From the Desk of President

ABLE Association of Biotechnology Led Enterprises

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The e-newsletter for the Indian Biotech industry

www.ableindia.in

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Eventful July for ABLE and Industry

I am happy to inform our members that July 2022 was a very eventful month for ABLE and the biotech industry. Expanding the footprint beyond Bengaluru and New Delhi, **ABLE** opened the **Western Regional Chapter** of the Association on July 15. The Chapter will be hosted by the **'Venture Centre', Pune**, thanks to Dr Premnath and team for facilitating this. The Chapter will provide a perfect platform for all biotech companies in the region to engage with each and other counterparts across the country under the ABLE umbrella.

This happy event was followed by even a greater activity. This was the formal release of the **'India BioEconomy Report 2022'** (click here to download the report), **authored by ABLE** for DBT-BIRAC (Biotechnology Industry Research Assistance Council) on July 19 by the **Union Minister for S&T and PMO, Dr Jitendra Singh**, along with **DBT Secretary Dr Rajesh Gokhale**. It was our first formal interaction with the new Minister who used the opportunity to interact with the strong ABLE member delegation and shared his vision for the biotech industry for the next few years. We also had an opportunity to meet with Dr Gokhale after the event who expressed his wish to visit Bangalore and meet with the industry leaders. We will update you more on this soon.

What is heartening is that the national BioEconomy registered 14 % growth in the Covid year of 2021, with nearly $15 billion contribution coming from the Covid Economy comprising vaccines, diagnostics kits, antivirals and other therapeutics. Innovation flourished with three biotech startups being incorporated on an average daily during the year, totalling 1128, industry's R&D spends touched $1 billion and on average 4 million doses of Covid vaccines were administered daily in 2021.

A 10-member ABLE delegation, comprising key members, also had the opportunity to **engage with** entire **BIRAC team** lead by **Dr Manish Diwan**. We discussed on matters of importance to the industry, explore opportunities for greater cooperation to guide the young entrepreneurs and further strengthen the biotech innovation system with knowledge sharing, mentoring and suitable funding efforts. It was very evident that the BIRAC team was very keen on addressing all challenges related to the Biotech segment.

There are other good news from our members: Serum Institute got the approval for the first ever India-made vaccine (Covovax) in the USA, String Bio raised $ 20 million to deploy its tech platform in Australia, Strand Lifesciences released the Covid-19 genomic surveillance report for Bengaluru based on 12,000+ samples collected from the city, Bharat Biotech planning to produce variant-neutral vaccine against Covid-19 and so on.

Another important development nationally is that many more state governments are looking at promoting biotech industry in a determined manner. Gujarat has released an updated Biotech Policy for 2022-27 with an array of incentives to attract investments into the state. Tamil Nadu has released two forward looking policies: State R&D policy and Life Sciences Promotion Policy in July 2022.

Another pioneering initiative is the ground breaking ceremony for the Anti Venom Research and Development Centre (AVRD) by IBAB at its Electronic City campus in Bengaluru. This unique institution, supported by the Government of Karnataka, will become a repository for a wide array of anti-venom treatments, tailored specifically to the entire region's needs

I am happy to welcome more than two dozen new members who have joined ABLE in recent weeks and particularly our latest Patron Gold member, **Cytiva.**

As the nation prepares to celebrate the 75th Anniversary of our Independence, I urge all our member companies too to join the historic occasion by hoisting the National Flag at our premises on August 15. The Flag Code of India has been amended to allow all to hoist the flag through the night on August 15 and need not be lowered before sunset.

Wish you all a very 'Happy Independence Day' in advance!

G S Krishnan
President, ABLE

IN THIS ISSUE

ABLE NEWS

Union Minister Dr Jitendra Singh releases India BioEconomy Report 2022: Urges all to work towards $300 billion target by 2030

The Union Minister of State (Independent Charge) Science & Technology; Minister of State (Independent Charge) Earth Sciences; MoS PMO, Personnel, Public Grievances, Pensions, Atomic Energy and Space, **Dr Jitendra Singh** today released India BioEconomy Report 2022. The report has been prepared for "Make in India Facilitation Cell for Biotechnology" of BIRAC by Association of Biotechnology Led Enterprises (ABLE).

Releasing India's Bioeconomy Report 2022, Dr Jitendra Singh pointed out that:

1. India's Bioeconomy has reached over **$80 billion in 2021 recording 14.1% growth** over $70.2 billion in 2020.
2. Noting the rapid growth in the sector, the Minister said, Bioeconomy is **likely to touch $150 billion dollars by 2025 and over $300 billion by 2030**.
3. Bioeconomy **will be key to India's future economy** over the next 25 years.
4. The Minister **urged all the stakeholders** of Biotech sector, particularly Industry, Startup Ecosystem, Investors, Scientists, Scholars, Entrepreneurs and enablers like DBT, BIRAC **to collectively work to achieve the ambitious target**.
5. Dr Jitendra Singh added, the **number of Biotech Start-ups** in the country have increased from **50 to over 5,300 in the last 10 years**, **because of the growing enabling ecosystem and prioritization provided by Prime Minister Narendra Modi**.
6. He hoped that **Biotech Start-ups** arising from strong talent pool is **expected to further increase 2 times, to 10,000 plus by 2025**.
7. The Minister recalled that **Prime Minister Modi's presence in the 1st National Biotech Start-up Expo 2022** organized by DBT/ BIRAC in June this year **is a testimony of growth potential in the biotech sector** and innovation talent pool of our Start-up ecosystem.
8. **Dr Jitendra Singh informed that India is among the top 3 in South Asia and top 12 destinations for biotechnology in the world, with approximately 3% share in the global Biotechnology industry.** Moreover, India has 2nd highest number of USFDA approved manufacturing plants outside the US. He said, biotechnology sector has the potential to have cascading multiplier effect on overall economic growth of the

country. This sunrise sector enables technology led solutions for Healthcare, Industrial manufacturing, Agriculture, Environment and Clean Energy, the Minister added.

9. Dr Jitendra Singh said that India is global leader in the supply of DPT, BCG and measles vaccines and for Covid vaccine also, the nation has demonstrated self-sustenance and also supported several countries. He said, it is interesting to note that while most sectors showed stunted growth or negative growth in the backdrop of Covid challenge, two rounds of lockdowns and global disruptions, the Biotech sector stood out distinctly.
10. Dr Jitendra Singh said, **the biotech sector particularly for vaccines, diagnostics, therapeutics has shown to the world that India can fight global challenges like COVID pandemic from the forefront and contribute with first-in-class and best-in-class solutions not only for itself but for the world**. He added that from large manufacturers to young start-ups, the innovation ecosystem in the country have come together and today, India is self-sufficient in most of the products required to manage the pandemic and we need to keep this momentum.
11. BioPharma companies were supported by Department of Biotechnology and **BIRAC with risk-funding of about $71 Mn for development and manufacturing of Covid vaccines**.
12. **BioPharma Industry in 2021 tripled its R&D spending to nearly $1 billion from $360 million in 2020**.
13. **Industry also augmented the manufacturing capacity by 3 times from 1300 Mn dose in 2020 to 4500 Mn** doses in 2021.
14. This in turn, enabled administration of about **4 Mn doses of Covid vaccine per day** in 2021. The overall impact on **Bioeconomy from Covid vaccines was registered as $8.7 billion** as per the India Bioeconomy report 2022.
15. Likewise, the **production capacities also witnessed major increase in Covid Diagnostics from 25 million Tests in 2020 to 2000 Mn Tests in 2021**. The indigenization of previously imported raw materials, reagents and components played a significant role here.
16. The **Make in India National Mission is also likely to play a major role in substituting the import dependence of medical devices where the 70-80% demand is currently being met through imports.**
17. We are already **witnessing increased contribution of biotech Start-ups innovating new affordable and accessible medical devices and digital health-tech solutions**.
18. **Secretary, DBT, Rajesh Gokhale** said, this year is particularly noteworthy as it coincides with the Azadi Ka Amrit Mahotsav, a celebration of our nation's 75 years of independence and **the release of Bioeconomy 2022 report could not be more apt, as it provides an interim progress report of our journey of Atma Nirbhar Bharat.**
19. Dr Gokhale also informed that in case of **sustainable Biofuel, target year for 20% ethanol blending has been advanced by India from 2025 to 2023 and this biotech sub-sector has shown two times growth. The Ethanol production of 3.3 Bn liters capacity has doubled to 6.5 Bn litres in 2021.** With further growth, India would save its import costs, thereby, directly impacting the Forex reserves and Import-Export imbalance in the favor of achieving $10 Trillion overall economy target by 2030.
20. Similarly, **Agriculture sector that employs nearly 60% on India's population has large scope of improvement**. BT Cotton, Biopesticides, Biostimulants and Biofertilizers contributed to about $10.48 billion in 2021 for bioeconomy of the country.

■ By Narayanan Suresh, ABLE

ABLE launches First Regional Chapter in the West zone at Venture Center, Pune

ABLE is expanding the footprint by launching the Western Regional Chapter. The Chapter will be located within the campus of Venture Center in Pune, one of the country's leading home for biotech startups.

The Chapter was launched formally on 15th July 2022 by ABLE President, Mr G S Krishnan along with Dr V Premnath, director, Venture Center. In his special address, Mr Krishnan recollected the major efforts of ABLE's member companies like Serum Institute based in Pune and other members in the fight against Covid-19 in the country and the world. The ABLE Regional Chapter will provide another platform for all the biotech companies to get together under the ABLE umbrella, exchange ideas, share their experiences to other companies, take up industry issues with policy makers and regulators in the regional and at the national level and emerge as a preferred networking center for all connected with biotech. Dr Premnath welcomed the ABLE Chapter and offered to work closely with member companies to transfer their rich experiences in various sectors to further fuel the innovation ecosystem in the city and beyond.

On the occasion, Mr Krishnan, as chief guest honoured three outstanding Pune-based companies, Serum Institute of India (maker of Covishield vaccine), Mylab Discovery (country's first home-made RT-PCR test kit) and Gennova Biopharma (maker of first mRNA vaccine at near room temperature against Covid-19).

Gujarat government conducted Bio-connect meet in Hyderabad in association with ABLE, promoting Gujarat Biotechnology Policy 2022-27

Gujarat is focused to encourage investment in the Biotechnology sector in the state. Recently, Shri Bhupendrabhai Patel, Hon'ble Chief Minister of Gujarat launched a forward looking Biotechnology Policy 2022-27 reiterating the commitment of Gujarat to promote rapid and inclusive growth in the biotechnology sector in Gujarat. The Policy offers several attractive incentives to companies setting up operations in the state. This policy will provide 25% CapEx support, 15% OpEx support for 5 years, 7% Interest Subsidy and many such incentives; with a special support for Mega/ Special/ Ecosystem Strengthening Projects.

A delegation composed of senior officials from the Department of Science and Technology, Government of Gujarat visited Hyderabad on 13-14 July 2022, to interact with Startups, Industry & Business Leaders of the Biotechnology Sector. The purpose of the visit was to share information about the exciting developments in Gujarat's Biotechnology Sector inclusive of the Biotechnology Policy 2022-27 as well as to invite companies to explore investment opportunities in the sector.

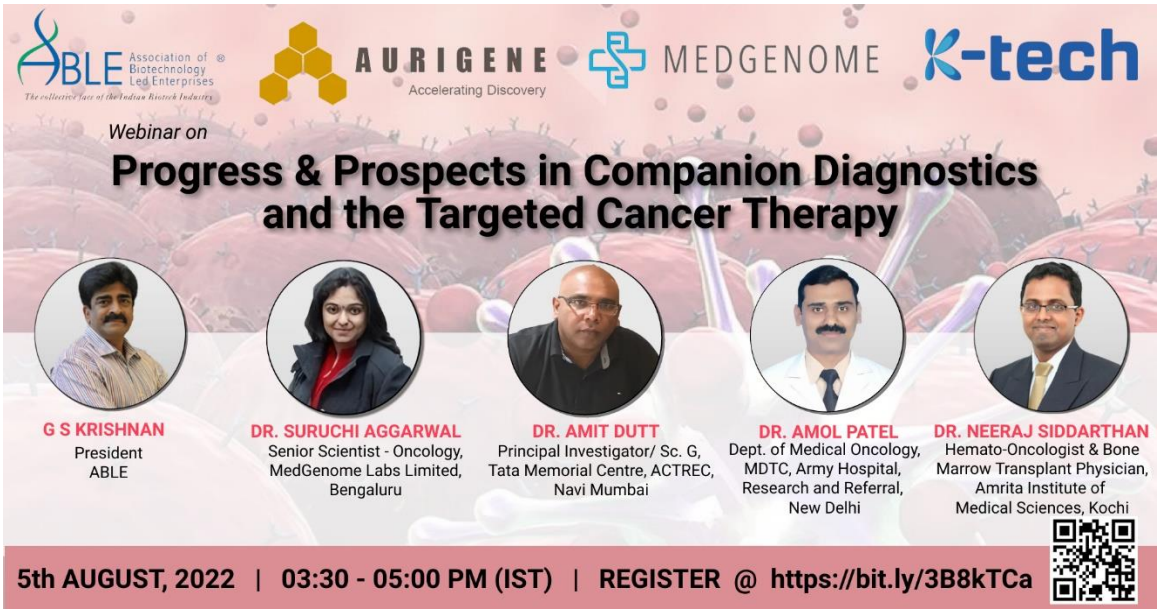
ABLE had associated with the Department of Science and Technology, Government of Gujarat, as a Strategic Partner Organization for the event **'Bio-Connect'**. The event was held at **ITC Kakatiya, Hyderabad on 13th July 2022 Wednesday**.

Have a look at the policy Click here

ABLE Webinar on “Progress & Prospects in Companion Diagnostics and the Targeted Cancer Therapy”

Register Now @ https://bit.ly/3B8kTCa

August 05, 2022



The webinar will be held on August 5, 2022 from 03:30 pm to 05:30 pm (IST). The Speakers for the webinar are:

Welcome address will be given by G S Krishnan, President, ABLE.

1. **Dr. Amit Dutt**, Principal Investigator/ Scientist G, Tata Memorial Centre, Advanced Centre for Treatment, Research & Education in Cancer, Navi Mumbai
2. **Dr. Amol Patel**, Prof., Department of Medical Oncology, Malignant Disease Treatment Centre, Army Hospital, Research and Referral, New Delhi
3. **Dr. Neeraj Siddarthan**, Hemato-Oncologist & Bone Marrow Transplant Physician, Amrita Institute of Medical Sciences, Kochi
4. **Dr. Suruchi Aggarwal**, Senior Scientist - Oncology, MedGenome Labs Limited, Bengaluru

Join us to be a part of this webinar.

India Vaccine Leaders Conclave

August 25-26, 2022

We are delighted to share the launch of a one-of-a-kind event for the Biopharma Industry - The India Vaccine Leaders Conclave 2022. The event is scheduled for 25-26 August at Courtyard Marriott, Mumbai.

The event strives to provide a meaningful theme of 'Best Practice in Vaccine'. Through the event, we will see how vaccinations can improve the health of everyone throughout life, by connecting us to the people, ambitions, and moments that matter.

The event is made up of a variety of keynote sessions, plenary talks, oral and poster presentations aimed to deliver comprehensive symposiums on current topics in vaccine development, as well as a terrific opportunity to network with peers from Biopharma Industry.

The organisers of IVLC are also recognizing the dedication to excellence and genuine initiatives of the biopharma industry with an award ceremony on 25th August.

Know more and register here to be a part of this event: https://forms.gle/ccYzpgV8DHqXsjw17

Contact: +91 98191 37226 / +91 88504 15580

Website: https://bluetech-media.com/vaccines-leaders-conclave/

IN THIS ISSUE

INDUSTRY NEWS

SOME OF THE KEY EVENTS THIS MONTH

Tamil Nadu releases policies on R&D and Life Sciences Promotion

The Tamil Nadu government on 4th July in Chennai released two major policies—Research & Development Policy 2022 and Life Sciences Promotion Policy 2022.

The State government has set a goal to double R&D expenditure from the government, higher education, and private sector by 2030, attracting ₹20,000 crore of investment in the Life Sciences and generating 50,000 jobs in the sector in the State.

Chief Minister MK Stalin released the policies at the Tamil Nadu Investors' First Port of Call-Investment Conclave held on Monday.

The Policy will provide a special package for R&D centres and Global Captive Centres that will include a special capital subsidy; an innovation lab incentive; a subsidy for software licence; a subsidy for product testing and prototyping facilities; and a training subsidy.

It aims to increase the inputs to R&D, including the number of researchers and scientists in both government and private sectors. The policy's aim is also to increase innovation outputs such as patents and publications and develop a synergetic innovation ecosystem of research parks, research centres, Centres of Excellence and innovation hubs, says the policy.

It aims to strengthen the industrial ecosystem for four broad segments: bio-technology and bio-services; pharma and nutraceutical industries; medical devices and medical textiles.

Source: The Hindu Business Line

Have a look at the R&D policy and Life Science policy

- ABLE member Bharat Biotech, two others to develop 'variant-proof' Covid-19 vaccine
- ABLE member Biocon announced its consolidated financial results for the first quarter
- ABLE member Syngene reports revenue from operations up 8% in the first quarter
- ABLE member Dr. Reddy's Laboratories releases quarterly results for the first quarter

Karnataka: Science and technology minister lays foundation for anti-venom research centre in Bengaluru

Science and Technology Minister Dr CN Ashwath Narayan laid the foundation for the Anti-Venom Research and Development Centre (AVRDC) at the Institute of Bioinformatics and Applied Biotechnology (IBAB) in Electronics City, Bengaluru Monday.

The centre would be built at a cost of Rs 7 crore, officials said. It will come up on a total built-up area of about 16,000 sqft and will have a serpentarium, venom extraction observatory, research lab, incubation facility and digital library.

The minister said India is considered as the global capital for snakebites, causing 58,000 deaths and 1,37,000 disabilities annually. He expressed confidence that the centre would contribute in reducing the number of deaths owing to snake bites.

Read more

ABLE Member Gangagen organized Prof. J. Ramachandra Memorial Lecture

On 8th July, 2022, ABLE member Gangagen Biotechnologies organized 2nd Prof. J. Ramachandran Memorial Lecture. Talks were given by C B Appaiah, Senior Scientist & Balganesh T S
President of GangaGen Biotechnologies Pvt Ltd.

Dr. Bala S Manian, Bio-medical Engineer, Founder ReaMetrix Inc. & Silicon Valley Entrepreneur delivered the lecture on "Single cell function analysis leveraging advances in droplet technologies".

ABLE Member Serum Institute scripts a first in the US with Novavax alliance on Covid-19 vaccine

India's Serum Institute has broken new ground for itself and the Indian vaccine industry by receiving regulatory approval in the United States for made-in-India vaccines, a first of sorts.

The vaccine major has a manufacturing tie-up with American biotechnology firm Novavax that has just received an emergency use authorization from the US Food and

Drug Administration (USFDA) for the use of its adjuvanted Covid-19 vaccine in those over 18 years.

"It is the first vaccine from India to be approved by the USFDA," Serum Institute of India's Chief Executive Adar Poonawalla confirmed to BusinessLine, adding that SII's site was the only one approved by the USFDA amongst all Novavax's partners. "In India, the vaccine is branded as Covovax, and in other international markets, including the US, it is branded as Nuvaxovid by Novavax," he added.

Source: The Hindu Business Line

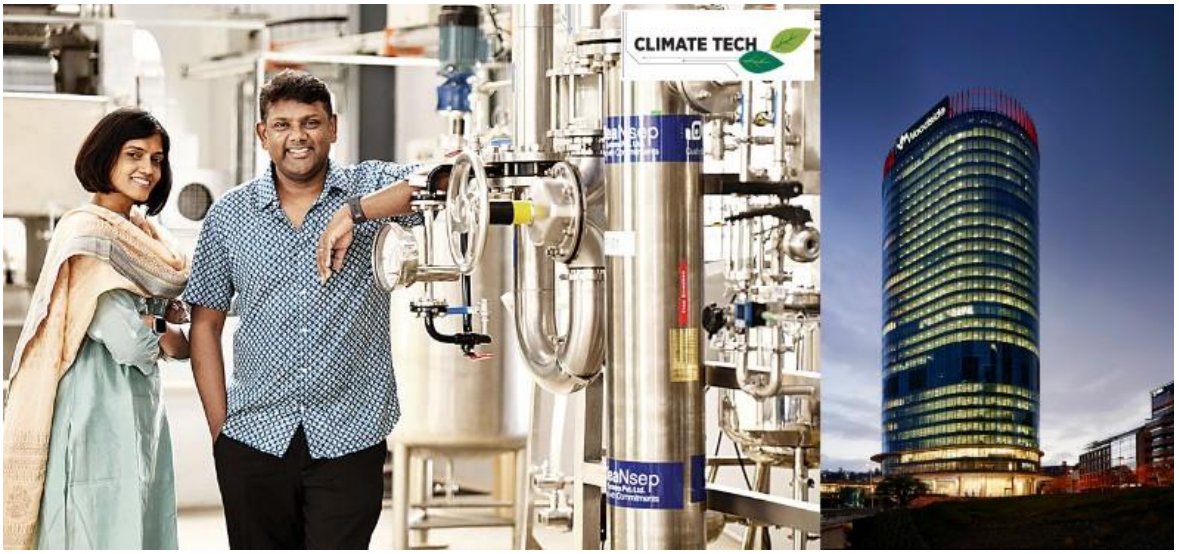
ABLE member Strand Life Sciences presents “Report on Genomic Surveillance of SARS-CoV-2” in the city of Bengaluru

ABLE Member Strand Life Sciences presented insights from its COVID-19 genomic surveillance initiative of sequencing 12,800 SARS-CoV-2 samples from the city of Bengaluru on Sunday, 17th July, 2022, as a part of the “Celebrating Covid Genomic Sequencing and Surveillance effort in Karnataka event at Sir Puttanna Chetty Townhall, JC Road, Bengaluru.

The event was presided over by Dr Ashwath Narayan CN, Minister of Higher Education, IT & BT, Govt of Karnataka, Dr. Thrilok Chandra IAS, Special Health Commissioner, BBMP, Dr. Ramesh Hariharan, CEO & Co-Founder, Strand Life Sciences, , Prof. Rajesh Sundaresan, IISc, Professor, Dr Vishal US Rao, Member of Genomic Surveillance Committee, Karnataka, and Director - Head and Neck Oncology, HCG Cancer Hospital, and Prof. Rakesh Mishra, Director, Tata Institute for Genetics and Society. RTPCR +ve samples were collected between July, 2021 and June, 2022 from various laboratories in Bengaluru, Karnataka, with due permissions from BBMP.

Source: Healthworld from The Economic Times

ABLE member String Bio raises $20 million in Series B funding round



ABLE Member, String Bio Pvt Ltd, a biotech company based in Bengaluru, announced that it has raised close to $20 million in Series B funding round this July. New and existing investors including Woodside Energy Technologies, Ankur Capital, Dare Ventures, Redstart, Zenfold Ventures and others have joined the first close of $20 million of the Series B raise.

Woodside Energy Technologies Pvt Ltd, a wholly-owned subsidiary of global energy company Woodside Energy Group Ltd (Woodside), has announced a $9.9 million equity investment in String Bio. It views String Bio as the developer of a patented process that can recycle greenhouse gases into value-added products such as feed for livestock.

A signing ceremony was also organised on 25th July with Woodside Energy Technologies to commemorate the event.

Read more

ABLE member Bharat Biotech, two others to develop 'variant-proof' Covid-19 vaccine

Bharat Biotech International Limited (BBIL), ExcellGene and the University of Sydney have formed a consortium to develop a variant-proof SARS-CoV-2 vaccine, with a funding of $19.3 million from the Coalition for Epidemic Preparedness Innovations (CEPI).

ExcellGene SA is a Switzerland-based private company offering R&D and manufacturing services for the biopharmaceutical industry. CEPI is a global partnership of public, private, philanthropic and civil society organisations founded to develop vaccine against future epidemics.

“The consortium partnership strives to advance a new vaccine concept that confers highly cross-reactive protection against numerous SARS-CoV-2 variants of concern (VoCs) as well as other Betacoronaviruses. Under the agreement, ExcellGene will produce complex chimeric Spike antigens using its engineered CHOExpress-cell based technology. ExcellGene will use insights from several scientific and technical disciplines along with artificial intelligence to identify the most promising antigenic structure,” a press statement on Tuesday said. Dr Krishna Ella, Chairman and Managing Director, BBIL said, “SARS-CoV-2 global threat continues with new infections over and over again, irrespective of prior infections or vaccinations. This partnership over three continents offers a robust solution promising to open a new door for a future cross-reactive vaccine.”

Source: The Deccan Herald

ABLE member Biocon announced its first quarter results

Biocon announced its first quarter results with Revenue at Rs 2,217 crore, a rise by 23% and Net Profit at Rs 144 Cr.

“We have had a strong start to the year. At a consolidated level, y-o-y revenues grew 23% backed by robust growth in both Biosimilars (29%) and Generics (19%). Core EBITDA grew 25% and margin improved to 31% compared to 30% in Q1FY22. and Net Profit grew 71% to Rs 144 Crore. Our financial performance this quarter includes the impact of annual increments in personnel costs as well as increased input and freight costs, pursuant to pandemic and geopolitical disruptions of global supply chains. R&D investments increased significantly by Rs 87 Crore this quarter reflecting pipeline progression to deliver future growth. All our three businesses are poised for the next phase of strong and sustainable growth which has been challenged during the two years of the COVID-19 pandemic.”

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

Read more

ABLE member Syngene reports revenue from operations up 8% in the first quarter

Syngene International Limited announced its first quarter results for FY23. The Company reported quarterly revenue from operations up 8% yearon-year to Rs. 644 Cr; profit after tax for the quarter declined by 4% year-on-year to Rs 74 Cr.

The first quarter results were against a strong quarter last year due to sales of COVID treatment, Remdesivir. Excluding the impact of Remdesivir, the underlying revenue from operations growth in the quarter was around 30% year-on-year.

Read more

ABLE member Dr. Reddy’s Laboratories releases quarterly results for the first quarter

Dr Reddy's Laboratories reported a 108 per cent year-on-year (YoY) surge in consolidated net profit at Rs 1,187.60 crore for June quarter compared with Rs 570.80 crore in the corresponding quarter last year. Revenue for the quarter rose 6 per cent YoY to Rs 5,215.40 crore from Rs 4,919.40 crore in the same quarter last year.

Co-Chairman & MD GV Prasad said "Our underlying business revenues adjusted for Covid products contribution during last year have grown well. The profits were aided by a few non-recurring incomes, offsetting the near term headwinds. We continue to improve the health of our core businesses through productivity improvement and robust product pipelines".

Source: The Economic Times

Welcome to our New members

Cytiva becomes ABLE Gold member

Cytiva is a global provider of technologies and services that advance and accelerate the development and manufacture of therapeutics. Our customers undertake life-saving activities ranging from fundamental biological research to developing innovative vaccines, biologic drugs, and novel cell and gene therapies. Our job is to supply the tools and services they need to work better, faster and safer, leading to better patient outcomes. Cytiva is a global life sciences leader with over 8000 associates across 40 sites who are dedicated to our vision to improve access to life-changing therapies that transform human health. As a trusted partner to customers that range in scale and scope, Cytiva brings efficiencies to research and manufacturing workflows, ensuring the development, manufacture and delivery of transformative medicines to patients. Visit www.cytiva.com for more information.

ThermoFisher Scientific becomes ABLE Gold member

Thermo Fisher Scientific Inc. (NYSE: TMO) is the world leader in serving science, with annual revenue of approximately $40 billion. Our Mission is to enable our customers to make the world healthier, cleaner and safer. Whether our customers are accelerating life sciences research, solving complex analytical challenges, increasing productivity in their laboratories, improving patient health through diagnostics or the development and manufacture of life-changing therapies, we are here to support them. Our global team delivers an unrivaled combination of innovative technologies, purchasing convenience and pharmaceutical services through our industry-leading brands, including Thermo Scientific, Applied Biosystems, Invitrogen, Fisher Scientific, Unity Lab Services, Patheon and PPD. Visit www.thermofisher.com for more information.

Welcome Aboard to all other new members!

INCHING TOWARDS THE $150 BILLION BIOECONOMY BY 2025

How we will cross the $ 150 billion in 2025 and why we can aim to double it to $ 300 billion by 2030

India's BioEconomy has crossed $80 billion mark in 2021. The nation has set an ambitious target for the BioEconomy to touch the $150 billion threshold by 2025.

Essentially, the performance of almost all the sectors that contribute to the national BioEconomy has to nearly double in the next 3-4 years to achieve this target.

People may be sceptical but we believe this is possible because there are many new green shoots within the biotech segment that are showing signs of great performance. And the hope comes from the resilience and the amazing performance of our Vaccine manufacturers and other related sectors who rose to the occasion and contributed nearly a quarter of 2021 BioEconomy, when growth stagnated in other sectors during the pandemic.

HERE'S HOW THE $ 150 BILLION MAGIC WILL HAPPEN BY 2025:

- BioPharma sector to grow to nearly $63 billion from $45 billion in 2022 (nearly 1.4 times). India made biosimilars are getting accepted in developed markets like the USA and we can expect more nations to source cost effective biosimilars in many disease categories as these global quality medical products demonstrate their efficacy and popularity in foreign countries.

- The Indian Diagnostics and medical devices market is likely to see a huge jump both in terms of consumption and exports. Covid-19 helped the nation to create the right ecosystem to manufacture, source, and export as well. The Diagnostics Labs services are also reaching across the breadth and width of country. "RT-PCR tests" done here is a frequently spotted signs even in small cities and towns across the country, indicating the spread of this expertise Ayushman Bharat is aiding the spread and India's BioEconomy from Diagnostics services and medical devices products is expected to touch $35 billion by 2025.

- Vaccines are expected to generate $15 billion by 2025 and biotherapeutics another $15 billion by 2025. The therapeutics segment is likely to create a BioEconomy of $15 billion from recombinant and biosimilar products.

- BioIndustrial is another important sector that has got fillip from the Prime Ministers vision of Atmanirbhar Bharat and India becoming "energy independent" by 2047. The Indian Government has approved the amendments to the National Policy on Biofuels and took decisions to increase biofuel production and advance the introduction of ethanol blended petrol with up to 20% blend from April 2023. The amendments include allowing more feedstocks for the production of biofuels,

INDIA SHOULD AIM FOR $ 300 BILLION BIOECONOMY BY 2030

YEAR 2030 FORECAST

India's BioEconomy has the potential to reach $270-300 Billion by the year 2030 and account for nearly 3.3-3.5 % share of India's GDP from the 2.8 percent share in 2021.

This is possible when the BioPharma sector races to hit the $120-125 billion mark and each of the three segments—Agriculture including animal biotech and marine biotech, Bioindustrial segment and the BioServices segment of Contract research, contract manufacturing, and, BioIT services cross the $60 billion mark. It is possible if the Indian to continues to take initiatives like it took during Covid and in shaping the Biofuels strategy.

In the BioPharma segment, India can leapfrog in the Vaccines and Therapeutics segment. These two together accounting for nearly 50 percent share of the BioPharma and the Diagnostics labs, medical devices, and services segment estimated to reach $60 billion. The Biofuels segment is forecast to contribute nearly $50 billion in value, while enzymes will rake in $20 billion. The BioServices segment is likely to touch $50-60 billion or even more.

permission for the export of biofuels in specific cases, support developments of indigenous technologies and generate more employment. The Biofuels capacity in the Indian is expected to grow from 5.2 billion liters in 2021 to 10.1 billion liters in 2025 (almost doubling). In terms of the economic value the Biofuel will generate $20 billion BioEconomy by 2025 from $6 billion in 2021 (almost tripling).

- BioAgri comprising of Bt Cotton, pesticides, marine biotech, and animal biotech has the potential to nearly double its BioEconomy contribution from $10.5 billion to $20 billion in 2025. The impetus on circular economy will give the needed push to the sector.

- BioServices sector comprising of CROs/ CDMOs and BioIT segment is forecast to grow from $6.4 billion to $26.6 billion. The segment will nearly quadruple. Most of the large IT companies have dedicated biotech / health care practice. Nearly 5-6 percent of the total value of company's income comes from the biotech portion of healthcare and life sciences practice.

- New segments like smart proteins,

OPTIMISTIC PROJECTION

BIOECONOMY 2025 WITH SUPPORT FROM GOVERNMENT

Segment / Year	2020	2021	2022	2023	2024	2025
BIOPHARMA	38	39.4	45.4	51.5	57.3	63.9
BIOAGRI	11.1	10.5	12.5	14.3	16.9	21.1
BIOINDUSTRIAL	5.1	10.3	14.5	18.5	23.1	28.9
CRO / BIOIT / Research	10.5	5.4	10.6	14.5	19.5	26.6
Covid Economy / Others	5.5	14.5	10	10	10	10
TOTAL BIOECONOMY	**70.2**	**80.1**	**93**	**108.8**	**126.8**	**150.5**

BIOECONOMY 2030 WITH SUPPORT FROM GOVERNMENT

Segment / Year	2025	2026	2027	2028	2029	2030
BIOPHARMA	63.9	70.9	79.2	88.6	101.1	112.2
BIOAGRI	21.1	28.6	32.8	36.3	40.3	45.3
BIOINDUSTRIAL	28.9	32.6	36.1	41.1	46.1	53.1
CRO / BIOIT / Research	26.6	30.2	35.7	41.8	48.8	57.2
Covid Economy / Others	10	10	10	10	10	10
TOTAL BIOECONOMY	**150.5**	**172.3**	**193.9**	**217.8**	**246.3**	**277.8**

protein and peptide-based materials, contact lens, speech restorers, smart pills, nerve regenerators, portable dialysis, prosthetic limbs, new wave of smart telediagnostics, will create a nearly $10 billion in BioEconomy.

- Just take the case of " alternate foods" or "smart proteins " India is the preferred destination for both Innovation and manufacture in the 'Smart Protein area. There is a very big demand for fermentation capacities in this area from startups in US. We have already seen some of the investment happening and in the next 3-5 years there is a potential for 10 million litre fermentation capacities to be set up in India. This will attract an investment of more than $ 500 million which will generate a revenue of $1 billion every year. These facilities could be located in strategic places which has all the infrastructure for setting these big fermentation faculties. The industry just needs the support from a regulatory and infrastructure point of view to capitalise on this great emerging opportunity.

YEAR 2030 FORECAST

India's BioEconomy has the potential to reach $270-300 Billion by year 2030 and account for nearly 3.3-3.5 % share of India's GDP from the 2.8 percent share in 2021.

REALISTIC PROJECTION

BIOECONOMY 2020 - 2025 ($ BILLION)

Segment / Year	2020	2021	2022	2023	2024	2025
BIOPHARMA	38	39.4	45.4	50.5	55.9	61.3
BIOAGRI	11.1	10.5	12.5	14.3	16.4	18.9
BIOINDUSTRIAL	5.1	10.3	13.5	15.5	18.1	21.1
CRO / BIOIT / Research	10.5	5.4	10.6	13.5	16.5	19.5
Covid Economy / Others	5.5	14.5	10	10	10	10
TOTAL BIOECONOMY	**70.2**	**80.1**	**92**	**103.8**	**116.9**	**130.8**

BIOECONOMY 2025 - 2030 ($ BILLION)

Segment / Year	2025	2026	2027	2028	2029	2030
BIOPHARMA	61.3	66.7	72.2	77.6	83.2	89.8
BIOAGRI	18.9	21.8	25.1	28.6	32.8	36.3
BIOINDUSTRIAL	21.1	24.1	26.9	29.6	32.6	36.1
CRO / BIOIT / Research	19.5	23.1	26.6	30.2	33.7	37.8
Covid Economy / Others	10	10	10	10	10	10
TOTAL BIOECONOMY	**130.8**	**145.7**	**160.8**	**176**	**192.4**	**210**

This is possible when the BioPharma sector races to hit the $120-125 billion mark and each of the three segments—Agriculture including animal biotech and marine biotech, Bioindustrial segment and the BioServices segment of Contract research, contract manufacturing, and, BioIT services cross the $60 billion mark. It is possible if the Indian Government continues to take initiatives like it took during Covid and in shaping the Biofuels strategy.

In the BioPharma segment, India can leapfrog in the Vaccines and Therapeutics segment. These two together accounting for nearly 50 percent share of the BioPharma and the Diagnostics labs, medical devices, and services segment estimated to reach $60 billion. The Biofuels segment is likely to contribute nearly $50 billion in value, while enzymes will rake in $20 billion. The BioServices segment is likely to touch $50-60 billion or even more.

*(The BioEconomy revenue projection has been made by the ABLE Research team of **Narayanan Suresh** and **Srinivas Rao Chandan** with inputs from the ABLE leadership team)*

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