology advancing rapidly, several different platforms are used to create IoT-based healthcare solutions, which brings new challenges in terms of interoperability of various platforms, infrastructure costs associated with advanced communications systems, and data protection.

The landscape of IoT in healthcare is very fragmented, with several different corporates and academia developing solutions tailored to specific challenges that they are tackling. This opens an opportunity to work on enhancing the interoperability between diverse systems, and Fast Healthcare Interoperability Resources (FHIR) standard by HL7 is a step in the right direction.

Fast communication is an important pillar of IoT and the wide roll out of 5G infrastructure will prove significantly advantageous for healthcare. Rush University Medical Center partnered with AT&T to become the first hospital to deploy 5G connectivity throughout their facilities, aiding use of IoT devices for patient care and telemedicine. On the other side of the world, Huawei and Guangdong Provincial People's

Hospital partnered to make the world's first remote robotic brain surgery over a 5G network possible.

Another significant challenge that IoT-enabled healthcare faces, in the medium- to long-term future, is that of data security. To enable analysis and quick decision-making, large amounts of personal health data are captured by the IoT devices and transferred over communications networks, which is vulnerable to hackers. Cybersecurity developers, such as MedCrypt and Irdeto, offer data security solutions for medical devices and patient data.

### Conclusion

IoT-enabled healthcare paints a rosy future for improving patient care, enabling personalized treatment, enhancing operational efficiency and resource utilization, aiding healthcare professionals' productivity, and enabling new forms of patient engagement.

Rapid developments in AI, IT, communications technology, and cybersecurity and their wide adoption promises upliftment of the global healthcare standards and improve accessibility to effective healthcare worldwide. However, as is the case with any new technology, it is rife with several different solutions, and governments worldwide will have to adapt quickly to formulate appropriate regulatory frameworks to prevent misuse of a wonderful boon to humanity that has the potential to be a bane of equal, if not larger, proportion. ■

## Author

**Akshay Ray**
Senior Manager, Technology Research & Advisory, Aranca

# Balancing Act - Domestic and Export Markets Fuel India's Pharma growth by 9%

The Indian Pharmaceutical Industry, including domestic and export segments, achieved an 8% CAGR from FY18 to FY24. In FY24, the industry grew by 9% year-over-year, reaching USD 54 billion, with exports rising by 10% and the domestic market growing by 9% compared to FY23. Regulated markets, making up ~60% of exports, saw an 11% y-o-y growth. Semi-regulated and unregulated markets grew by 7% y-o-y, rebounding from a 3% contraction in FY23. These markets are projected to grow at a CAGR of 8% (FY25-FY27), with regulated markets expected to grow at 9%.

**CareEdge Ratings** predicts an overall industry growth of 9% in the coming years, driven by parallel growth in both export and domestic markets. The Indian Pharmaceutical Industry is set for sustained expansion, with balanced contributions from domestic and export markets, and significant growth in both regulated and semi/unregulated markets.

**Overview of Indian Pharmaceutical Industry:**

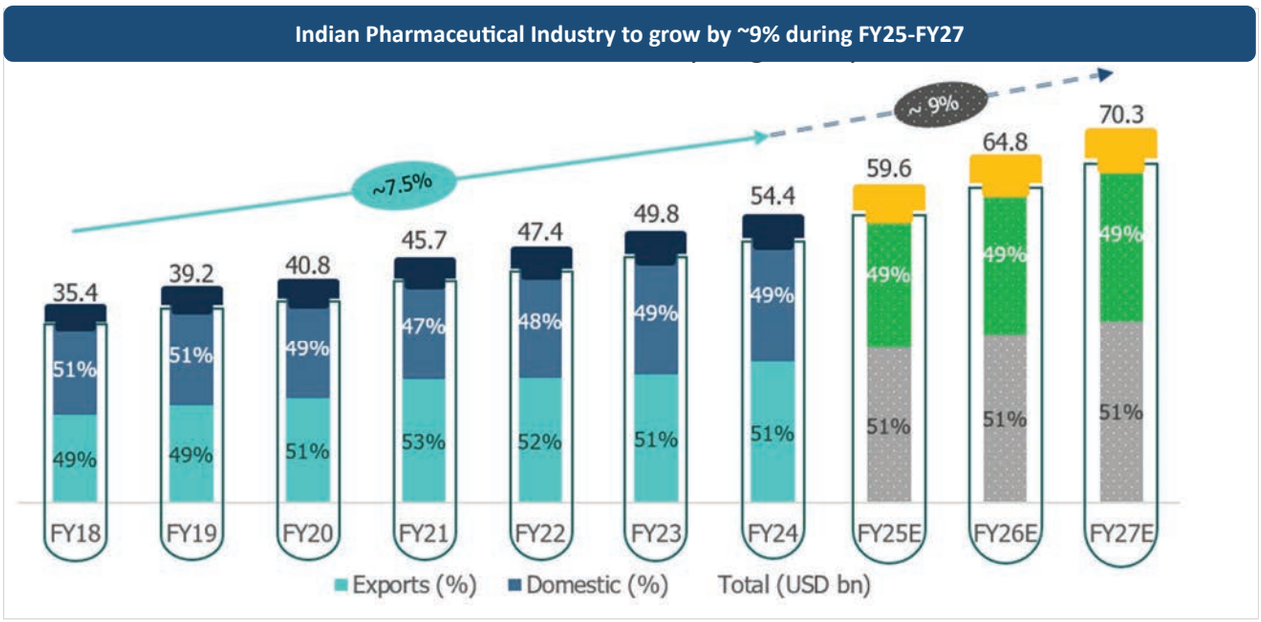
- The Indian pharmaceutical industry has demonstrated a Compound Annual Growth Rate (CAGR) of approximately 8% from FY18 to FY24, with the domestic market expanding by 7% and exports by 8%. FY24 was particularly robust, with the domestic sector growing by 9% and exports by 10%.

- Several factors contributed to the domestic market's 9% growth in FY24. There was a notable increase in demand for both acute and chronic segments. The revision in prices, adopted by pharmaceutical companies as permitted under the National Pharmaceutical Pricing Authority (NPPA), positively impacted overall revenue growth by approximately 4% to 5%. The introduction of new products further propelled growth by about 2% to 3%. Therapies for cardiac conditions, diabetes, and central nervous system (CNS) disorders experienced over 10% year-on-year growth, with other therapeutic areas also showing strong performance. Additionally, an increase in demand for existing therapies contributed about 2% to 3% to the overall growth.

**Indian pharma exhibits healthy growth both domestically and in exports:**

Indian Pharmaceutical Industry to grow by

- Exports demonstrated robust growth, particularly in the North American market, which accounts for approximately 40% of India's total pharmaceutical exports. After experiencing significant pricing pressures post-COVID-19 until FY23, this region saw a turnaround with a growth rate of approximately 13% in FY24. Key contributing factors included the easing




Source: CMIE and compiled by CareEdge

of pricing pressures, revitalization of biotech funding, the launch of specialty products, and deeper penetration into the generic market.

- The European, African, and Asian markets also reported commendable growth rates, ranging between 7% and 8.5% during FY24. Overall, exports increased by 10% in FY24, with regulated markets achieving an impressive growth rate of 11% and semi/unregulated markets growing by around 7%.

**Overview of Current Trends in the Pharmaceutical Industry**

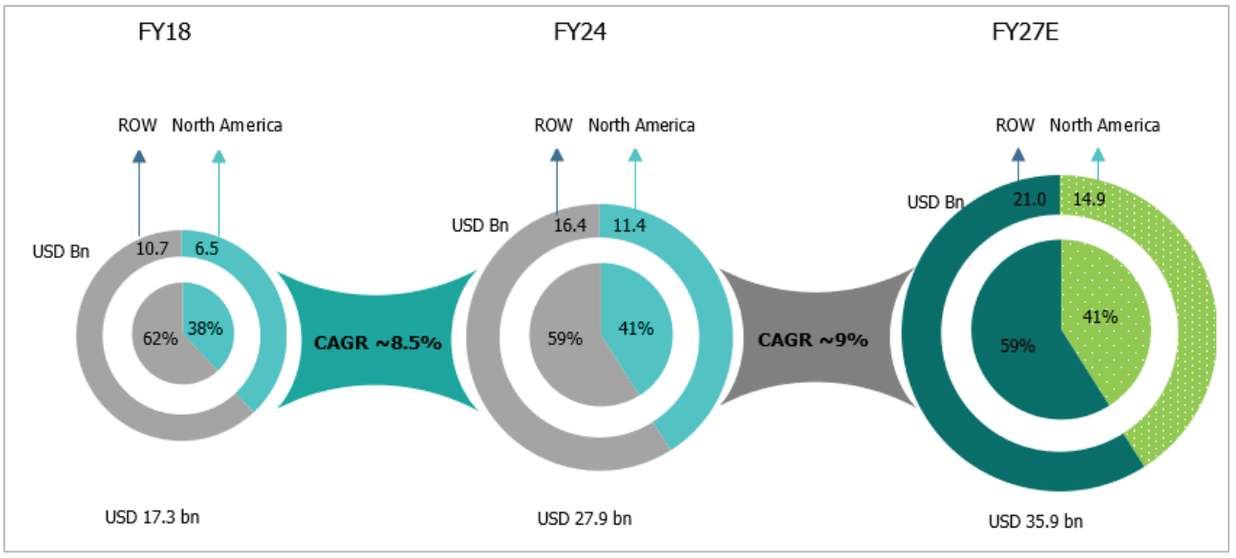
- Selective ANDA Filings: Due to increased competition and high costs, pharma companies are reassessing the economic viability of certain generic products for Abbreviated New Drug Application (ANDA) filings. This has resulted in a more selective approach with the USFDA and a reduction in the ratio of ANDA filings to approvals, easing competitive intensity in the US generics market. This shift has moderated price erosion and heightened demand for critical drugs.

- Regulatory Improvements: Between FY13 and FY18, Indian pharma companies faced significant regulatory challenges, impacting their operations and market entry. Over time, these companies have strengthened their systems, leading to fewer critical regulatory observations. The proportion of Form 483 observations classified as Official Action Initiated (OAI) by the USFDA decreased from 22% in CY14 to 10% in CY23, with most recent OAIs targeting smaller companies and a notable decline in data integrity issues.

- Bio-Secure Act 2024: The Bio-Secure Act 2024 is expected to benefit Indian pharma companies engaged in Contract Research and Manufacturing Services (CRAMS). Innovator companies are likely to relocate their research for Phase I, II, and III trials, boosting CRAMS players through increased contributions from innovator pharma companies, a gradual recovery in biotech funding, and the commercialization of new molecules in the discovery and development stages.

- Market Growth: The semi/unregulated markets experienced volatile growth from FY18 to FY24, with a CAGR of approximately 6%. Contributing 35-40% to total exports during this period, this segment is projected to achieve an 8% CAGR from FY25 to FY27, driven by an established base portfolio and new product launches.

**North American market continues to garner major share in Indian pharma exports**




Source: CMIE and compiled by CareEdge

## Conclusion

The Indian pharmaceutical sector is on the brink of substantial growth, with forecasts predicting an approximate 9% increase for the period FY25-FY27. This anticipated expansion is underpinned by several structural trends, including the domestic market's expansion driven by a 4% price increase, innovative product introductions, a growing focus on chronic therapies, and deeper market penetration into tier-2 and tier-3 cities. These trends are further supported by rising consumer awareness, enhanced digital engagement, and strategic industry consolidation through mergers and acquisitions aimed at bridging gaps in brands and therapeutic areas.

In the export domain, growth is expected to be fueled by diversification into specialty molecules, seizing opportunities in the off-patent market, and increased penetration into the Rest of the World (ROW) markets. Historically, the credit profile of Indian pharmaceutical firms has demonstrated stability, characterized by robust profitability and minimal debt reliance—a trend that is projected to persist moving forward.

In conclusion, the Indian pharmaceutical sector is well-positioned for continued growth and stability, driven by a combination of domestic and international opportunities that promise to sustain its positive trajectory in the coming years. ■

## Authors

**D. Naveen Kumar**
Associate Director
CARE Ratings Ltd

**Pulkit Agarwal**
Director
CARE Ratings Ltd

GUEST COLUMN

# Pharma Digitization fueled by Artificial Intelligence

Technology is becoming a great enabler to many industries in India. The pharmaceutical industry is witnessing a significant rise in the adoption of digital technology enabled models and tools especially artificial intelligence ("AI") and blockchain to streamline various processes.

**Dr. Milind Antani and Tanya Kukade s**hares insights about the AI in Pharma Digitization and AI is likely to play a major role in automating and standardising the quality assurance processes, ensuring high standards in drug development and production, reducing domestic issues, development costs, and increasing drug adherence.


**Tanya Kukade**
Member, Pharmaceutical and Lifesciences Practise, Nishith Desai Associates



**Dr. Milind Antani**
Pharmaceutical and Lifesciences Practise, Nishith Desai Associates


The move towards digitization in pharma is aimed at driving enhanced productivity, increasing supply chain efficiency and enabling increased focus on creating disruptive products with utmost focus on quality and safety.

In a bid to race ahead in the innovation game, pharma companies are willingly adopting AI to transform their businesses. Digital technology is seeping through every stage of the business operation, enabling companies to collect large amounts of data for use across various activities to assist them in meeting the goals of research and development, drug manufacturing, clinical development, supply chain management, quality assurance and control and enabling greater accessibility for drugs to patients.

Digitization is enabling pharma companies to cut down on costs of research and development and collection

of primary data repeatedly. Automation of manual processes has not only enabled the companies to reduce room for human error but it has immense potential to ensure maintenance of product quality standards which is ultimately beneficial in ensuring patient safety.

The flexibility of the AI algorithms allows the companies to mould the functions of various tools basis the dynamically evolving goals for research and development. AI is playing a crucial role in accelerating the identification of potential drug candidates and optimizing molecular design. Traditionally, the drug discovery process in India can take up to six-seven years, with clinical trials adding at least a few more years in the development cycle of the drug to reach the market. Digitization at this stage enables companies to enhance this process by putting in place specific AI tools for analysing large datasets and molecular patterns to identify new molecules and compounds for disease treatment. AI can predict drug efficacy and safety profiles in parallel with the datasets, thereby reducing time and costs associated with bringing new drugs to the market.

Upon completion of the research and development stage in the drug development cycle, next in line is the requirement for establishing the safety and efficacy of the drug for use in human beings. AI has the potential to play a dynamic role wherein it can expedite the prolonged process of participant selection by processing data on existing participants, diseases, demographics, infection rates, etc. to handling large and complex data generated through the clinical trial, thereby reducing the risk of human error. The data generated by automated processes in a clinical trial set-up would enable streamlining of such collection activities, followed by processing, research and submissions to the regulators.

AI has the potential to improve the design and conduct of clinical trials through remote monitoring, telemedicine, and patient-generated data, making trials more efficient and patient-centric. This improves the rate of success of such trials and accelerates the research process, bringing drugs to market faster and aiding in enhancing availability.

Additionally, the focus on application of blockchain technology to the pharmaceutical industry is also gaining momentum and by virtue of the nature of the technology, it has the capability to improve data integrity in clinical trials by securely storing and timestamping data, ensuring that it remains tamper-proof. In the realm of drug development, blockchain can facilitate collaboration among researchers by providing a secure platform for sharing data and intellectual property. This can accelerate innovation and reduce duplication of efforts.

Also, the application of the blockchain technology to the supply and distribution channel is also likely to enhance transparency, security, and efficiency across the supply chain. One of the key applications is in tracking and tracing of drugs that enter the market, ensuring authenticity and providing a mechanism for preventing counterfeit medications. This is becoming seemingly important in light of the growing concerns surrounding counterfeit and spurious drugs being circulated in the Indian market. The drug regulators are proactively testing drugs to ensure implementation of the drug regulatory framework and the number of drugs determined to be not of standard quality by the drug regulator are on the rise.

In the past, pharmaceutical and life sciences companies have been cautious of adoption of technologies given the costs, operational burden and regulatory uncertainty. However, during the COVID-19 pandemic there has been greater acceptance of technology in clinical trials.

Digitization is also playing a crucial role in optimizing the pharmaceutical supply chain by enhancing predictive analytics and automation capabilities. This integration enables accurate demand forecasting, efficient inventory management, and optimized production schedules, leading to streamlined and cost-effective operations. AI ensures real-time monitoring as well as maintaining the integrity of sensitive medications.

Digitization at the supply chain stage also enables greater transparency in the process and provides the manufacturers with end-to-end process visibility, thereby enabling easier identification of errors in the supply chain. AI tools are also being employed by pharma companies in optimizing inventory

management and improving decision making based on warehousing and demand and helps avoid stock-ups or shortages given that AI produces actionable predictions, coordinates maintenance efforts, and maximizes supply chain efficiency. For example, AI can predict stock of products, track daily orders by distributors, to optimize delivery times and sales.

AI in the pharmaceutical industry is not only benefiting the drug development and distribution cycle to ensure better availability of drugs in the market but is also faring well in its application to the disease diagnosis sector by enabling personalized treatment based on precise analysis. This is particularly valuable for diagnosing rare diseases, where AI helps doctors provide fast and accurate results, leading to precision medicine. Use of blockchain technology also has immense potential for patient data management, given the robust security features, which enable the secure sharing of sensitive health information while maintaining patient privacy. This can foster more personalized treatment plans and improve patient outcomes.

The focus of the companies to automate and digitize production by integrating digital technologies is likely to improve operations and enhance customer interactions with the company and its products. AI is likely to play a major role in automating and standardising the quality assurance processes, ensuring high standards in drug development and production, reducing domestic issues, development costs, and increasing drug adherence. ■

# Healthcare 4.0: Transforming the Healthcare Industry

Health 4.0 heralds a transformative vision for the healthcare industry, especially from the perspective of India Inc. By seamlessly integrating innovative process automation and industrial autonomy technologies, it promises to deliver improved, value-added, and cost-effective healthcare services to patients. This initiative aims to elevate the overall effectiveness and efficiency of the healthcare sector, a crucial development for India's rapidly growing population and healthcare demands.

**Sajiv Ravindran Nath, Chief Executive for India & South Asia Region, Regional Managing Director, Yokogawa India** emphasizes about Healthcare 4.0, which focuses on enhancing data security by ensuring the privacy and security of patient data through robust encryption and blockchain technologies.

Inspired by the principles of Industry 4.0, Health 4.0 redefines the healthcare business model, enhancing interactions among patients, stakeholders, infrastructure, and the entire value chain. This paradigm shift is poised to significantly improve the quality, flexibility, productivity, cost-effectiveness, and reliability of healthcare services, ultimately leading to higher patient satisfaction and boost healthcare tourism in India.

Health 4.0 leverages a suite of advanced technologies to revolutionize the healthcare industry. The Internet of Health Things (IoHT) encompasses interconnected medical devices and applications that communicate health data through the Internet, enabling continuous monitoring and real-time data exchange, which improves patient care and allows for timely interventions. Medical Cyber-Physical Systems (medical CPS) integrate physical and computational processes in healthcare environments, facilitating seamless interaction between hardware (e.g., sensors and actuators) and software to provide precise and reliable healthcare services.

The health cloud offers a centralized repository for storing and accessing health data, supporting scalable and flexible storage solutions and making it easier for healthcare providers to manage and analyze large volumes of patient information. Health fog computing extends cloud services to the edge of the network, closer to where data is generated, reducing latency and enhancing the responsiveness of healthcare applications. Big data analytics involves analyzing vast amounts of health data to uncover patterns, trends,

and insights, supporting evidence-based decision-making and personalized medicine.

Machine learning and intelligent algorithms enable predictive analytics, early diagnosis, and customized treatment plans by learning from vast datasets and improving over time. Blockchain technology ensures health data's security, privacy, and integrity by creating a tamper-proof and transparent record of transactions, enhancing trust among stakeholders in the healthcare ecosystem. Additionally, process automation technologies streamline workflows and operational processes, further boosting the efficiency and effectiveness of healthcare services.

The main objectives of Health 4.0 are multifaceted, aiming to transform the healthcare industry through several key initiatives. First, it seeks to improve patient care by integrating advanced technologies to enhance patient outcomes through personalized and timely interventions. Second, it aims to increase efficiency by streamlining operations and processes in healthcare facilities, thereby reducing waste and optimizing resource use. Third, Health 4.0 focuses on enhancing data security by ensuring the privacy and security of patient data through robust encryption and blockchain technologies. Additionally, it facilitates collaboration by promoting seamless communication among healthcare providers, patients, and other stakeholders.

Supporting innovation is another crucial objective, encouraging the developing and adoption of new technologies and solutions in the healthcare sector. In India, implementing process automation technologies within Health 4.0 is particularly significant, as it addresses the unique challenges of the country's healthcare industry. By automating workflows and operational processes, healthcare facilities in India can achieve greater efficiency and effectiveness, ultimately improving the quality of care and patient satisfaction.

Health 4.0 applications can be categorized into four primary groups based on their beneficiaries. Patient-targeted applications focus on improving patient care and experience through remote monitoring devices, personalized treatment plans, and telemedicine services. Applications supporting healthcare professionals assist providers in delivering better care with tools such as decision support systems, diagnostic tools, and surgical robots. Resource management applications optimize healthcare resources, including hospital beds, medical equipment, and staff, utilizing predictive maintenance systems, inventory

management tools, and workforce scheduling software. High-level healthcare systems management applications aim to enhance healthcare systems' overall management and governance with solutions like health information exchanges, population health management systems, and policy analysis tools.

As the development and utilization of healthcare applications under Health 4.0 are complex, a service-oriented middleware framework is proposed to offer standard services to application developers. This framework would facilitate integrating different services to build comprehensive Health 4.0 applications. Essential services in the framework include efficient and secure mechanisms for collecting and transmitting health data from various sources, robust measures to protect patient data and ensure compliance with regulatory requirements, and ensuring the consistent and dependable performance of healthcare applications and systems. From my viewpoint, adopting such a framework is crucial for advancing healthcare technology in India.

By leveraging expertise in automation and control technologies, the industries should be able to contribute significantly to developing this middleware framework, ensuring it meets the specific needs of the Indian healthcare industry. This approach enhances the efficiency and reliability of healthcare services and aligns with the broader vision and commitment to promoting innovation and improving patient care in India. Furthermore, this initiative supports the Make in India initiative by fostering local development and deployment of advanced healthcare technologies, thus contributing to India's economic growth and technological self-reliance.

### Conclusion

In this context, advanced technology is crucial in transforming the pharmaceutical, food, and water industries. Sensing and control technologies support innovations in products and production processes, enhancing productivity and ensuring high-quality standards. In the pharmaceutical industry, these technologies support biopharmaceutical production, which utilizes complex cell-cultivation processes. Such solutions help accelerate development and achieve stable processes needed for the efficient mass production of biopharmaceuticals.

Health 4.0 represents a transformative approach to the healthcare industry, integrating advanced technologies to improve patient care, increase efficiency, and foster innovation. By leveraging the principles of Industry 4.0, Health 4.0 aims to enhance interactions across the healthcare ecosystem, ultimately improving the quality and reliability of healthcare services while ensuring patient satisfaction. As the healthcare industry continues to evolve, the adoption and implementation of Health 4.0 technologies will play a critical role in shaping the future of healthcare, aligning with the goals of achieving well-being and sustainable development for all. ■

## Author

**Sajiv Ravindran Nath**
Chief Executive for India & South Asia Region, Regional Managing Director, Yokogawa India

# Leveraging CDMOs for Nutraceutical Research and Development

India's rich heritage in the nutritional value chain, rooted in ancient healing practices using herbs and natural resources, has positioned it as a global leader in this domain. Students and medical experts from around the world flock to India to study its extensive medicinal techniques derived from nature, which have been honed over thousands of years. The philosophical, practical, and spiritual significance of herb-based cures underscores their efficacy and acceptance, especially in addressing chronic diseases where modern medicines often fall short.

**Yuvraj Datta, Director of Manufacturing & Process Excellence, Zeon Lifesciences Ltd** emphasizes about the increasing trend of outsourcing services in the nutraceutical industry opened significant growth opportunities for contract development and manufacturing organization (CDMOs).

## The Rise of India's CDMO Sector

A contract development and manufacturing organization, or CDMO, offers end-to-end, fully cohesive drug development and manufacturing solutions and services that caters to biotechnology and pharmaceutical companies. This market is projected to reach USD278.98 billion by 2026. This implies that CDMOs play a crucial role in nutraceutical research and development.

India's Contract Development and Manufacturing Organization (CDMO) sector has rapidly emerged as a pivotal player in the global healthcare landscape. With its nutraceutical manufacturing facilities earning global accreditations, India has demonstrated a strong commitment to delivering high-quality products and services. Indian CDMOs are now interfacing with regulatory authorities, addressing challenges, and expanding their scope beyond mere manufacturing to become integral partners in the research and development (R&D) ecosystem.

The increasing trend of outsourcing services in the nutraceutical industry has opened significant growth opportunities for CDMOs. National and international players are increasingly relying on external service providers for their R&D and manufacturing needs. India has long been a preferred location for global companies to outsource these services, thanks to its robust technical expertise and regulatory-compliant facilities. Indian CDMOs, with their comprehensive capabilities ranging from clinical trials to commercial production, have proven to be capable partners for the global industry.

## Benefits of Outsourcing to CDMOs

Outsourcing to CDMOs offers several advantages. Companies can optimize their fixed costs by leveraging the cost-effective business models of CDMOs. This flexibility allows firms to scale their operations efficiently, reducing the financial burden associated with maintaining in-house R&D and manufacturing capabilities. Moreover, outsourcing enables companies to focus on their core competencies, such as marketing and distribution, while entrusting specialized tasks to experts in the field.

## Innovation Through Collaboration

Collaboration between nutraceutical companies and CDMOs is a driving force behind innovation in

the industry. By combining their strengths, these partnerships can accelerate the development of new products and technologies. CDMOs bring a wealth of expertise in process development, regulatory compliance, and quality assurance, ensuring that products meet the highest standards of safety and efficacy.

For instance, the development of a new dietary supplement might involve several complex steps, from initial formulation to large-scale production. A CDMO can provide end-to-end support, including raw material sourcing, formulation development, clinical trial management, and regulatory submissions. This comprehensive approach not only streamlines the development process but also enhances the overall quality of the final product.

### Addressing Regulatory Challenges

Navigating the complex regulatory landscape is a major challenge in the nutraceutical industry. CDMOs play a vital role in helping companies address these challenges by providing guidance on regulatory requirements and ensuring compliance with relevant standards. This is particularly important in the context of nutraceuticals, where regulatory frameworks can vary significantly between regions.

Indian CDMOs have developed strong relationships with regulatory authorities and possess a deep understanding of the regulatory environment. This expertise enables them to provide valuable support to their clients, from initial product development to market authorization. By partnering with CDMOs, nutraceutical companies can mitigate regulatory risks and accelerate their time to market.

Furthermore, Indian CDMOs have been proactive in adopting international best practices and certifications, such as Good Manufacturing Practices (GMP) and ISO standards. These certifications not only enhance the credibility of the CDMOs but also provide assurance to international clients about the quality and safety of the products developed and manufactured in India.

For example, the Indian CDMO industry has made significant strides in achieving compliance with the U.S. Food and Drug Administration (FDA) and European Medicines Agency (EMA) regulations. This compliance ensures that the nutraceutical products manufactured in India can be readily exported to and marketed in these regions, thereby expanding the global reach of Indian-made nutraceuticals.

### The Future of CDMO-Nutraceutical Partnerships

The future of the nutraceutical industry lies in fostering even closer collaborations between companies and CDMOs. As consumer demand for natural and health-enhancing products continues to grow, the need for innovative solutions will become increasingly important. By leveraging the capabilities of CDMOs, nutraceutical companies can stay ahead of the curve and deliver cutting-edge products to the market.

One area of potential growth is the development of personalized nutraceuticals, which are tailored to meet the specific needs of individual consumers. This approach requires a deep understanding of both traditional medicine and modern science, making CDMOs ideal partners for such initiatives. By working together, nutraceutical companies and CDMOs can create personalized solutions that offer significant health benefits and cater to the unique preferences of consumers.

Another promising area is the integration of advanced technologies, such as artificial intelligence (AI) and machine learning, into R&D processes. These technologies can help in identifying new bioactive compounds, optimizing formulations, and predicting consumer responses to new products. CDMOs equipped with these advanced capabilities can offer a competitive edge to nutraceutical companies by accelerating the innovation cycle and enhancing product efficacy.

Additionally, sustainability is becoming a critical consideration in the nutraceutical industry. Consumers

are increasingly seeking products that are not only beneficial for their health but also environmentally friendly. CDMOs that adopt sustainable practices, such as sourcing raw materials responsibly, reducing waste, and minimizing their carbon footprint, will be in a strong position to meet this growing demand. By prioritizing sustainability, CDMOs can contribute to the overall well-being of the planet while delivering high-quality nutraceutical products.

### Conclusion

Innovation through collaboration is the key to unlocking the full potential of the nutraceutical industry. India's CDMO sector, with its rich heritage in traditional medicine and strong technical expertise, is well-positioned to lead the way in this dynamic field. By partnering with CDMOs, nutraceutical companies can accelerate their research and development efforts, navigate regulatory challenges, and bring high-quality products to market more efficiently.

The growing trend of outsourcing in the nutraceutical industry underscores the importance of strategic partnerships. As companies continue to seek cost-effective and flexible solutions, the role of CDMOs will become increasingly crucial. Together, through collaboration and innovation, we can achieve mastery in the nutraceutical value chain, reaching new heights in health and wellness. ■

## Author

**Yuvraj Datta**
Director of Manufacturing & Process Excellence,
Zeon Lifesciences Ltd.

# Pharma Digitisation

The impact of these applications in Healthcare and Pharmaceutical is also seeing fast evolution and unlocking opportunities like never before. Traditionally, we have seen use of digital capabilities to streamline operational efficiencies. **Tushar Mansukhani, and Kshitij Vijayvargiya, BCG** emphasizes about the emerging technology paradigms and advancement of AI and digitization.

Pharmaceutical organizations have used technology to enhance yields, optimize manufacturing cycle times, reduce deviations and manage inventories; and to good effect. Often times, a 10-25% improvement in respective KPIs and outcomes has been observed; leading to enhanced bottom lines.

Emerging technology paradigms, especially those with generative capabilities, however, open up new transformative opportunity dimensions; including in spaces of R&D and commercial which were relatively insulated from tech developments in the past

### Technology in Pharma R&D and Quality

Many global pharmaceutical companies have now started using a combination of machine learning and Generative Ai Foundational models to augment their R&D processes in molecule discovery, RoS design, clinical trial design and target identification. This can lead to product development cycle time reduction from 11-13 years to 6-7 years leading to faster patient access to innovative therapies.

This will also enhance competition with more players coming to market and with newer technologies, leading to lower cost of therapy for patients. Generic pharma companies also have an opportunity to leverage foundational models trained on clinical information to augment their R&D teams with knowledge platforms. Such platforms can help faster identification of potential route of synthesis, chemical pathways and interactions and optimized experiments leading to faster development. Additionally, technology can help companies in being more prepared and thorough in regulatory filings, dossier generation as well as quality documentation (e.g APQR creation).

### Technology in Front end Commercial operations

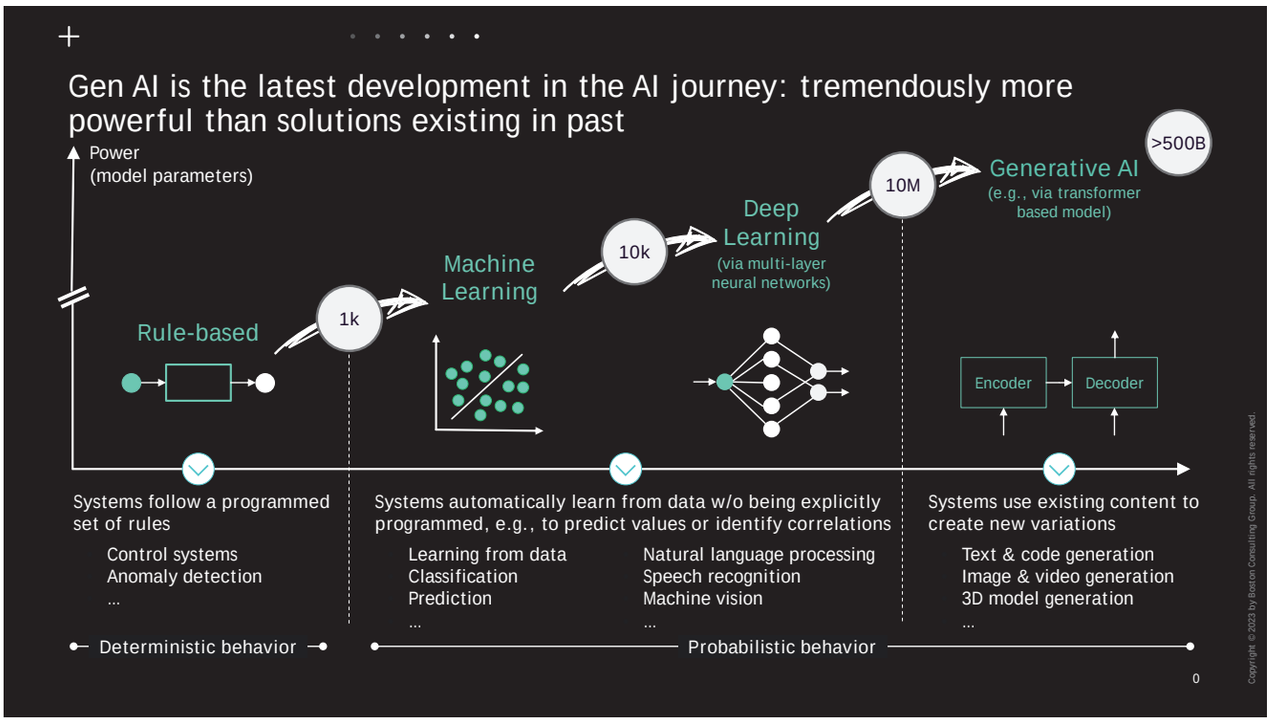
On the Front end, today's technology creates immense opportunity to enhance efficiency as well as effectiveness in the sales process. Historically, pharmaceutical companies have relied on sales representatives to build and establish connect with doctors. The industry, however, also struggles with heavy attrition at the front line, which leads to loss of the relationships and doctor priorities.

Strong technology enabled systems will help organizations build institutional knowledge and augment their sales team. Companies more evolved in their digital journey are already seeing their sales teams achieve higher engagement from the doctors by leveraging 360 degree doctor engagement (timely nudge, beyond clinic engagement, personalized content..). The organizations also see their new sales reps ramping up and reaching desired productivity by as much as 30 days faster by using AI for training, contextualization and engagement modeling

### Technology in Marketing

The marketing teams also have opportunities to leverage technology in creating marketing content faster. The engagement content can now be customized for a segment of one (for variables including geography, doctor persona, patient profile, other stakeholders) within hours, and can be delivered efficiently using digital handhelds with the sales team or through omni-channel engagement.

While in the past, pharma sales reps used to rely on static detailing aids that would change once in 6-9 months, nowadays, you have the possibility to




use different and custom aids for each discussion. Additionally, organizations no longer have to rely only on sales reps to engage physically with doctors – but can enhance reach by using virtual-sales calls, GenAI reps and by omni-channel engagement. Latest examples of omni-channel have shown upto 3-5% enhancement in engagement scores with users.

The impact of technology transcends much beyond the internal processes for an organization. Especially, in today's informed world, we are observing impact of technology in the overall stakeholder dynamics that could influence the way organizations look at their strategies. For example:

## Digitally Integrated patient journeys

Patient journeys have a significant potential to be overhauled owing to creation of digital infrastructure and capabilities. We see the patient journey evolving across 4 key areas.

**Screening and Diagnosis:** Advanced AI supported diagnostics (e.g. 3 TESLA MRI) now have in-built features of identifying and highlighting potential areas of concerns and scrutiny – e.g. in early identification and detection of likely cancers. Along with access to longitudinal patient data, these could lead to broader and more wide-spread testing and detection of morbid NCDs and would bring super-specialties closer to patients in Tier 3 and 4 towns in India.

**Deeper access through hybrid multi-venue care:** Remote monitoring, virtual consults and connected OT/ICUs will improve access to care beyond large towns and will further enhance uptake of products in smaller towns.

**Continuous Monitoring:** Digital wearables and biosensor led remote monitoring are increasing the awareness of health outcomes in the users. With increasing health awareness and ready markers, usage of appropriate preventive products and supplements is increasing, and offers opportunities to create specialized and differentiated health products.

## Digital therapeutics and companion applications

Companion apps are finding increasing favour with users, both, for post intervention care to augment recovery, as well as condition management, including in conditions such as COPD, Asthma, IBS and other gastro-intestinal conditions, and recovery from interventions. This should promote higher adherence in patients, and offer data that can be leveraged for faster and better real world evidence generation and subsequently for research.

## Technology in healthcare provisioning

Advances in AI and digitization have potential to unlock the quality of healthcare provisioning and is likely change the roles of key stakeholders.

**For illustration:** AI for doctor support & co-pilot: A recent assessment of clinical engagement revealed that on an average, quality of clinical responses of AI was better than the equivalent clinical response from doctors. More interestingly, the empathy displayed by AI was also much higher than that for doctors. While the role of doctors is paramount in healthcare, such outcomes may drive a shift in the doctor-patient engagement, with a lot more use of technology assistance as co-pilot, and doctors over-indexing on psychological well-being and support of patients and addressing complex cases.

AI in nursing and monitoring: Patient monitoring systems and data integrations would eliminate the need for regular observations by nurses and caregivers in the hospital and across home care settings. Adoption of data systems will also reduce the burden of administrative tasks on nursing staff, and release time for patient care

**Advancements in Companion diagnostics**: Companion diagnostics, esp. for oncology and rare diseases will create opportunities towards wide-spread testing, thus enhancing treatment rates, as well as for organizations to build businesses around Point of Care companion diagnostic solutions.

**Ecosystem evolution:** In addition to connecting various stakeholders, one big impact of technology and longitudinal data will be the emergence of the payor ecosystem in India. The trend towards creating integrated payor-provider models, like those prevalent in the western world, is already emerging in India and will further strengthen including OPD insurance. This will further increase adherence to medication regimes and preferences for higher quality of medicines.

Sustained policy action and concerted efforts will be needed to accelerate the journey and put the Healthcare ecosystem on a path to capture the fruits of technology and digital possibilities:

### Digital skilling

Healthcare workforce would need training and skilling in digital technologies. This is true, both within organizations (e.g. Research scientists, Quality workforce and Sales teams would need to be trained to embrace digital), in the regulatory ecosystem (e.g. acceptance of technology generated submissions) as well as incorporating digital as a structured curriculum in the education for doctors, nurses and all allied and adjacent health professional.

Technology ecosystem and partnerships: The digital solutions scale best when different organizations with the right skills and capabilities come together to complement each other and promote innovation and solutioning. Organizations will need to embrace such partnerships rather than looking at players with suspicion and mistrust.

### Enhanced Policy Implementation

Strengthening the implementation and reach of initiatives like ABDM and PMJAY is crucial to build the trust and transparency. These programs provide the foundation for a connected and inclusive healthcare system with clear data exchange guidelines creating operating guidelines for the ecosystem and ensuring that digital health solutions reach every corner of the country

### Interoperability Standards

Developing and implementing interoperability standards for health information systems will ensure seamless data exchange between different healthcare providers. These standards will facilitate the integration of EHRs, telemedicine platforms, and other digital health tools, creating a unified healthcare ecosystem

The digital innovation and disruption is the fact of the hour, and best path is to drive the strategic investments and setting up of structured enablers to help achieve the right outcomes for both organizations and for stakeholders. ■

## Authors

**Tushar Mansukhani**
Principal, BCG

**Kshitij Vijayvargiya**
Managing Director & Partner
BCG

# The Microbiome Revolution: How Genomics Is Changing the Gut Health Diagnostic Landscape and Personalized Medicine

The human body harbors an extensive network of microorganisms called the human microbiota. The human Microbiome is the conglomeration of genes of these extensive plethora of microbiota responsible for our overall health. This ecosystem works symbiotically to keep us healthy and sway digestion, immunity, mood, and mental health. Recent research has singled out an immense link between dysbiosis of gut microbiota and a range of chronic diseases: inflammatory bowel disease, diabetes, and some neurological disorders. **Dr. Subhradeep Majumder, Consultant Microbiologist, CORE Diagnostics** emphasizes about how Genomics is changing the Gut Health Diagnostic landscape.


This emerging area of health science is sparking a "gut health revolution," with India actively engaging in this global movement..The Indian market for gut health diagnostics is expected to grow to a remarkable USD 1.2 billion by 2027, driven by heightened awareness of gut health and the increasing prevalence of chronic illnesses.

Gut Health Diagnostics at the Frontline: Unleashing Personalized Gut Health Insight

At the heart of this revolution is the domain of gut health diagnostics. Companies like Core Diagnostics, a leading Indian provider of cutting-edge diagnostic solutions, are at the forefront of unlocking personalized insights into gut health through microbiome analysis. Their innovative tests, such as the "Microbiome Signature Test," use advanced next-generation sequencing (NGS) technology to accurately identify and measure the types of bacteria in a person's gut.

### Role of NGS in Gut Health Diagnostics

Conventional diagnostic methodologies related to gut health led us to very limited information. However, NGS by evaluating the complete genetic information present

in gut microbiota can provide us with a futuristic approach for better understanding of microbiome. This may lead to delineation of individual bacterial strains specifically responsible or contributing to various diseases and can help prevention of future health risks.

Advantages of Personalized Gut Health Insights

The insights from such high-end diagnostics enable primary healthcare professionals to come up with a treatment strategy tailored to each individual patient based on their unique microbiome.

Here are some advantages of personalized gut health diagnostics

Targeted therapies: Doctors can prescribe revised therapy targeted against the identified imbalance of bacteria in the gut, be it beneficial bacterial prebiotics, probiotics or dietary changes to improve gut health.

Early Detection of Diseases: Gut microbiome analysis can give early signs of potential health issues and give insight into the prevention of the same.

Better Treatment Outcomes: This is because individualized treatment plans can be formulated based on individual gut microbiome profiles for better recovery and shorter periods of recuperation.

### Challenges and Considerations

Despite the huge potential of gut microbiome diagnostics, challenges are inevitable. More innovative researches are required to fill the knowledge gap about the complex relationship between the gut microbiome and human health, increased need for standardization of interpretation methods of test results, as well as determining an ideal composition for the microbiome itself.

Despite these challenges, the future of gut health diagnostics in India seems very bright. The research is ongoing in this field, technology is developing, and awareness is increasing at present; hence, it definitely holds very huge potential to revolutionize personalized medicine.

### Going Beyond Basic Testing: Adopting a Comprehensive Strategy

One has to remember that gut health tests are merely a small portion of this huge problem. A sort of holistic approach to gut health management remains absolutely necessary. You will still need to eat well with ample fibre, exercise well, augment your stress to a minimum, and get enough rest for optimal gut microbiome function.

Mainstream Diagnostics: A Key Ally in Gut Health Businesses like Mainstream Diagnostics are committed to giving medical professionals the latest technology so that every gut health test is as effective as possible. Only by innovation coupled with learning will physicians be able to use the benefits of Tailored Medicine for patients and gain the best gut health possible.

### Conclusion

The revolution of research in microbiome is changing how we view gut health and its role in our overall health. Such tools, like the ones made available to Mainstream Diagnostics, lead the way into personalized medicine across India. It is by revealing and raising awareness of the mysteries hidden within the gut microbiome that new eras of preventive and proactive health care could be delivered to each and every one of us. ■

## Author

**Dr. Subhradeep Majumder**
Consultant Microbiologist,
CORE Diagnostics

UNION BUDGET 2024

# 2024 Union Budget: Industry Leader's Reaction

2024 Union Budget has been announced by Finance Minister Nirmala Sitharaman. Here are the few eminent industry leader's reaction.

**Kiran Mazumdar Shaw**
Chairperson, Biocon & Biocon Biologics

"The Union Budget for FY25 builds further on the government's pre-election, Interim Budget and has positive indicators on how the government is looking at India's economic growth and development. The FM's emphasis on job creation through skilling is a key underlying theme. Internships at large companies with Government and CSR backed stipends is the right approach to employability and jobs for the future. The budget has also focused on the start up ecosystem and provided a fillip through the abolition of the 'angel tax' which is aimed at spurring investments in start-ups, and the emphasis on 'ease of doing business' will benefit MSMEs.

The government's focus on research and innovation, especially agritech and industrial research, is a welcome move. The allocation of Rs 1 lakh crore financial pool will spur private sector-driven research and innovation at commercial scale. We will need to read the details to see how this will be allocated to each sector. The removal of Customs duty on three cancer drugs will provide relief to cancer patients. However, the government needs to consider GST exemption for all cancer drugs to make cancer care more affordable for patients."

**Joydeep Ghosh**
Partner and industry leader, Life Sciences and HealthCare Industry, Deloitte India

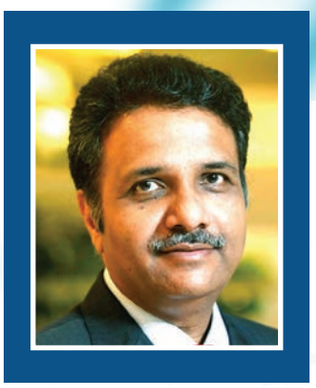
"There has been a higher allocation of 89,247 crores to healthcare sector in FY24-25, more than 10% increase against the revised estimate of Rs. 80,518 crores for FY 23-24, which is welcome. In addition, the increased allocation to Ayushman Bharat - Pradhan Mantri Jan Arogya Yojana (PMJAY) of Rs. 7300 crores demonstrates the importance and priority that the Government accords towards healthcare. Though sectoral announcements for Pharma, Medical Devices and Healthcare, have not been very specifically called out in this budget, the same appears to be part of most of the priority areas announced by the Hon'ble Finance Minister today. The need of the hour is: in the seven months left for the next annual Union Budget, schemes aiming to meet priority needs in this fiscal year, are implemented in line with the budget allocation, in a timely and effective manner."

UNION BUDGET 2024

**Sanjay Vyas**

Executive Vice President and Managing Director, Parexel

"The healthcare sector has received a significant boost, with an allocation of ₹89,287 crore, marking a substantial increase from ₹79,221 crore in FY 2023-2024. The Union Budget also increased allocation for R&D, particularly through the Anusandhan National Research Fund, a welcome step for the clinical research industry. This aligns with the sector's growing emphasis on innovation. Furthermore, the government's push for digital infrastructure under the Jan Vishwas Bill will significantly enhance the operational efficiency of clinical trials. Moreover, the budget's emphasis on skill development and women's empowerment will contribute to a robust talent pipeline for the life sciences sector. These measures collectively position India as a more attractive destination for Global Capability Centers (GCCs)."



**Hitesh Sharma**

Partner and Life Sciences Leader – Tax EY India

"The budget has maintained a neutral stance towards the Pharmaceutical and Healthcare sector. Noteworthy advancements include a commitment to enhance R&D, with an emphasis on basic research and the development of prototypes - reemphasis of commitment made in interim budget. Additionally, the budget proposes the elimination of customs duties on select cancer medications and a reduction of Basic Customs Duty (BCD) on specific X-ray related products. Also skilling initiative and support would help the healthcare sector. However, the budget did not focus on healthcare infrastructure, the manufacturing of medical devices, or incentives for R&D, which were notable omissions."

**Dr. Sujit Paul**

Group CEO at Zota Healthcare Ltd.

"Union Finance Minister Nirmala Sitharaman, introducing the Pradhan Mantri Janjati Unnat Gram Abhiyan scheme, said it would be a transformational scheme with the goal to improve living conditions for 50 million tribal individuals across 63,000 villages. This scheme will strive toward a healthier and more connected India through enhanced provisions for road connectivity, telecommunication, and healthcare facilities. A major high point of this budget was the relief in customs duty to three more cancer medicines, bringing down drastically the prices for vital therapies. This provides ample evidence that it is, in reality, a gesture pro-people, born out of concern for the common man. More significantly, the outlay on the health sector at ₹90,171 crores, higher than last year, only goes to further reinforce this commitment.

To maintain this impetus, the industry leaders have asked for an increase in funding, tax benefits to the healthcare businesses, and streamlined GST rate for products so that they can reach far more. Ensuing AI-led health initiatives and reforming regulations are also being taken with much interest, besides encouraging public–private partnerships in strengthening healthcare delivery. There is an imperative need to invest in training and skill development among health professionals so that these are battle-ready in today's contemporary technologies.

# Powerful Process Control with IND500x Weighing Indicators

Ensuring consistent quality in hazardous environments, particularly in Ex-Areas (Zone 1/21, Division 1), is a critical aspect of industrial operations. The IND500x weighing indicators from METTLER TOLEDO provide a robust solution for these challenging settings, offering optimized safety and productivity.

▪ **Versatile Applications :** The IND500x is designed to handle a wide range of applications, thanks to its high-resolution capabilities of up to 30,000d. Whether used for simple weighing tasks or more complex automated processes, it supports inventory control, filling, and formulation with precision and reliability.

▪ **Error-Free Operation**: To minimize the risk of operational errors, the IND500x incorporates features such as error messages and step-by-step operator guidance. These functionalities ensure that tasks are performed accurately and efficiently, reducing downtime and enhancing overall productivity.

▪ **Full Network Connectivity**: Modern industrial environments demand seamless integration with various control systems. The IND500x meets this requirement by offering flexible connectivity options, including high-speed interfaces compatible with PLCs or DCS systems. This ensures smooth data communication and process management across the entire network.

▪ **Maximum Process Control** : The indicator supports both manual and automated control operations, providing unparalleled flexibility. It is particularly effective in filling or formulation processes, where precise control over material flow is essential.

## Key Features of IND500x

**Global Approvals:** The IND500x comes with global approvals, making it suitable for use in standardized operations across different regions.

**Flexible Communication Options:** It integrates easily with PLC or DCS systems, offering various communication protocols to suit different industrial setups.


**Built-in Applications:** The device includes pre-installed applications that simplify complex tasks such as filling and formulation, ensuring users can achieve optimal results with minimal effort.

The IND500x weighing indicators are a powerful tool for industries operating in hazardous areas. By combining versatility, error-free operation, full network connectivity, and maximum process control, they help optimize both safety and productivity. For industries requiring precise and reliable weighing solutions, the IND500x stands out as a top-tier choice.

## About METTLER TOLEDO

METTLER TOLEDO is a leading global manufacturer of precision instruments. The Company is the world's largest manufacturer and marketer of weighing instruments for use in laboratory, industrial and food retailing applications. The Company also holds top-three market positions for several related analytical instruments and is a leading provider of automated chemistry systems used in drug and chemical compound discovery and development. In addition, the Company is the world's largest manufacturer and marketer of metal detection systems used in production and packaging. Additional information about METTLER TOLEDO is available at www.mt.com. ■

*Email us at – sales.sales@mt.com*
*Call us toll-free at – 1800 22 8884 & 1800 1028 460*
*Visit: www.mt.com/pro*

# Mankind Pharma acquires Bharat Serums and Vaccines for ₹ 13,630 Crores

Rajeev Juneja, Vice-chairman and MD, Mankind Pharma

**Mumbai, India:** Mankind Pharma Limited has entered into a definitive agreement to acquire a 100% stake in Bharat Serums and Vaccines Limited (BSV) from Advent International, one of the world's largest and most experienced private equity investors, for an enterprise value of approximately. ₹ 13,630 Crores, subject to closing related adjustments. This strategic move marks a significant leap for Mankind Pharma, positioning it as a market leader in the Indian women's health and fertility drug market alongside access to other high entry barrier products in critical care with established complex R&D tech platforms.

With over five decades of leadership in biopharmaceuticals, BSV has developed recombinant and niche biologic products in-house, demonstrating its strong R&D capabilities and boasts of a robust branded product portfolio across Women's Health, Fertility and Critical Care, with a few of its marque brands enjoying a strong leadership position in their respective therapy areas. BSV's dedicated in-house R&D centre along with a dedicated team of 60+ scientists, a strong product pipeline, coupled with a diverse domestic product portfolio offering huge scalability potential through niche filings across markets.

BSV has a niche portfolio offering in Women's Health, encompassing the entire lifecycle – from fertility to post-pregnancy. BSV has one of the most comprehensive portfolio in fertility segment to scale in both India and International markets amid increasing IVF penetration. The company remains committed to delivering high quality, innovative healthcare solutions at affordable prices to meet the evolving needs of patients and healthcare providers worldwide.

Rajeev Juneja, Vice-chairman and Managing Director, Mankind Pharma Ltd. shared "BSV's acquisition represents a pivotal milestone in Mankind's journey, establishing us as market leader in Indian women's health & fertility segment. We believe women's health & fertility segment has massive opportunity along with strong growth visibility globally, led by structural tailwinds. BSV's established Specialty R&D Tech Platforms with complex portfolio across Women's health, Fertility, critical care and Immunoglobulin segment perfectly aligns Mankind Pharma's strategic vision to expand its footprint in high entry barrier portfolio. We are also delighted to welcome BSV's 2,500+ members to our Mankind family. Together, we look forward to achieving even greater milestones and making a positive impact on women's health worldwide."

Sheetal Arora, Chief Executive Officer and Whole-time Director, Mankind Pharma Ltd. shared "Mankind's strategic acquisition of BSV with branded specialty pharma portfolio across India and Emerging Markets presents immense growth potential and will add to existing growth velocity of Mankind. Moreover, BSV's business will be highly synergistic with our comprehensive product portfolio, expansive field force and doctor coverage. We are confident this would correspond to the expansion of EBITDA margins and

thereby solidify our position as a company known for marketing innovative and specialized offerings."

Shweta Jalan, Managing Partner and Head of Advent India, commented, "Mankind's investment in BSV is a testament to our approach of identifying and nurturing unique businesses, working with high-quality management teams and building these businesses into respected industry leaders. With the building blocks in place, we are confident that Mankind Pharma and BSV's management team will continue the accelerated journey to build one of India's largest pharma companies."

Pankaj Patwari, Managing Director, Advent India, said, "We are delighted that BSV has found the right home and is joining forces with Mankind Pharma. BSV's deep-domain R&D capabilities and unique portfolio of products combined with Mankind's strong pan-India coverage and growth orientation will provide significant synergies; bringing differential scale, reach and capabilities. We are excited for BSV to support Mankind's aspirations of 'Building a Healthier Bharat'."

Sanjiv Navangul, CEO & Managing Director, BSV, said, "We are proud to be one of the few Indian companies that have several first-of-its-kind indigenously developed complex treatments that have delivered better patient outcomes. This acquisition reinforces our commitment towards bringing cutting edge products and expanding our access to millions of patients in India and across the globe. With a proven and established leadership in women's health and critical care, our robust R&D pipeline, and best-in-class manufacturing, and above all, a dedicated and high-performing one-BSV team will add immense value to Mankind Pharma as we grow together, synergise our strengths and explore opportunities towards bringing healthcare closer to every home in India and across the world."

BSV reported revenues of ₹ 1,723 crore in FY24, delivering robust 20% y-o-y growth with adjusted EBITDA Margins of 28%. The business has grown at ~21% revenue CAGR[ii] over the last 3 years.

The company also signed a Non-Exclusive Patent License agreement with Takeda Pharmaceutical Company for commercialising 'Vonoprazan' in the Indian market. The agreement allows Mankind Pharma to launch the novel drug for treating Gastroesophageal Reflux Disease (GERD) under its trademark. Vonoprazan is a potassium-competitive acid blocker (P-CAB) used for the treatment of acid-related disorders, including Gastroesophageal Reflux Disease (GERD). The drug is effective in treating conditions such as erosive oesophagitis, gastric ulcer, duodenal ulcer, peptic ulcer, gastro-oesophageal reflux, reflux oesophagitis, and Helicobacter pylori eradication.

M Ramesh, EVP – Global Business Development - Mankind Pharma Limited, said, "This non-exclusive patent license agreement with Takeda aligns with our commitment to bringing innovative and effective treatments to patients in India. By introducing Vonoprazan, we aim to address a significant medical need and improve the quality of life for those suffering from acid-related illnesses with a new and advanced option for managing acid-related disorders, potentially offering improved health outcomes and quality of life."

Mankind Pharma is one of the largest pharmaceutical company in India, which focuses on the domestic market with its Pan India presence. Mankind operates at the intersection of the Indian pharmaceutical formulations and consumer healthcare sectors with the aim of providing quality products at affordable prices. The company is a leading player in the domestic pharmaceuticals business present across acute and chronic therapeutic areas including anti-infectives, cardiovascular, gastrointestinal, antidiabetic, neuro/CNS, VMN and respiratory, among others with a strategy to increase chronic presence going ahead. In the consumer healthcare business, the company operates in the condoms, pregnancy detection, emergency contraceptives, antacid powders, vitamin and mineral supplements and anti-acne preparations categories, among others, with several category-leading brands. ■

## DOMESTIC

### Bio Pharma and Lab Analytix World Expo 2026

**Dates:** 3-6 February, 2026

**Venue:** Bombay Exhibition Centre, Goregoan East, Mumbai, India

**Details:** The Bio Pharma and Lab Analytix World Expo 2026 will bring together the stakeholders and leaders for the pharma industry, which will focus on emerging trends and technologies.

**Contact:** 022-40373636
**Email:** sales@jasubhai.com
**Website:** www.chemtech-online.com

### International Conference on Pharmaceutical Chemistry (ICPC)

**Dates:** 6th September 2024

**Venue:** Jabalpur, India

**Details:** ICPC-24 will create a global platform to researches, scientists, academicians, policymakers, industry experts to share experiences, discuss research findings and acquire and the desired knowledge in the subject from around the world with many networking opportunities.

**Contact:** +91-9677007228
**Email:** info@sfe.net.in
**Website:** https://www.sfe.net.in/

### 12th World Conference on Pharmaceutical Science and Drug Manufacturing

**Dates:** 19-20th September, 2024

**Venue:** Goa, India

**Details:** The challenges associated with pharmaceutical research and drug production will be discussed and technologies that can be implemented will be explored. As the experts involved, attendees can expect to gain valuable insights on industry trends and potential solutions for ongoing issues..

**Contact:** +91-9884076645
**Email:** pharma@bioleagues.com
**Website:** www.assopharm.com

### Pharma Pro&Pack Expo 2024

**Dates:** 26-28 September, 2024

**Venue:** HITEX Exhibition Centre, Hyderabad

**Details:** Pharma Pro&Pack Expo empowers the manufacturing industry by facilitating ideal ground for networking and opportunity to get acquainted with latest machinery by bringing the best of the industry under one platform.

**Contact:** +91-22-42554766
**Email:** leonara.braganza@mm-india.in
**Website:** www.pharmapropack.com

## INTERNATIONAL

### EgyMedica 2024

**Dates:** 11 - 13 Sep 2024

**Venue:** Cairo International Convention Centre, Cairo, Egypt

**Details:** This is the biggest and oldest exhibition and conference in Egypt and Africa, with the largest number of visitors and deals in the medical field. Egymedica is the place for all concerned individuals and distributor companies to gain agents for new products.

**Contact:** +2) (02) 208 22 137 208 22 109
**Email:** info@egymedica.com; marketing@egymedica.com
**Website:** https://egymedica.com/

### ISHP International Congress 2024

**Dates:** 4 – 7 Sep 2024

**Venue:** Marina Bay Sands Singapore, Singapore

**Details:** The ISHP regularly holds an International Congress for research presentations and discussions about pharmacy history Consider participating and presenting. The topic of the Congress is Pharmaceutical Profession and Society: ROOTS, DEVELOPMENT AND LESSONS FOR THE FUTURE. This overall theme will be developed in plenary sessions with high-level keynotes and throughout all the sessions in the event.

**Contact:** +381 11 770 21 84
**Email:** smarttravelpco4@smarttravelpco4.rs
**Website:** https://ishp24.com/

### MEDICAL FAIR ASIA 2024

**Dates:** 11 - 13 Sep , 2024

**Venue:** Marina Bay Sands Singapore, Singapore

**Details:** The premier healthcare event in Southeast Asia, MEDICAL FAIR ASIA offers the latest technology, equipment, and solutions for medical manufacturing and supplies. Connect with international buyers, decision-makers, and medical professionals both online and in person.

**Contact:** (65) 6332 9620
**Email:** medicalfair-asia@mda.com.sg
**Website:** https://www.medicalfair-asia.com/

### Pharmaconex Exhibition 2024

**Dates:** 08 - 10 September, 2024

**Venue:** Egypt International Exhibition Center, Cairo, Egypt

**Details:** Pharmaconex is Africa's pharmaceutical manufacturing hub, connecting the entire supply chain in Egypt, the largest producer of pharmaceuticals in the MENA region. It offers a 365-day marketplace for our communities to interact, network, and build knowledge around the latest industry trends through physical and online opportunities.

**Contact:** +201091511196
**Email:** dham.ibrahim@informa.com
**Website:** www.pharmaconex-exhibition.com

## Flexible Image Processing for Increased Productivity


B&R vision functions perform specific image processing tasks, either individually in a vision sensor or as a sequence of functions in a smart camera. By encapsulating sophisticated HALCON program code in an intuitive interface, the new vision functions make it easy for automation programmers to configure advanced vision functionality and incorporate the results in the machine application. The Simple Matching function is easier to train because it has fewer argument possibilities. When a picture is being trained directly from the application, it serves as an alternative to the edge-based standard matching algorithm.

The Clutter Matching function can be used to define an area within or around a matching hit, where no clutter is allowed which is important in pick-and-place applications. The Calibration function corrects errors resulting from perspective or optical distortion by converting pixel values into metric values. These are needed for metric data from a camera or when precise measurement the subpixel range is needed. The Image Manipulation function makes it possible to apply added filters and image manipulations for tasks such as reading curved fonts. With the Simple Logic & Mathematics function, the intermediate results from one or more vision functions can be used directly on the camera to control later image processing steps. These five new vision functions make image processing more flexible and productive than ever. ■

## Ystral Rolls out Continuously Operating Disperser


With the YSTRAL Coflow, powdered solids are inducted, mixed and dispersed into liquid streams in a controlled way and in proportion to quantity via volumetric or gravimetric solid dosing systems. The powders and liquids are combined in a premixing zone, fine dispersion then occurs via a rotor-stator system, whereby the dispersing tools can be designed with different slot widths depending on the application. The product is subjected to a pressure increase via an inducer installed between the premixing zone and the rotor-stator zone, which causes separation of the air inducted with the powder, thus resulting in a lower residual air content in the product.

The focus here is on products which are produced in large series. In the pharmaceutical industry, the inline disperser is used, among other things, for the wetting of APIs in water. For its market launch, the YSTRAL Coflow is available in Coflow-4 size for production with an overall throughput of 6,000-13,500 kg/h. ■

## Thermo Fisher Scientific introduces Thermo Scientific Heracell Incubators

To support the future implementation of workflow automation in cell therapy production, Thermo Fisher Scientific introduces the Thermo Scientific Heracell VIOS 250i AxD CO2 Incubators. These first-of-their-kind CO2 incubators are designed for integration into automated and modular laboratories. The VIOS family of incubators are known for optimal cell growth conditions and minimal contamination risk.

Emerging cell therapy manufacturers, biotech and pharmaceutical companies focused on bringing advanced therapies to market want to automate production of cultured cells without compromising quality. The new innovative design of the Heracell VIOS Incubator modernizes cell therapy production without compromising on contamination control features. ■

## Syntegon Launches modular Bioprocessing Platform

The Syntegon subsidiary Pharmatec is launching its new Modular Bioprocessing Platform (MBP). Developed to address the most pressing current challenges in biopharmaceutical production, the MBP is a highly flexible, fully integrated and automated solution for biologic drug substances. The platform can be configured for a full range of microbial and mammalian cell culture applications including proteins and peptides, oligonucleotides and plasmid DNA, as well as whole or sub-unit recombinant vaccines. "Its innovative, modular design allows our customers to profit from shorter lead times and lower costs, without compromising on functionality or the accustomed 'made in Germany' quality," Christian Lavarreda, Global Product Manager at Pharmatec, emphasizes. "Biopharmaceutical manufacturers can now turn to Syntegon for seamless, complete solutions along the entire production chain."

Integral to time to market in today's biopharmaceutical industry, the need for enhanced functionality and compliance in manufacturing operations has never been greater. "Biopharma companies are under intense pressure to bring increasingly sophisticated production capacity online in ever-shorter timelines. This is exactly what our new platform allows them to do," says Lavarreda. Featuring a prefabricated integrated cleanroom design with all peripheral technology outside the cleanroom in technical skids, the MBP approach to cell culture offers full functionality off-the-shelf for clinical and commercial production alike. ■

## Agilent Technologies unveils 8850 Gas Chromatograph (GC) System

Agilent Technologies Inc announces the 8850 Gas Chromatograph (GC) System, a small single-channel GC that combines the legacy of the 6850 GC with the capability and system intelligence of the 8890 GC. With a focus on speed and intelligence, the 8850 GC stands poised to revolutionize labs across diverse markets, including energy, chemicals, food, and pharmaceuticals, while reducing energy consumption by up to 30%.

Modern labs face the seemingly contrasting goals of maximizing analytical capacity with limited bench space while reducing the overall environmental impact of their operations. In response, lab managers strive to get the most productivity out of every square foot of their facility by maximizing instrument uptime and ensuring optimal use of all available bench space. Meeting sustainability goals amid these pressures requires an unwavering focus on the efficiency of lab operations and individual workflow components.

"We are excited to introduce the 8850 GC, a cutting-edge instrument that leverages the latest technological advancements," stated Mike Zhang, vice president and general manager, of the Gas Phase Separations Division at Agilent. "Incorporating engineering excellence and the intelligence of Agilent's smart GC portfolio, this compact, rugged GC is poised to revolutionize analytical labs across various industries. It delivers answers quickly and efficiently while significantly reducing physical space and energy requirements."

Integrated instrument intelligence enhances uptime, while remote connectivity features facilitate regular maintenance and troubleshooting, ensuring uninterrupted workflow capacity. The instrument's small footprint – half the size of the Agilent 8890 GC – maximizes space utilization and operational redundancy. Additionally, heating and cool-down times are shorter, increasing lab throughput. Using up to 30% less power than other GCs, reduces energy costs and helps labs meet their sustainability goals. ■

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ChemTECH WORLD EXPO 2026

SPECIALTY ChemiCAL WORLD EXPO 2026

Bio Pharma World Expo 2026

## 32nd International Exhibition and Conferences

## 3-6 February 2026

**Venue:** Bombay Exhibition Center, Goregaon (East), Mumbai, India

**Concurrent Events**

EPC 2026 | Specialty ChemiCAL | Refining & Petro Chemicals 2026 | Bio Pharma | Industry Automation & Control 2026 | PVF | WaterEX WORLD EXPO 2026 | Surface Engineering Coating & Corrosion WORLD EXPO 2026 | Chlor-Alkali World Expo & Conferences 2026

### Scope for ChemTECH World Expo 2026

- Plant Machinery & Industrial Consumables
- Engineering Consultants
- OEMs for Chemicals & Pharmaceutical Processing Equipment
- Metals & Metallurgy
- Bioprocessing Equipment
- Construction Services Providers
- Plant Maintenance Services Providers
- Logistics & Supply Chain Solutions Providers
- Instrumentation & Process Control
- Industry Automation (Process & Factory)
- Systems Integration & ERP Solutions Providers
- Water & Waste Water Treatment Consultants
- Environment Solutions Providers
- Waste Management Consultants
- Financial Institutions
- Fire & Safety Solutions Providers
- Material Handling Solutions
- Certification Bodies
- Welding Solutions
- Quality Health & Environment Solutions
- Analytical & Laboratory
- Packaging Materials, Machinery & Systems
- Business Consultants

### Scope for Specialty Chemicals World Expo 2026

- Agrochemicals Intermediates
- Adhesives & Sealants
- Agrochemicals & Crop Protection
- Bulk Drugs & Intermediates
- Enzymes
- Colorants, Dyes & Pigments
- Cosmetics & Personal Care Ingredients
- Hygiene & Cleaning Chemicals
- Laboratory Chemicals
- Surfactants
- Water Treatment Chemicals
- Catalysts
- Electronic Chemicals
- Flavours & Fragrances
- Contract Manufacturers

### Scope for Biopharma World Expo 2026

- Materials Processing
- Pharma Machinery
- Pharma Ingredients
- Plant Engineering, Process Plants & Equipment
- Laboratory & Analytical Solutions
- Process Measurement & Inspection
- Sterilization & Clean Room Solutions
- Biopharma R&D And Manufacturing
- IT Solutions
- Water & Waste Treatment Solutions

### FACT & FIGURES 2024

- **750** EXHIBITORS FROM 15+ COUNTRIES
- **25871** VISITORS FROM 53 COUNTRIES
- **8** TECHNICAL CONFERENCES
- **250+** GLOBAL SPEAKERS
- **1500+** BUSINESS DELEGATES
- **2500+** ENGINEERING PHARMA & SCIENCE STUDENTS AT STUDENT OUTREACH PROGRAM FROM 28 STATES & UNION TERRITORIES
- SCALE@CHEMTECH World Expo 2024: 60+ GLOBAL CLIMATE TECH STARTUPS FROM 20 COUNTRIES; 40 TECHNICAL PRESENTATIONS
- BRICS WORKING GROUP BRAIN STORMING SESSION


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Taj Building, 3rd Floor, 210, Dr. D N Road, Fort, Mumbai – 400 001, INDIA.
**Tel:** +91-22-4037 3636, **Email:** sales@jasubhai.com
Ahmedabad - 09833104834 | Bangalore - 09892644177 | Chennai - 09176963737
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**sales@jasubhai.com** **www.chemtech-online.com**

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# LAB & ANALYTIX World Expo 2026

## International Exhibition & Conferences

### 3-6 February 2026

**Venue:** Bombay Exhibition Center, Goregaon (East), Mumbai, India

## BIO-PHARMA

### Manufacturing
- Vaccines
- Serums
- Biologics & Biosimilars
- Generics
- Bulk Drugs
- Drug Discovery & Development
- Drug Delivery
- Contract Manufacturers

### Equipment & Technology
- Pharma & Biopharma Processing
- Mixers & Blenders
- Agitators & Dryers
- Sterlizers & Autoclaves
- Homogenizers & Emulsifiers
- Instrumentation & Automation
- Lab & Analytical technologies
- Bioinformatics
- Packaging Machinery & Equipment
- Filtration & Separation

### Pharma Chemicals
- APIs & HPAPIs
- Fine & Specialty Chemicals
- Formulations
- Excipients
- Pharma Ingredients

### Research & Development
- Lifesciences
- Contract Research & Clinical Trials
- Contract Development & Manufacturing
- Research Institutes
- Academic Institutes
- Academic Institutions
- Government Institutions
- Testing & Inspection
- Intellectual Property Rights (IPR) & Legal Services

### Infrastructure & Logistics
- Biotech Parks
- Warehousing
- Cold chain logistics
- Supply Chain Management
- Logistics services
- Online distributors

## LAB ANALYTIX

### Laboratory Technology
- Laboratory furniture, equipment, machines
- Chemicals, Consumable, reagents, glassware
- Laboratory data system and documentation
- Laboratory automation
- Laboratory diagnostics
- Instruments for environmental labs
- Forensic lab instruments

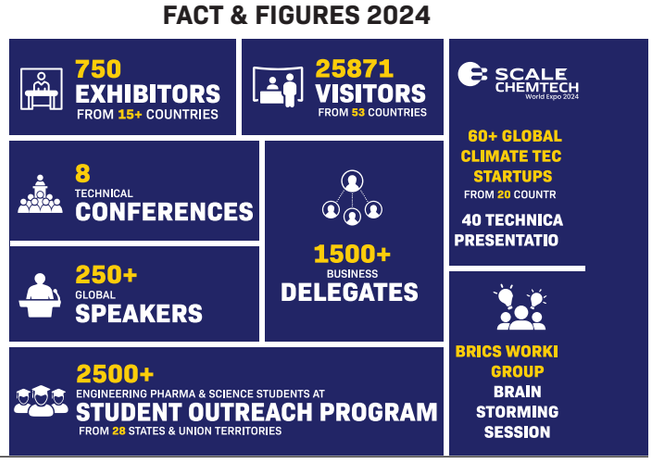
### Analysis
- Chromatographes
- Spectroscopes
- Microscopes and imaging
- Analytica instrumentation and systems
- Instruments for physical and chemical analysis

### Quality control / Measuring &Testing
- Characterization and properties of materials
- Quality control for pharmaceutical industry
- Material testing

### Diagnostics
- Diagnostic Equipment and Reagents
- Diagnostic Technology & Devices
- IVD Medical Devices
- Clinical Diagnostic

### Biotechnology
- Biochemicals
- Bioinformatics
- Medicine and diagnostics
- Life Sciences

## FACT & FIGURES 2024




Concurrent Events

EPC Power | Specialty Chemical | Refining & Petro Chemicals 2026 | WaterEX World Expo 2026 | Industry Automation & Control 2026 | PVF World Expo 2026 | Chlor-Alkali World Expo & Conferences 2026 | Surface Engineering Coating & Corrosion World Expo 2026 | Student Outreach Program 2026 Develop Future Leaders

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