



The e-newsletter for the Indian Biotech industry

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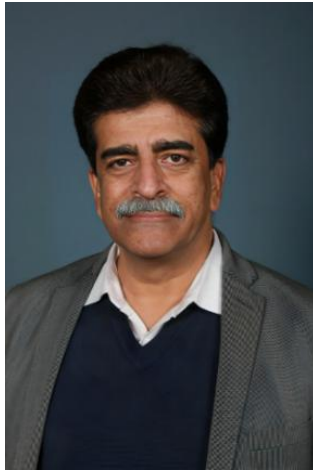
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ABLE prepares Biotech Industry for the Biodigital Era



Dear Members, Colleagues and Friends,

The past few months have been encouraging for India's biotechnology sector and for ABLE's continued efforts to strengthen the country's BioEconomy ecosystem.

We successfully organized the **BioEconomy Conclave 2026**, themed "*Synthesizing Biology and Bits – The Dawn of the Biodigital BioEconomy.*" The conclave brought together policymakers, industry leaders, scientists, investors and innovators to explore the growing convergence of biology, artificial intelligence and digital technologies—an important

driver for India's journey towards a **\$300 billion BioEconomy by 2030.**

During this period, two states released their BioEconomy Reports, the **Karnataka BioEconomy Report (KBER) 2025** and **Tamil Nadu BioVision 2026**, both prepared by ABLE for the Governments of Karnataka and Tamil Nadu, respectively. These documents provide strategic insights into opportunities to grow their states bioeconomy and other policy initiatives to support this growth. ABLE was invited to be a part of the **BioEconomy Taskforce meeting** by IISER Bhopal, Madhya Pradesh.

ABLE also continued its ecosystem engagement through platforms such as the **BIO-X India World Expo 2026** and the **Rajasthan Biotech Conclave 2026**, fostering dialogue and collaboration across the sector.

As we move forward, we encourage members to participate in the **India Pavilion at the BIO International Convention 2026 in San Diego**, coordinated by **ABLE** which offers a valuable opportunity to showcase innovations, build global partnerships and strengthen India's presence in the global biotechnology ecosystem. We are also planning startup delegations to the **US and the UK** to help emerging companies explore collaborations and expand market access.

G S Krishnan
Hon. President, ABLE

ABLE BioEconomy Conclave 2026 Concludes Successfully

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Inaugural Session



The Inaugural Session of ABLE's BioEconomy Conclave 2026, themed **"Synthesizing Biology and Bits – The Dawn of the Biodigital BioEconomy"**, set a bold and strategic tone for India's next phase of growth. Leaders emphasized that India's BioEconomy has already surpassed \$165 billion and is firmly on track toward the \$300 billion milestone by 2030, with a long-term vision of \$1.2 trillion by 2047. The session underscored the convergence of Artificial Intelligence and Biology as the defining engine of next-generation medicine, smart biomanufacturing, precision agriculture, and sustainable innovation. A strong call was made for building indigenous AI capabilities, strengthening compute infrastructure, enabling regulatory sandboxes, and advancing the Triple Helix model of Government–Academia–Industry collaboration to establish India as a global biodigital powerhouse.

Shri. Priyank M Kharge, Hon'ble Minister, Rural Development & Panchayat Raj, IT & BT, Government of Karnataka shared a video message, announcing the release of the Karnataka BioEconomy Report 2026, noting that the state's bioeconomy has reached \$39.2 billion, reflecting 21% growth and contributing over 10.5% to the State's GSDP. He highlighted that Karnataka is home to 1,451 biotech startups, including 218 new additions in 2025, and has attracted \$1.14 billion across 40 major investment deals between 2023 and 2025.

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He reiterated the government's commitment to strengthening Karnataka's position as a global biomanufacturing hub through robust startup support, innovation parks, and deep-tech investments. He also emphasized regional expansion, with emerging innovation corridors in Mysuru, Belagavi, and Coastal Karnataka fostering inclusive statewide growth.



Dr. Kiran Mazumdar-Shaw, Hon. Non-Executive Chairperson-ABLE and Executive Chairperson, Biocon Group delivered a visionary address on Biotech Sovereignty, stressing that India must build indigenous AI models rooted in Indian datasets. She highlighted the feedback loop between biological and artificial intelligence and called for

energy-efficient, distributed AI inspired by biological systems. She urged embedding AI across discovery, development, manufacturing, and regulatory pathways to create an AI-native biotech ecosystem.

"The strategic moment is here", Dr. Shaw stated. "Those who master the language of life and the language of machines will shape the future of humanity. We must move from one-size-fits-all drugs to programmable biology that reinforces the body's natural guardrails".

Dr. N. Manjula, IAS, Secretary to Government, Department of Electronics, Information Technology & Biotechnology, Government of Karnataka

underscored the government's role in providing a science-first regulatory and funding environment.

"Our mission is to ensure that the regulatory framework evolves as fast as the science itself. By amending the Karnataka Innovation Authority Act and introducing Regulatory Sandboxes, we intend to provide an environment where deep-tech startups can validate high-risk interventions under government oversight.



Karnataka is committed to being the pioneer in tech-enabled pathways that simplify the journey from lab to clinic."
Said **Dr. N. Manjula, IAS.**

She also emphasized the introduction of regulatory sandboxes to enable data-driven approvals for high-risk innovations, proposed amendments to the Karnataka Innovation Authority Act to

support experimental biotech and MedTech solutions, strengthened DeepTech funding through Elevate NXT, and promoted regional expansion of the bioeconomy beyond Bengaluru to drive inclusive statewide growth.



Dr. P M Murali, President, ABL Council of Presidents & CMD, Jananom emphasized ABL's expanding national and international footprint, including bioeconomy reporting across states, global collaborations, entrepreneurship promotion, and policy advocacy. He highlighted the need for bio-AI sandboxes, self-regulatory frameworks, and multidisciplinary skilling to

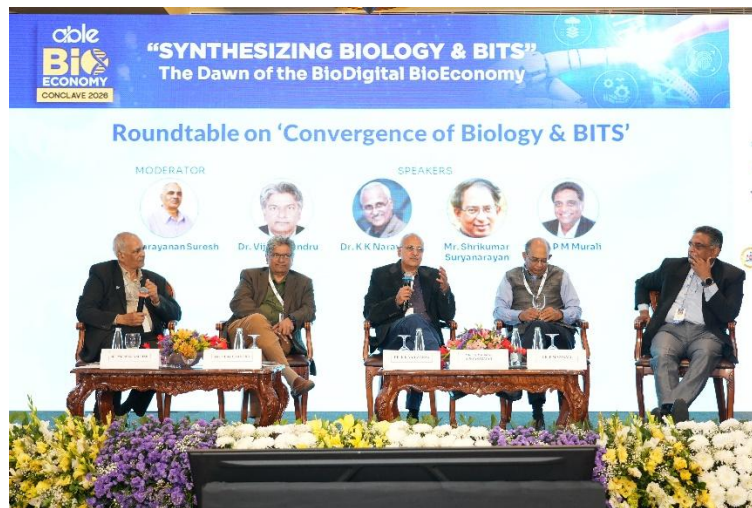
accelerate innovation without excessive regulatory friction.



Mr. G S Krishnan, Hon. President of ABL, set the strategic context for the Conclave by reaffirming ABL's commitment to strengthening India's bioeconomy ecosystem. He emphasized the importance of deeper collaboration between Government, Academia, and Industry to accelerate biodigital innovation. He highlighted ABL's role in policy advocacy, ecosystem

building, international partnerships, and entrepreneurship promotion, underscoring that the convergence of biology and digital technologies will be central to achieving India's \$300 billion bioeconomy vision and long-term global leadership.

Roundtable on “Convergence of Biology and Bits”



The conclave commenced with a thought-provoking roundtable on the transformative role of AI in biotechnology. Moderated by **Mr. Narayanan Suresh**, Advisor, ABLE. The session brought together **Dr. Vijay Chandru**, Founder Director, Strand Life Sciences, CRISPRBITS;

Dr. K K Narayanan, Founder & Managing Director, Sthayika Seeds; **Mr. Shrikumar Suryanarayan**, CMD, Sea6 Energy and **Dr. P M Murali**, President, ABLE Council of Presidents & CMD, Jananom.

Dr. Vijay Chandru reflected on the evolution of biology into a data-driven science, noting that AI now underpins drug discovery, diagnostics, and genomics. He emphasized exponential advances in computational power, the importance of staying ahead of the AI curve, and advocated for responsible self-regulation over excessive oversight.

Dr. P M Murali highlighted AI's growing role in synthetic biology and biomanufacturing, particularly in generative design, fermentation optimization, and digital biofoundries. He stressed the importance of structured, high-quality data and adherence to FAIR data principles to unlock AI's full potential.

Mr. Shrikumar Suryanarayan discussed AI applications in marine biotechnology and bioenergy, including ocean farming, drone-based monitoring, enzyme engineering, and cross-disciplinary innovation. He cautioned against AI hallucinations and emphasized expert validation and effective prompt engineering.

Dr. K K Narayanan focused on AI-driven transformation in agriculture, especially in accelerating crop breeding and improving productivity in genetically complex crops. He highlighted how computational biology is shortening breeding cycles and enhancing climate resilience.

The session concluded with a strong consensus on building AI-enabled biotech talent and adopting balanced, innovation-friendly regulatory frameworks to power India's biodigital future.

Session 1 on 'Viksit Health'



The Session 'Viksit Health', was moderated by **Ms. Deepanwita Chattopadhyay**, Hon. Vice President, ABLE and Chairperson, IKP Knowledge Park, along with **Dr. Jayashree Aiyar**, Chief Scientific Officer, Syngene International. The session featured insightful discussions by **Mr. Soham Sankaran**, Founder, MD & CEO, Popvax, and **Dr. Achintya Das**, Head –

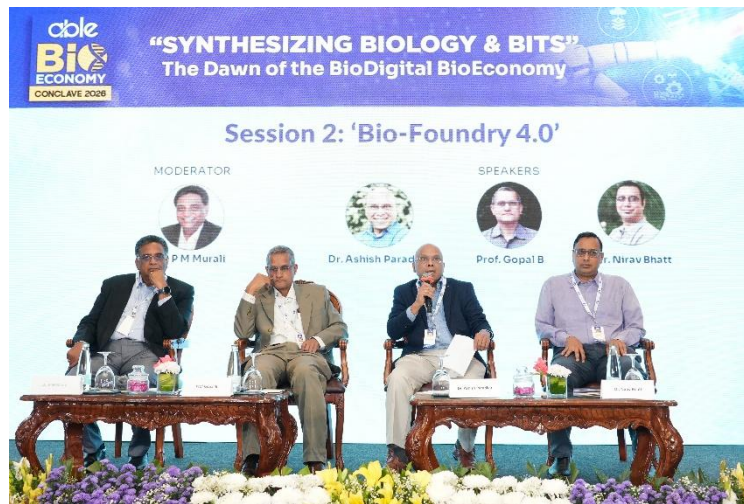
Computational & Data Sciences and Digital & AI Centre of Excellence, Syngene International Limited.

Ms. Deepanwita Chattopadhyay and **Dr. Jayashree Aiyar**, as moderators of the session, framed the conversation around India's opportunity to move beyond generics toward an innovation-led, AI-powered healthcare ecosystem. They emphasized that the convergence of biology and AI can accelerate diagnostics, drug discovery, and advanced therapeutics, while strengthening indigenous R&D, novel IP creation, and progressive regulatory frameworks.

Dr. Achintya Das presented a comprehensive overview of how artificial intelligence is transforming the pharmaceutical value chain. He noted that the AI segment in drug discovery is growing faster than the overall pharma market and is now expanding beyond discovery into development and manufacturing. He explained how AI reduces target validation failure rates, shortens hit-to-lead timelines, and enables multi-parameter optimization for better safety and efficacy predictions. He also highlighted the use of digital twins in biomanufacturing to anticipate batch failures and improve yields. Dr. Das emphasized the need for a risk-based regulatory approach and stressed that national-scale, high-quality multimodal data generation is critical for sustained AI-driven innovation.

Mr. Soham Sankaran discussed the application of generative AI in mRNA vaccines, cancer immunotherapies, and protein engineering. He highlighted how generative models can design structurally plausible and functional proteins, opening new frontiers in therapeutic development. He emphasized India's competitive advantage in generating large-scale proprietary and clinical data at lower costs compared to global markets. However, he identified regulatory delays—particularly in Phase 1 trial approvals—as a major bottleneck limiting innovation. He argued that streamlined regulatory pathways could position India as a leader in personalized medicine and enable the development of Indian-specific biological foundation models built on diverse clinical datasets.

Session 2 on 'Bio-Foundry 4.0'



The session was moderated by **Dr. P M Murali**, President, ABLE Council of Presidents and CMD, Jananam. The distinguished speakers included **Dr. Ashish Paradkar**, Independent Advisor in Industrial Biotechnology; **Prof. Gopal B** from the Molecular Biophysics Unit at the Indian Institute of Science, Bangalore; and **Dr. Nirav Bhatt**, Associate

Professor at the Indian Institute of Technology Madras.

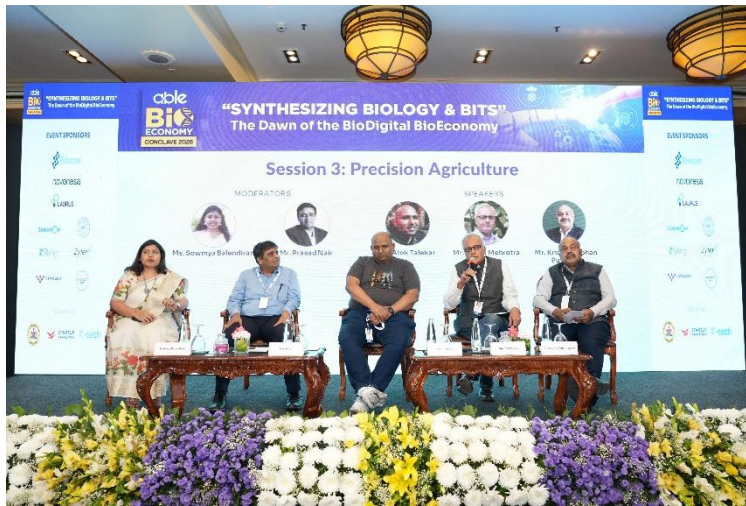
The session, moderated by Dr. P M Murali, explored the shift from manual experimentation to AI-driven, automated biomanufacturing. Discussions focused on accelerating design-build-test-learn cycles, leveraging digital twins, and scaling lab innovations to commercial production, highlighting the need for strong data systems, predictive AI, and deeper industry-academia collaboration.

Dr. Ashish Paradkar highlighted the contrast between highly automated chemical industries and comparatively slow, batch-based bioprocesses. He emphasized that AI and automation can integrate siloed datasets across research and production, enabling real-time decision-making. He stressed the importance of data transparency—including sharing failure data—and advocated federated learning models to balance collaboration with IP protection. He also urged startups to integrate scale-up considerations early, focusing on product viability, marketability, and profitability.

Prof. Gopal B discussed the complexity of biological systems and the challenges of applying AI to “messy” biological data. He explained the progression from hindsight analysis to predictive and prescriptive AI in bio-manufacturing. He highlighted the role of digital twins and the Bio3 initiative in bridging academia and industry, outlining structured pathways from pilot to commercial scale. He also emphasized developing alternative microbial chassis, improving fermentation economics, and leveraging national supercomputing resources.

Dr. Nirav Bhatt shared insights on translating lab innovations into industrial processes, noting resistance to disruptive technologies and supply chain monopolies as major barriers. He stressed the need for bolder industry participation, consistent scale-up validation, and long-term investment in biotech process development to ensure commercial viability.

Session 3 on 'Precision Agriculture'



The Session 3 'Precision Agriculture', was moderated by **Ms. Sowmya Balendiran**, Co-Founder and Chief Business Officer, Sea6 Energy, along with **Mr. Prasad Nair**, Head – Strategic Alliances and Partnerships, String Bio. The session featured insightful perspectives from **Mr. Alok Talekar**, Software Engineer at Google DeepMind; **Mr. Nipun Mehrotra**, Founder of The Agri

Collaboratory (TAC); and **Mr. Krishna Mohan Puvvada**, Senior Vice President, Planetary Health and Regional President, MEIA, Novonosis. The session highlighted how AI, biotechnology, and digital infrastructure can transform Indian agriculture by improving productivity, efficiency, and farmer incomes. The discussion emphasized trust, data quality, collaboration, and scalable, farmer-centric solutions as critical enablers of precision agriculture.

Mr. Alok Talekar spoke about building farm-level geospatial intelligence to power India's digital agriculture stack. He explained how AI can enable accurate field mapping, targeted subsidy delivery, and data-driven policy decisions. He emphasized statistical validation, government capacity building, and gradual scaling as key to responsible AI adoption.

Mr. Nipun Mehrotra focused on the farmer's perspective, stressing that technology must solve real, daily challenges such as irrigation timing, pest detection, and yield improvement. He highlighted the importance of micro-advisory, trust, and physical extension support. He shared examples showing how timely AI-enabled interventions can significantly increase farmer income.

Mr. Krishna Mohan Puvvada discussed industry's role in integrating AI and biotechnology across the agricultural value chain. He highlighted opportunities in soil health, weather prediction, early disease detection, and yield optimization. He advocated mission-mode collaboration to improve productivity, sustainability, and profitability at scale.

Session 4 on 'Research, Development and Innovation (RDI) Fund'



The Session 'Research, Development and Innovation (RDI) Fund', was moderated by **Dr. P M Murali**, President, ABLE Council of Presidents & CMD, Jananom. The keynote address was delivered by **Dr. Manish Diwan**, Head – Biofoundry, NCR Biotech Cluster & IVCOL at BIRAC, and Mission Director – Make in India (Biotech Sector), Department of Biotechnology,

Government of India. The session also featured insights from **Dr. Premnath V**, Director, Venture Center; **Dr. Mrutyunjay Suar**, CEO, KIIT-TBI; and **Mr. Krupa Shankar**, Partner – Private Markets, National Investment and Infrastructure Fund Limited (NIIFL). The session focused on addressing the funding gap faced by biotech companies moving from proof-of-concept to commercialization. The RDI Fund was presented as a strategic deep-tech financing mechanism to support scale-up, manufacturing, and indigenous innovation through blended funding models and co-investment.

Dr. Manish Diwan outlined the RDI Fund as a flexible financing instrument supporting projects from TRL-4 onwards, with funding ranging from ₹5 crore to ₹200 crore. He emphasized collateral-free loans, equity options, co-investment requirements, and the focus on high-impact, first-in-class innovations with Indian IP ownership.

Dr. Premnath V highlighted the mid-stage funding gap in biotech and welcomed the RDI Fund as a crucial bridge for startups scaling manufacturing and commercialization. He stressed that it should complement ongoing early-stage funding schemes.

Dr. Mrutyunjay Suar emphasized the importance of the RDI Fund for emerging biotech ecosystems beyond major metros. He noted that it can help regional startups overcome infrastructure and investor network limitations.

Mr. Krupa Shankar explained that government-backed initiatives like the RDI Fund help de-risk innovation and prepare companies for larger domestic and global capital. He highlighted the importance of building scalable, investment-ready enterprises to attract institutional investors.

The RDI Fund marks a significant step toward enabling scale-driven, deep-tech growth in India's biotech sector through patient capital and public-private collaboration.

Session 5 on 'Regulatory fast-tracking'



The session on 'Regulatory Fast-Tracking' brought together regulators, industry leaders, legal experts, and biotech innovators to examine one of the most critical enablers of India's bioeconomy—efficient and innovation-aligned regulatory systems. Moderated by Mr. Ravi Bhola and Dr. S. Shriram, the discussion focused on practical bottlenecks, recent reforms,

global best practices, and the urgent need to align regulatory pathways with the speed of scientific advancement.

Dr. S. Shriram highlighted emerging regulatory challenges in bio-manufacturing and AI-driven biotech, emphasizing the need for forward-looking frameworks to support next-generation innovations.

Dr. S. R. Rao emphasized that regulatory reform must match the speed of scientific innovation. He called for structural integration across agencies, adoption of AI-enabled review systems, global harmonization, and capacity building in regulatory science to enable faster approvals without compromising safety.

Dr. Pawan Kumar Gupta highlighted recent CDSCO reforms such as digital submissions and regulatory sandboxes, while pointing out ongoing challenges in implementation, first-in-human trial approvals, and inter-agency coordination. He advocated for conditional approvals, pre-submission consultations, and acceptance of global data to accelerate innovation.

Ms. Mansi Kulshreshtha stressed that regulatory clarity and predictability are critical for achieving India's bioeconomy goals. She underscored the need for stronger capacity within regulatory bodies, clearer GM policies, risk-based pathways for low-risk biotech products, and greater harmonization with international standards.

Mr. Ravi Bhola noted the positive transformation seen in patent digitization and urged similar simplification and transparency across regulatory systems.

The session underscored that achieving India's bioeconomy ambitions requires regulatory systems that are faster, harmonized, transparent, and innovation-aligned. While recent reforms mark meaningful progress, speakers emphasized the need for structural coordination, capacity building, global harmonization, and risk-based pathways to ensure that science-driven innovations can reach patients and markets without avoidable delays.

ABLE Awards Ceremony

For the first time, ABLE instituted two prestigious recognitions, the **BioInnovator of the Year Award** and the **BioEntrepreneur of the Year Award**, to honour transformative impact in India's biotechnology and bioeconomy ecosystem. These awards recognize demonstrable innovation outcomes, technology scale-up, product launches in 2024–25, ecosystem impact, and sectoral leadership across biotechnology sub-sectors.

ABLE BioInnovator of the Year 2026

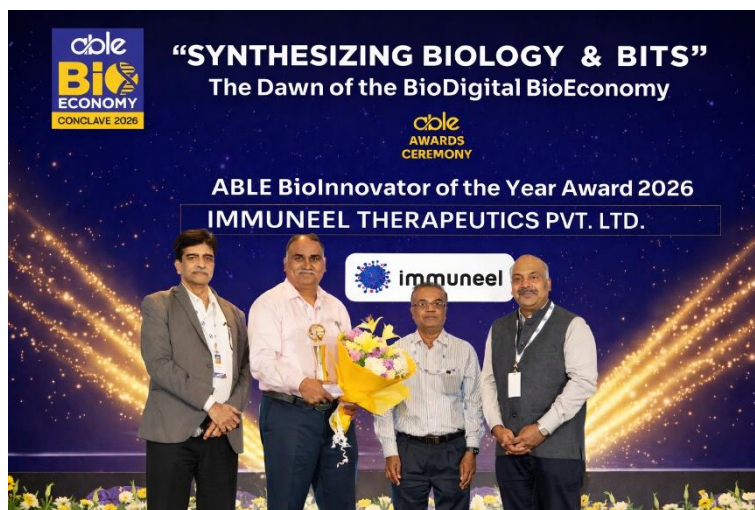
ABLE is proud to confer this recognition on “Immuneel Therapeutics”.



while advancing accessibility, affordability, and India's global leadership in next-generation therapeutics.

ABLE BioEntrepreneur of the Year 2026

ABLE is delighted to recognise “Avammune Lifesciences Private Limited”.



A Bengaluru-based pioneer in cell and gene therapy, Immuneel marked a historic milestone with the launch of Qartemi, India's first indigenous CAR T-cell therapy approved for adult Non-Hodgkin's Lymphoma. Demonstrating an impressive 83.3% overall response rate in its IMAGINE Phase 2 study, Immuneel is redefining personalized cancer care

while advancing accessibility, affordability, and India's global leadership in next-generation therapeutics.

Founded in 2019, Avammune is building a differentiated immuno-oncology pipeline, led by its ENPP1 inhibitor candidate, AVA-NP-695. Backed by strong translational science and USD 12 million in Series A funding, the company represents bold entrepreneurial vision, scientific rigor, and global ambition emerging from India's vibrant biotech ecosystem.

Concluding Remarks

The BioEconomy Conclave 2026 concluded on a powerful note, reinforcing India's ambition to emerge as a global leader in the biodigital era. Under the theme "Synthesizing Biology and Bits – The Dawn of the Biodigital BioEconomy," the conclave brought together policymakers, industry leaders, scientists, investors, and innovators to explore how the convergence of biology, digital technologies, and AI can accelerate India's journey toward a \$300 billion bioeconomy by 2030. The discussions highlighted the importance of innovation, collaborative ecosystems, supportive regulatory frameworks, and initiatives such as the RDI Fund to drive scale-up and sustainable growth across sectors including healthcare, agriculture, and biomanufacturing.

ABLE extends its sincere gratitude to all our sponsors: Biocon Group, Novonesis, Laurus Bio, Government of Karnataka, IKP Knowledge Park, String Bio, Jananom, Zytex, Perfect Day and Vipragen for their invaluable support in making the event a grand success.

Thank You to all the Sponsors



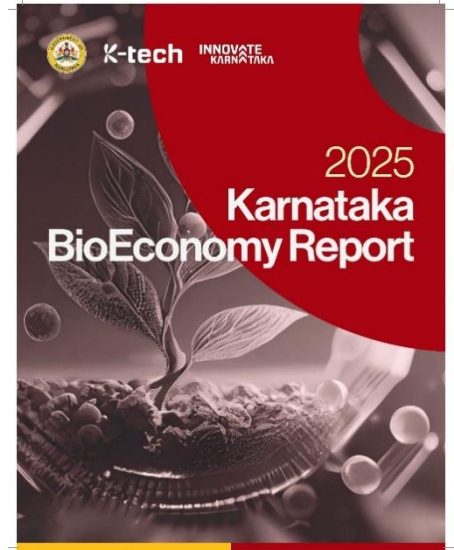
State Partners



Karnataka BioEconomy Report 2025 Released

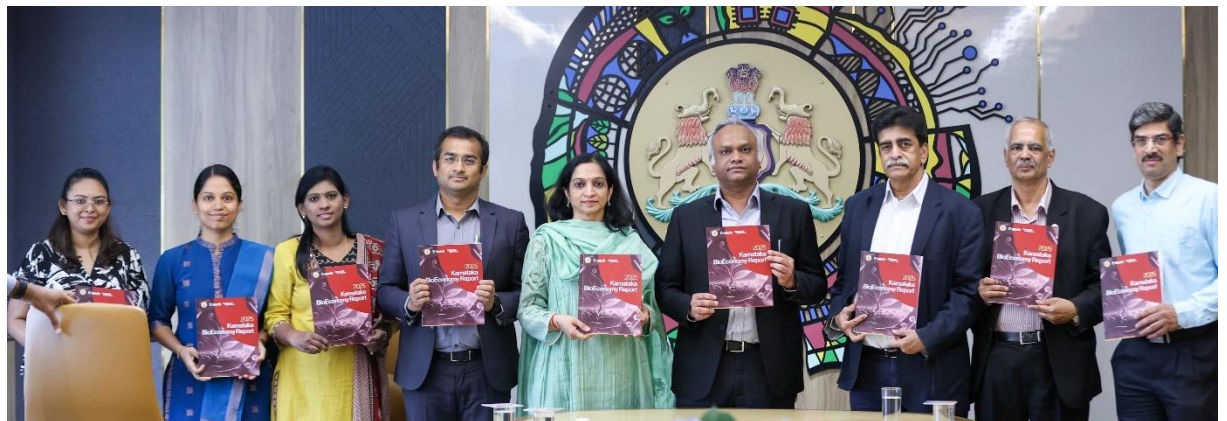
ABLE is proud to have prepared the **Karnataka BioEconomy Report 2025** for the Government of Karnataka. The report highlights Karnataka's continued leadership in India's BioEconomy:

- Total State BioEconomy Value: \$39.2 Billion (21% growth)
- Contribution to National BioEconomy: 21% (consistent average)
- Contribution to State GSDP: 10.51%
- Total Biotech Startups: 1,451 (218 new in 2025)
- Investment Inflow (2023–25): \$1.14 Billion across 40 major deals



The report was released by **Hon'ble Minister Shri Priyank M Kharge**, underscoring Karnataka's strength across BioPharma, BioIndustrial & Biomanufacturing, and BioServices & Digital Health. Importantly, growth is no longer limited to Bengaluru. Emerging innovation corridors in Mysuru, Belagavi and Coastal Karnataka are driving inclusive regional development. With strong policy support, investment momentum, and expanding infrastructure, Karnataka continues to strengthen its position as India's leading BioEconomy hub.

[Click here to download the Report](#)



Release of Tamil Nadu BioVision 2026 – Shaping the Future of the Bioeconomy



Tamil Nadu BioVision 2026 was released by **Thiru. M. K. Stalin**, Hon'ble Chief Minister of Tamil Nadu yesterday. **Thiru Udhayanidhi Stalin**, Hon'ble Deputy Chief Minister of Tamil Nadu, **Mr. N. Muruganatham, I.A.S.**, Chief Secretary, Government of Tamil Nadu, **Mr. Sajjansingh R. Chavan, IAS**, Secretary, Planning and Development Department, Government of Tamil Nadu, **Dr. J. Jeyaranjan**, Acting Vice-Chairman of State Planning Commission, **Tmt. S. Sudha, IFS**, Member Secretary of State Planning Commission, Government of Tamil Nadu and other Government officers were present.

The report was prepared by **ABLE** for the **State Planning Commission, Government of Tamil Nadu** highlighting Tamil Nadu's potential to emerge as a nationally and globally competitive bioeconomy hub, driven by BioPharma and manufacturing, BioIndustrial and fermentation-based industries, medical devices, BioAgri and emerging circular bioeconomy opportunities.

Tamil Nadu BioVision 2026 outlines a strategic roadmap to position the BioEconomy as a key driver of the State's Trillion Dollar Vision. Building on Tamil Nadu's strong manufacturing base, globally competitive pharma and healthcare ecosystem and robust research institutions, the vision aims to accelerate innovation, high-value manufacturing and export competitiveness. It prioritizes investment-led growth, skilled job creation, regional cluster development beyond Chennai.

[Click here to download the Report](#)

Rajasthan Biotech Conclave 2026

Dr. Balasubramanya S, General Manager of ABLE, was among the distinguished panelists at the **Rajasthan Biotech Conclave 2026**, contributing to an insightful panel discussion on the theme “**Science for Society: Making Biotechnology Accessible, Inclusive & Impactful**”. The session brought together leaders from academia, industry, and innovation ecosystems to deliberate on how biotechnology can address pressing societal challenges while fostering inclusive growth.



The discussion highlighted how biotechnology can play a transformative role in sectors such as healthcare, agriculture, environmental sustainability, and food security. Panelists emphasized the importance of translating laboratory research into affordable, scalable solutions that can benefit communities at the grassroots level, particularly in rural and

underserved regions. Strengthening industry–academia–startup collaborations, expanding incubation and funding opportunities, and enhancing policy support were also identified as key enablers for building a robust biotechnology ecosystem.

The panel further underscored the need to promote scientific awareness and innovation literacy, while ensuring that biotechnology advances remain ethical, responsible, and sustainable. A key takeaway from the discussion was that biotechnology’s true success lies not only in scientific breakthroughs, but in its ability to deliver meaningful societal impact and improve quality of life.

ABLE at the First meeting of the Task Force on Madhya Pradesh Bioeconomy at AIGGPA, Bhopal

The first meeting of the Task Force on Bioeconomy was held at the **Atal Bihari Vajpayee Institute of Good Governance and Policy Analysis (AIGGPA)**, Bhopal, bringing together key stakeholders from government, academia, research institutions, industry and civil society. The meeting was chaired by **Prof. Gobardhan Das**, Director, IISER Bhopal, with opening remarks by **Prof. Rajeev Dixit**, Vice Chairman, AIGGPA.



Mr. G S Krishnan, Hon. President of ABLE and **Dr. Balasubramanya S**, General Manager of ABLE represented the industry body in the meeting. Discussions focused on exploring opportunities in BioAgri, BioPharma and BioMedical, BioIndustrial and BioResearch & BioIT. Experts deliberated on policy support, investment opportunities and strengthening the innovation

ecosystem to accelerate the state's bioeconomy growth. The initiative aims to develop a strategic roadmap and position Madhya Pradesh as a leading bioeconomy destination in India.



BIO-X India World Expo & Concurrent Conference 2026 – A Resounding Success!

The **BIO-X India World Expo & Concurrent Conference 2026**, organized by **CHEMTECH** and powered by **ABLE**, concluded on a high note as part of the **52nd ChemTECH World Expo & Conferences**, held from 3–6 February 2026 at the Bombay Exhibition Centre (BEC), Goregaon, Mumbai.



The One-Day Concurrent Conference themed “Reimagining the Future of Biotech in India”, brought together diverse perspectives across five high-impact sessions that collectively highlighted India’s growing bio-innovation leadership.

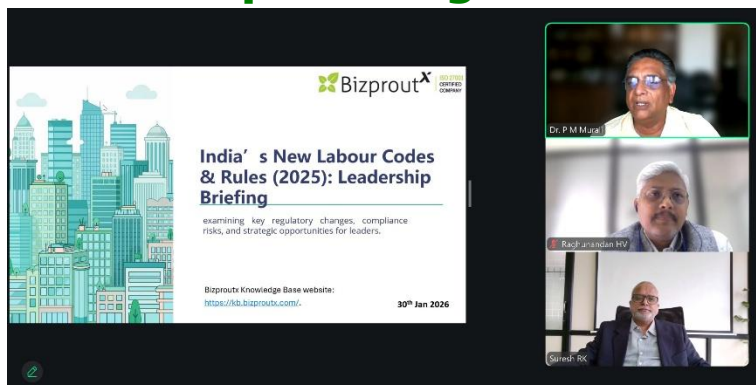
Discussions on **Translating the BioE3 policy rollout and Biomanufacturing Investments** focused on enabling policy frameworks and capital flows to strengthen India’s bioeconomy;

Frontier Tech in Healthcare explored breakthroughs in gene editing, mRNA platforms, and precision medicine and **Synthetic Biology in Food & Agri** examined next-generation solutions for resilient food systems. The session on **Next-Gen Bioplastics & Specialty Green Chemicals** showcased India’s potential in sustainable manufacturing, while deliberations on **AI-Driven Drug Discovery and Diagnostics** demonstrated how digital intelligence is accelerating therapeutic and diagnostic innovation. Together, the sessions reflected a strong convergence of science, technology, policy, and industry collaboration shaping the future of biotechnology in India.

We extend our sincere gratitude to the Chairman **Dr. Rajesh Gokhale**, Secretary, Department of Biotechnology, Government of India, for his leadership and guidance and **Mr. Nadir Godrej**, Chairperson and Managing Director, Godrej Industries Group for delivering an inspiring keynote address.

We look forward to building on these discussions and continuing to drive collaboration across innovation, policy, and industry.

Highlights on the Webinar "Awareness Session on India's New Labour Codes & Rules (2025): Leadership Briefing"



ABLE, in collaboration with **Bizprout Expert Systems Pvt. Ltd.**, hosted a webinar to help industry leaders understand the implications of India's newly implemented labour codes. The session brought together HR leaders, founders, and compliance professionals from the biotech

and life sciences ecosystem to discuss regulatory readiness and workforce governance.

Dr. P M Murali, President - ABLE Council of Presidents & CMD - Jananom opened the session by setting the broader policy context, highlighting the Government of India's efforts to simplify and modernize labour regulations by consolidating 29 fragmented labour laws into four comprehensive labour codes. He emphasized that these reforms aim to balance worker protection with ease of doing business while addressing emerging workforce models such as gig and platform workers.

Mr. Raghunandan HV, Co-Founder & Chief Marketing Officer, Bizprout Expert Systems introduced the objectives of the webinar, noting that the new labour codes significantly impact sectors like biotechnology that operate with diverse employment structures, multi-state operations, and stringent regulatory oversight. He emphasized the growing importance of digital compliance systems and proactive HR readiness.

Mr. Suresh RK, Co-Founder, Director & Chief Compliance Officer, Bizprout Expert Systems delivered the main presentation, explaining the structure and implementation timeline of the four labour codes: Code on Wages, Industrial Relations Code, Social Security Code, and Occupational Safety, Health and Working Conditions Code. He highlighted key changes including the standardized wage definition (50% basic wage rule), expanded social security coverage, simplified compliance through digital systems, and new workplace safety and welfare provisions. He also outlined the operational and financial implications for employers, including payroll restructuring, increased compliance obligations, and new HR action plans required for implementation.

Overall, the webinar provided valuable guidance for biotech and life sciences organizations to prepare for India's evolving labour regulatory framework while ensuring compliance and workforce sustainability. Participants discussed practical concerns such as wage restructuring, consultant classification, state versus central rules, and compliance timelines.

Click here to watch the recording: <https://youtu.be/9ymsMzbs-jY>

Committee Meetings

ABLE team attended the following important committee meetings.

1) NAIN Committee:

Mr Narayanan Suresh, Advisor, represented ABLE as the member as the member at the The **6th Steering Committee Meeting to deliberate and approve the selection of 20 NAIN Host Institutes under NAIN 2.0 (Call-2)**, as well as the selection of Anchor Institutes / Project Management Units (PMUs) and the mapping of the selected NAIN Host Institutes to the respective Anchor Institutes. The meeting was chaired by Dr N Manjula, IAS, Principal Secretary, Department of IT, BT, Government of Karnataka.

2) Meeting with visiting Australian Biotech Delegation

A 15-member team of life science companies from Australia met Bengaluru's innovative companies. The meeting was held at the **Bengaluru Bioinnovation Center (BBC)** and was organized by **Australia Trade and Investment Commission**. Mr Narayanan Suresh, Advisor, **ABLE**, presented an overview of the Association and the biotech innovation ecosystem and interacted with the Australian delegation.

'India Pavilion' at BIO International Convention 2026 in San Diego, USA



DRIVEN BY PURPOSE



EXHIBIT IN THE 'INDIA PAVILION'
BIO International Convention 2026
JUNE 22-25 | SAN DIEGO, USA

ABLE will once again organize the **India Pavilion** at BIO 2026, scheduled from **22–25 June 2026 in San Diego, USA**, featuring an expanded **5,000 sq. ft. pavilion** at **Booth Nos. 3351 and 3551** in collaboration with **3SMG Private Limited**. The pavilion will provide Indian companies a high-visibility platform to showcase innovations, engage with global stakeholders, and explore international collaborations. **Booth No. 3351** has been **exclusively earmarked for ABLE members and previous exhibitors**, while **Booth No. 3551** is designated for **3SMG clients**.

Click here for more information

https://drive.google.com/file/d/1Pq3Rz_9uofiu6ocizZCq7fd3er821I_h/view

Reach out to **Dr. Balasubramanya S**, General Manager, ABLE for detailed discussion (*Email: gm@ableindia.org.in* , *Mobile: 99000 48833*)

MEMBER NEWS

Lupin CEO Vinita Gupta honoured in CNBC 2026 Changemakers List



ABLE member, Lupin's CEO, Ms Vinita Gupta has been recognized with a place on the CNBC Changemakers list of Women Transforming Business 2026. Each year, this prestigious list honours female leaders who are redefining industries, breaking barriers, and driving lasting change across various business sectors.

"I am honoured to be recognized as a CNBC Changemaker and listed amongst such extraordinary leaders who are driving significant change and impact," said Ms Vinita Gupta, CEO, Lupin in a company statement. *"This recognition reflects not only my own journey, but the shared dedication of everyone at Lupin who works each day to help transform hope into healing. I truly believe that meaningful change occurs when purpose is matched by execution. I extend my congratulations to all the other honourees."*

She built Lupin's U.S. business from the ground up. During her tenure as CEO, the company grew into the third-largest generic medicine supplier to the U.S. and the world's seventh-largest pharmaceutical company by volume. Under her leadership, Lupin continues to expand its impact on affordable medicine, complex generics, inhalation and biosimilars. In late 2025, Lupin gained FDA approval for its first biosimilar Pegfilgrastim, marking a pivotal step in Lupin's ongoing commitment to providing high-quality, affordable medicines to U.S. patients.

Ms Vinita has made expansion in the U.S. a core pillar of Lupin's worldwide growth strategy. In 2025, she advanced efforts to strengthen domestic pharmaceutical manufacturing by progressing Lupin's reshoring initiative and announcing plans for a new state-of-the-art inhalation facility in Coral Springs, Florida. The site is anticipated to produce multiple respiratory products, including Albuterol. By expanding production in the United States, Lupin is reinforcing medicine security and improving patient access to critical medicines.

CNBC Changemakers is an annual list spotlighting women whose accomplishments have left an indelible mark on the business world. The list recognizes female leaders who are finding solutions, driving innovation, and building businesses poised for sustainable success.

Those recognized in the CNBC Changemakers list will be honoured at the CNBC "Changemakers Summit in New York on April 16, 2026".

QUARTERLY RESULTS

Lupin Q3 FY2026 Results

Lupin Ltd reported its financial performance for the quarter ending December 31, 2025. These unaudited results were taken on record by the Board of Directors at a meeting in February 2026

Financial Highlights – Consolidated IND-AS

Amt in INR Mn

Particulars	Quarter				
	Q3 FY2026	Q3 FY2025	YoY Growth %	Q2 FY2026	QoQ Growth %
Sales	71,005	56,186	↑ 26.4%	68,314	↑ 3.9%
EBITDA	23,766	14,098	↑ 68.6%	124,313	↓ 2.2%
EBITDA Margin (%)	33.5%	25.1%	↑ 840 bps	35.6%	↓ 210 bps
Adjusted PBT	15,220	10,713	↑ 42.1%	20,070	↓ 24.2%
PAT	11,805	8,589	↑ 37.4%	14,848	↓ 20.5%

Income Statement Highlights – Q3 FY2026

- Gross Profit was INR 52,224 Mn compared to INR 38,970 Mn in Q3 FY2025, with a gross margin of 73.5%.
- Personnel cost was 16.1% of sales at INR 11,433 Mn compared to INR 9,844 Mn in Q3 FY2025.
- Manufacturing and other expenses were 27.3% of sales at INR 19,366 Mn compared to INR 16,959 Mn in Q3 FY2025.
- Adjusted PBT at INR 15,220 Mn at 21.4%, up 42.1% YoY from INR 10,713 Mn in Q3 FY2025.
- PBT (excluding exceptional items) is INR 19,486 Mn at 27.4%.
- We have provided net one-time exceptional items of INR 4,266 Mn.
- Investment in R&D for the quarter was INR 5,352 Mn (7.5% of sales).

Balance Sheet highlights

- Operating working capital was INR 79,481 Mn as on December 31, 2025.
- Capital Expenditure for the quarter was INR 2,007 Mn.
- Net Debt as on December 31, 2025, stands at INR -28,793 Mn.
- Net Debt Equity as on December 31, 2025, stands at -0.14.

Commenting on the Q3FY26 results, Mr. Nilesh Gupta, Managing Director, Lupin Limited said "We are happy to deliver another quarter of strong growth led by our highest ever quarterly sales in the US and double-digit growth in India and all other regions. We are on track to deliver a strong close to FY26."

BIOSIMILARS NEWS

Government announces ₹10,000 cr BioPharma Shakti program in Union Budget 2026-27

To make India a global center for biopharma manufacturing, Union Finance minister Mrs Nirmala Sitharaman announced a dedicated ₹10,000-crore, five-year programme to develop India as a global biopharmaceutical manufacturing hub. The announcement was made during the Budget on February 1, 2026.

This program will shift focus away from generics medicines and direct funds towards quicker development of biosimilars and biologics to treat a range of non-communicable diseases. The biotech industry has been urging the government to focus on this sector due its long-term global potential.

The move aims to boost manufacturing, regulation, and clinical trials, positioning India for future global competition.

Mrs. Sitharaman said in her budget speech, "India's disease burden is observed to be shifting towards non-communicable diseases, like diabetes, cancer and autoimmune disorders. Biologic medicines are key to longevity and quality of life at affordable costs. To develop India as a global biopharma manufacturing hub, I propose the Biopharma SHAKTI (Strategy for Healthcare Advancement through Knowledge, Technology and Innovation) with an outlay of ₹10,000 crore over the next five years."

Welcoming the announcement, Dr. Kiran Mazumdar-Shaw, executive chairperson of Biocon and non-executive chairperson of ABLE, said, "This initiative-spanning manufacturing scale-up, global-grade regulation, new NIPER (National Institutes of Pharmaceutical Education and Research) institutions and a nationwide clinical trials network-can firmly position India as a global biopharma manufacturing hub."

Mr Sujay Shetty, global health advisory leader at PwC, told **Economic Times** that the proposal to set up 1,000 accredited clinical trial sites and strengthen regulatory capacity is a crucial signal that India is serious about innovation and biosimilars.

Added, Dr Annaswamy Vaidheesh, former managing director of GlaxoSmithKline Pharmaceuticals, "The timing is driven by the upcoming global biologics patent cliff and intensifying competition. Countries like China and South Korea are scaling biosimilars rapidly with strong state backing. India needs to move from cost advantage to scale, quality and regulatory credibility."

FDA accepts DRL's application related to interchangeable biosimilar, Abatacept

ABLE Patron Gold Member, Dr Reddy's Laboratories announced in February 2026 that the USFDA has accepted Dr. Reddy's 351(k) Biologics License Application (BLA) for Proposed Interchangeable biosimilar Abatacept, DRL_AB (IV for Infusion). The submission was made to the US regulator in December 2025.

BLA is based on a robust data package supporting similarity to Orencia® (abatacept) IV for infusion through totality of evidence including pharmacokinetic (PK) data

"We are proud to be the first to submit a BLA for an abatacept biosimilar which marks a significant milestone in our mission to increase patient access to critical, high-quality biologic therapies," said Mr. Milan Kalawadia, CEO, North America, at Dr. Reddy's. "We look forward to working with the FDA to bring this in-house developed biosimilar to market as a cost-effective alternative for patients and healthcare providers in the United States."

A company statement said DRL_AB, once approved will be administered as an IV for infusion formulation for the treatment of adults with moderately-to-severely active rheumatoid arthritis (RA), adults with active psoriatic arthritis (PsA), and individuals aged six years and above with moderately-to-severely active polyarticular juvenile idiopathic arthritis (pJIA).

The 351 (k) BLA submission includes a comprehensive data package consisting of analytical, pharmacokinetic (PK), and clinical studies. DRL_AB Clinical Milestones: 1. Phase 1 study (AB-01-003), achieved Pharmacokinetic similarity with comparable safety and immunogenicity profiles with Orencia. 2. Pivotal Phase 3 study (AB-01-004), to compare the efficacy and safety of DRL_AB with Orencia [ongoing].

AB DRL_AB is a proposed biosimilar to Orencia® (abatacept) IV for infusion, a selective co-stimulation modulator, inhibits T-cell (T lymphocyte) activation by binding to CD80 and CD86, thereby blocking interaction with CD28. This interaction provides a costimulatory signal necessary for full activation of T lymphocytes. Activated T lymphocytes are implicated in the pathogenesis of RA, pJIA and PsA and are found in the synovium of patients with RA, pJIA and PsA.

DRL enters Hormone Replacement Therapy with acquisition of Progynova® and Cyclo- Progynova® in India from UK company

On February 18, DRL announced that it has acquired the trademarks of specialty brands, Progynova® and Cyclo- Progynova® and related assets, for India from Mercury Pharma Group Limited, a UK-headquartered specialty pharmaceutical company.

Progynova® (estradiol valerate) is an oral hormone replacement therapy indicated for the treatment of estrogen deficiency symptoms and for the prevention of postmenopausal osteoporosis¹. Cyclo Progynova®² (estradiol valerate and norgestrel) is a combined hormone replacement therapy indicated for the treatment of estrogen deficiency symptoms, providing both estrogen and progestogen components³. Progynova® is the #1 Brand in the Estradiol represented pharmaceutical market (RPM)⁴, with strong physician equity and brand recall in India.

As per IQVIA MAT December 2025, the brand recorded sales of INR 100 cr. The acquisition strengthens Dr. Reddy's gynaecology portfolio and marks a strategic entry into the hormone replacement therapy segment.

Mr. M.V. Ramana, CEO, Branded Markets (India and Emerging Markets), Dr. Reddy's, said: "The acquisition will serve as the spearhead of our expansion into the HRT segment, strengthening our existing gynaecology portfolio in India. With our established market access, we are uniquely positioned to extend the reach of the acquired assets and deliver greater impact. Furthermore, this acquisition brings a first-in-class treatment closer to patients, underscoring our commitment to innovation and patient care at the centre of everything we do."

Cipla, Kemwell form biologics JV to tap fast-growing biosimilars market

ABLE members, Cipla and Kemwell Biopharma, have formed a joint venture to strengthen presence in the fast-growing biologics and biosimilars space. The announcement was made on March 2, 2026. The new venture aims to develop, manufacture and commercialise biologics and biosimilars for global markets.

A new company will be incorporated in which Cipla will hold a 60 per cent stake while Kemwell will own the remaining 40 per cent.

Together they will initially invest up to ₹10 crore in the new entity in proportion to their shareholding. At the time of incorporation, Cipla will subscribe to 6,000 equity shares of ₹10 each at par, amounting to ₹60,000.

The JV's scope will include applying for and obtaining regulatory licences, as well as importing, exporting and outsourcing biologics-related activities, Cipla said in an exchange filing on BSE.

Kemwell is an Asia-based biologics contract development and manufacturing organisation (CDMO) that offers end-to-end services to global biopharma clients. Its Bengaluru facility, certified by the US Food and Drug Administration, houses 5,000-litre bioreactor capacity, sterile fill-finish lines and advanced development

laboratories for protein therapeutics. The company supports both commercial manufacturing and R&D and clinical programmes for novel biologics and biosimilars.

Cipla said the transaction does not involve any related-party considerations and does not require any specific governmental or regulatory approvals at this stage.

Biocon Biologics excited about 2026 on biosimilars front

ABLE member Biocon Biologics expects the upcoming 12 months to be far more exciting than the recent past, led by a series of new biosimilar launches, including Aspart, Aflibercept and Denosumab.

Dr. Shreehas Tambe, MD& CEO, Biocon Biologics, said the financial impact of these recently launched products will begin to reflect significantly in the company's full-year numbers for fiscal year 2027.

Dr. Tambe's comments at the recent BioAsia Conference was reported by CNBC-TV18. He said the company's third quarter margins were in line with guidance. "We have said it will be in mid-20s, and we expect it to be 24 to 26%," he said.

Dr. Tambe said competition in the insulin space is limited, primarily coming from the originator products. He stressed the importance of being a responsible player in chronic therapies, where long-term patient commitment is crucial. He pointed to the company's success with Glargine, which has captured a fifth of the US market, and stated that the company expects a similar trajectory for Aspart.

Dr. Tambe noted that new products typically take four to six quarters, or in some cases six to eight quarters, to reach their peak sales. He also highlighted the endurance of legacy products launched since 2018, which continue to deliver good margins and hold a quarter of the US market.

Contrary to the belief that the rise of GLP-1 drugs for diabetes and weight loss would diminish insulin demand, Dr Tambe observed a different trend. While acknowledging it is intuitive for pharmaceutical companies to redirect capacity towards more remunerative GLP-1s, he stated that insulin demand has not receded.

"We continue to see a very steady demand," Dr Tambe said, adding that there is even an "increasing demand for insulins." Given the limited competition, he believes this trend continues to present a "sizable opportunity" for Biocon Biologics.

Lupin Receives European Commission Approval for Biosimilar Ranibizumab

ABLE member, Lupin Limited has announced that it has received the approval from European Commission for its biosimilar ranibizumab, Ranluspec™ (for vials and pre-filled syringes), following the recent positive opinion from the Committee for Medicinal Products for Human Use.

Ranibizumab is a recombinant humanized IgG1 monoclonal antibody fragment that binds and inhibits vascular endothelial growth factor A. Its indications encompass the treatment of patients with neovascular (wet) age-related macular degeneration, macular edema following retinal vein occlusion, diabetic macular edema, proliferative diabetic retinopathy, and choroidal neovascularization.

Mr Thierry Volle, President EMEA and Emerging Markets, Lupin, said, “We are very pleased to receive the European Commission approval for ranibizumab. This achievement underscores the strength and quality of our scientific capabilities and manufacturing excellence. We remain firmly committed to expanding access to innovative, high quality, and affordable biologic therapies for underserved patients worldwide.”

The approval from the European Commission for our biosimilar ranibizumab is a milestone that validates our unwavering commitment and scientific standards to making advanced biologic therapies more accessible,” said Dr. Cyrus Karkaria, President Biotechnology, Lupin.

Lupin’s biosimilar ranibizumab will be commercialized by Sandoz across the European Union (excluding Germany). In France, the product will be commercialized by two companies, Sandoz and Biogaran.

Lupin launches Brivaracetam Oral Solution in US

On February 24, Lupin announced that it has received approval from the U.S. FDA for its Abbreviated New Drug Application (ANDA) for Brivaracetam Oral Solution 10 mg/mL. Brivaracetam is the bioequivalent to Briviact® Oral Solution, 10 mg/mL, of UCB, Inc. and is indicated for the treatment of partial-onset seizures in patients 1 month of age and older. Following the approval, the company initiated the launch of Brivaracetam Oral Solution in the United States.

Brivaracetam Oral Solution (RLD Briviact) had an estimated annual sale of \$ 135 million in the U.S. (IQVIA MAT December 2025).

BIOENERGY NEWS

India's bioenergy gains momentum post E20 mandate – Optimism builds for the future

In an important policy announcement, the government has mandated the sale of E20 petrol with Research Octane Number (RON) 95 across the entire country.

For the sugar and bioenergy sector, which has been requesting a stable and long-term demand and supply policy, this announcement has landed as a blessing. It has rejuvenated the industry, as it finds a new purpose.

Amongst the initial takers of the decision, Mr Samir Somaiya, Chairman &MD of Godavari Biorefineries Limited, celebrated it as a “very positive development,” highlighting how India is ahead in its journey towards energy transition. I feel his optimism is infectious.

Industry leaders, from sugar mills to grain-based distillers to advanced biofuel innovators, have been worried for months that expanded ethanol capacities would translate into less offtake. They worried that what if the market is unable to handle the supply?

That feeling has been decisively turned this week by the E20-RON95 mandate. The E20 mandate, thus far in effect, frees up significant demand, reinforcing price certainty, increasing utilisation and making it easier for producers to plan investments in infrastructure with certainty.

What's next? Is a question on everyone's mind.

India boasts of the largest population. As per some estimates, the total energy consumption will almost double by 2045. Road, aviation, and agriculture will make up a vast part of that consumption. Meeting this growing demand in a sustainable manner in India requires an extensive ethanol roadmap beyond E20.

Countries such as Brazil have long adopted E27 throughout their entire nation. India needs a 2.0 National Ethanol Blending Policy. Clear timelines for E22, E27 and E30 adoptions. Producers contract on a long-term procurement basis and a technology roadmap for high-blend vehicles, for which Brazil is ready for knowledge transfer and partnership. Adoption of higher blends will further reduce dependence on crude oil imports and create a reliable new source of income for farmers.

However, the current GST regime and differential duty slabs restrict market growth. A unified lower GST across biofuels and incentives for blending infrastructure at fuel stations would speed up the uptake of their use.

Flex-fuel vehicles (FFVs) need to be mainstream. A national FFV roadmap, including GST cuts, consumer incentives, and fleet-level measures, will enable the full unlocking of E27–E30 in India.

The Next Frontier in Aviation: Sustainable Aviation Fuel (SAF).

The International Civil Aviation Organization (ICAO) has adopted a market-based measure Carbon Offsetting Reduction Scheme for International Aviation (CORSA), to reduce carbon emissions from international aviation. India, being a Member State of the ICAO, is under an obligation to comply with the mandatory phase of CORSA from 2027. Under the CORSA scheme, airlines are required to offset their emissions above a set baseline of 2019. The CORSA scheme is applicable for international flights only.

To facilitate the Indian aviation industry's transition towards carbon-neutral growth, India has joined ICAO's Assistance, Capacity-building and Training for Sustainable Aviation Fuels (ACT-SAF) program, which aims to support the mitigation of CO₂ emissions from international civil aviation in ICAO Member States. India is also an active member of various working groups of ICAO Committee on Aviation Environment Protection where experts from all member States participate and contribute to the development of environmental standards and guidance material for the international aviation sector.

The Government has approved indicative blending targets of 1% by 2027, 2% by 2028 and 5% by 2030 for SAF in Traditional Aviation Fuel, initially for international flights. Public sector Oil Marketing Companies are actively engaged in achieving the stated blending targets.

A feasible SAF ecosystem in India will require a mechanism for financial viability gap funding, scheduled blending targets on domestic carriers, logistics, etc. SAF is India's chance to take the lead globally, making use of its agricultural prowess, distillation capacity and low-carbon aspirations.

A study done by Deloitte and ISMA released a report on 11th September 2025, on Sustainable Aviation Fuel (SAF) titled 'India's SAF Roadmap'.

The report said that India's robust sugar industry has the ability to produce 350 to 400 Cr litres of SAF via surplus ethanol from the 1G route alone by 2040. "The sector holds the potential to meet over ~50% of India's total SAF demand by 2040. In the near term, the report projects that the sugar sector can easily support 125 to 150 Cr

litres of SAF production in 2030 without any disruptions in the ongoing sugar supply or ongoing ethanol blending,” the report outlined.

Isobutanol, produced from the same feedstocks as molasses-based ethanol, has various applications. Its blending with diesel has the potential to produce cleaner, lower-carbon diesel fuels and helps broaden the green fuel portfolio. Isobutanol-sourced bitumen enhancers can ease carbon intensity and increase the durability of roads, providing an eco-friendly route for the high-performance highway construction of India.

With the right policy architecture, biofuels are not just going to power vehicles; they are going to drive India’s economic revolution, delivering cleaner mobility, increased farmer incomes, lower oil imports, and a strong low-carbon future.

The industry is energised, optimistic and poised. It is now time to turn this optimism into action.

(This is an Editorial comment by Mr Uppal Shah, in Chini Mandi, a Media & Networking Platform)

India could double biofuel production by 2030 with stronger policies, says IEA

Ethanol and compressed biogas (CBG) are leading growth.

India’s production of liquid and gaseous biofuels could more than double by 2030 if policies are strengthened, according to a new report from the International Energy Agency (IEA).

The report said that enhanced policy measures could unlock opportunities across ethanol, compressed biogas, biodiesel, and sustainable aviation fuels. It also highlighted that biofuels can strengthen India’s energy security by reducing reliance on imports, support economic development and job creation—particularly in rural areas—and contribute to the country’s emissions reduction goals.

These benefits align closely with India’s national energy and climate objectives and are underpinned by abundant agricultural residues and organic waste, a key resource for modern bioenergy production.

Join Asian Power community

“India’s success in scaling up bioenergy shows what is possible when you have clear targets, predictable policies and coordination across government,” said IEA Executive Director Fatih Birol.

Since 2018, India's ethanol consumption has grown from under 2 billion litres to over 11 billion litres, making it the world's fourth-largest producer of liquid biofuels. Compressed biogas (CBG) has also seen strong growth, supported by 11 national policies since 2018, with around 170 plants currently operational and nearly 300 more under construction.

Meanwhile, sustainable aviation fuels and other innovative biofuels are attracting growing investor interest as the aviation industry seeks low-emission alternatives. Under the IEA report's baseline forecast, reflecting current policies and market conditions, India's use of liquid and gaseous biofuels is expected to rise by more than 50% by 2030, with ethanol and CBG leading the way.

In an accelerated scenario, with enhanced policy support, improved feedstock access, and expanded supply chains, biofuel consumption could more than double, representing a sixfold increase from 2020 levels.

The report calls for four key actions, namely a national sustainable fuels roadmap, integrated supply chains and infrastructure, innovation support for emerging fuels, and strong carbon accounting and sustainability frameworks for international markets.

Kerala commissions first CBG plant; minister says toughest waste management phase over



Thiruvananthapuram: The launch of Kerala's first Compressed Biogas (CBG) plant at Brahmapuram marks a major step in the State's waste management drive, with the most difficult phase of the mission now complete, Minister for Local Self Governments and Excise Mr M. B. Rajesh said on Wednesday, The Hindu reported.

Addressing a press conference in Kerala, Mr. Rajesh said the remaining goals in waste management are relatively easier to achieve. He noted that 38,355 Haritha Karma Sena volunteers are collecting non-biodegradable waste from 95.99 lakh households across the State. The number of material collection facilities has increased significantly to 22,838 compared to a few years ago.

He said more CBG plants are being readied in various cities. Work on four double-chamber incinerators for processing sanitary waste is under way and expected to be completed within a few months. The State has also reclaimed 70 acres of land by clearing old dump sites.

(Courtesy: BioEnergy Times)

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