# From the Desk of President





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# ABLE Governing Body Members

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**General Secretary** Mr Ravi Bhola

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Dr Kavitha Iyer Rodrigues

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Dr Shriram Raghavan

Mr Venkat Kamalakar Bundia

COO Mr Narayanan Suresh

#### Looking forward to your continued support



We enter the new year 2022 with yet another threat posed by new mutant strains of the SARS CoV-2 virus. Initial indications are that the new Omicron variant is more aggressive but mild in affecting patients. As in the past, ABLE member companies are geared up to step up vaccine production, testing facilities, supply anti-virals and provide any other assistance that is needed to mitigate the effects of the virus quickly. The crossing of the 150 crore (1.5 billion) doses of vaccination and the starting of vaccination for certain teenage groups and precautionary doses for vulnerable segments of citizens indicate that the nation is preparing to face all challenges on the health front.

On another note, January is the time for all industries to present the various fiscal demands to be included

in the Union Budget that will be presented on February 1, 2022. ABLE has presented a detailed set of demands with inputs from our members that will provide significant benefits to various segments of our industry. These demands have been formally submitted to Mr Tarun Bajaj, Union Revenue Secretary and Dr T V Somanathan, Secretary, Department of Expenditure, in the Union Finance Ministry.

We are hopeful that the government will help the Biotech segment that has played a key role in tackling the COVID-19 pandemic. We all believe it will be BT tomorrow supporting significantly towards the development of our Economy. BioPharma is already making a big impact towards the growth of this segment and playing a global role and we see the alternative/ smart protein in the food segment, BioFuel in the renewable energy segment and BioAgriculture very well progressing towards achieving our 2025 vision of USD 150 billion. Startups need all the support and push to succeed and at ABLE we will be focusing more.

In this edition of ABLE newsletter, we have tried to highlight some of the major activities by the organization in the last few weeks. Look forward to your continued support to take up a lot more activities that benefit our industry. Let us together change the BT segment in India as driver of India's economy in future. Wishing you all a very Happy New Year 2022

G S Krishnan President, ABLE

## ABLE WEBINARS

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#### **WEBINARS**

- "Show me the Money!" A Straight talk with VCs
- "Switzerland: The perfect launchpad for Indian Life Science companies to expand in Europe"

## Webinar on "SHOW ME THE MONEY!!" A straight talk with VCs" October 29, 2021



The webinar "Show me the Money!" – A straight talk with VCs was scheduled on October 29, 2021 at 4pm.

Mr Kiran Mysore, Principal, UTEC-The University of Tokyo Edge Capital; Dr Archana Hingorani, Co-Founder & Managing Partner, Siana Capital Management LLP; Mr Ashwin Raguraman, Founding Partner, Bharat Innovation Fund; Dr Arvind Chari, Vice President, Eight Roads Ventures were the speakers for the webinar.

Dr Kavitha Iyer Rodrigues, CEO, Zumutor Biologics Inc. and ABLE EC Member was the moderator.

# Webinar on "Switzerland: The perfect launchpad for Indian Life Science companies to expand in Europe" November 26, 2021



The webinar "Switzerland: The perfect launchpad for Indian Life Science companies to expand in Europe" was scheduled on 26 November at 4pm. The webinar was a conversation with Representatives from Switzerland for Indian Life Sciences companies to expand in Europe via Switzerland. Ms. Anke Hollnagel, Director Asia, Basel Area Business & Innovation; Mr. Christoph Pauli, Director, International Tax, PwC Zurich; Mr. Kay Egger, Manager, International Tax, PwC Zurich were the speakers for the webinar. Ms. Krishna Bhatia, Chief

Representative-India, Basel Area Business & Innovation was the moderator.

## IN THIS ISSUE ABLE Events

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   Summit 2021
- Smart Bio Awards 2021
- Round Table to gather inputs on Drugs and Cosmetics Act, 1940
- ABLE MoU with BioNJ, ILSE & Choose NJ

## ABLE EVENTS

#### Bengaluru Tech Summit 2021

November 17-19, 2021



ABLE is a Knowledge
Partner to the annual GoK
flagship event, Bengaluru
Technology Summit (Nov
17-19, 2021). Hybrid event
this year with all
conference sessions (IT,
Biotech, Key Note,
Innovation, Startups track)
held virtually. Inaugural,
Awards etc. were held

physically. The Biotech Conference Committee was chaired by Dr Vijay Chandru. The Committee had weekly meeting from June to November 2021 to put together the program. In all, ABLE handled 16 sessions in the biotech track held over three days. The sessions were:

- 1. Plenary Talk by Nobel Laureate, Dr Venki Ramakrishnan, Group Leader, MRC Laboratory, UK. vaccine.
- 2. Reigniting Innovation in Indian Life Sciences.
- 3. Moderna & mRNA Technologies in Conceiving Vaccines
- 4. Investing Nextgen Medtech & Diagnostics
- Creating Transformative Gene-based Medicines for Serious Diseases using CRISPR
- 6. Gene-Editing on Centre stage in Crop Regeneration, Therapeutics, Precision Bioscience & Environment Protection
- 7. Plenary talk by: Dr. Siddhartha Mukherjee, Associate Professor of Medicine, Columbia University Irving Medical Center.
- 8. The Beacon of Innovation in Cancer Treatment
- 9. Oncology: Innovative Treatments and Biomarkers Create Paradigm Shift
- 10. Vaccine Equity
- 11. Showcasing India's Vaccine Leadership
- 12. Global health imperatives and the next wave of Innovation Cellular Immunotherapies
- 13. Industrial Bio Finding Biological Solutions to Bettering Lives
- 14. Agri Bio Graduating/Moving from Primary to Secondary
- 15. Highlights of Latest regulatory trends in food Safety, health, biotechnology sectors
- 16. Smart Bio Awards

#### **Smart Bio Awards**

November 18, 2021



The Smart Bio Awards
was instituted by the
Department of Electronics, IT,
BT and S&T, Government of
Karnataka with the purpose of
recognizing biotechnology
firms that have shown
dynamic leadership, exciting
technologies and stand-out
contribution in their chosen
fields of biotech

activities. ABLE was entrusted with the selection process. The Awards process was advertised widely in local newspapers. 30+ applications were received. 18 eligible applications were evaluated.

An eminent jury chaired by ABLE President had selected the following Award winners. Smart Bio Awards Jury panel were Mr G S Krishnan (Chairman), Mr Ravi Bhola (K&S Partners), Mr P M Mohan (Novozymes), Dr Jitendra Kumar (BBC) and Mr Narayanan Suresh (ABLE)

- Startup of the Year -HealthCube
- Innovator of the year Axio Biosolutions Private Limited
- Best Social Enterprise/ Institute Biocon Academy
- Woman Entrepreneur of the Year Dr Janani Venkataraman, founder of Biomoneta
- Best Startup Against COVID-19 NeoDx Biotech Labs Pvt. Ltd

### Round Table to gather inputs on Drugs and Cosmetics Act, 1940 November 29, 2021



Government has constituted expert committees to revamp the Drugs and Cosmetics Act, 1940 to make it contemporary. DBT organized 3 expert committee meetings. ABLE participated in these meetings with member companies.

A Round Table on Drugs & Cosmetics Act was also held on 29th November to gather more inputs. 30+ members attended.

The Parliamentary Standing Committee has sought ABLE views on the Personal Data Protection Bill, 2019. Experts

from K&S Partners gave detailed inputs. The Round Table on November 29, was also used to gather more member inputs on this Bill. Data Protection Bill On 29 November at 4:00-5.30pm. The session was moderated by Dr S R Rao (ex-DBT).

#### ABLE MoU with BioNJ, ILSE & Choose NJ

November 30, 2021



#### VIRTUAL LAUNCH OF ABLE LAUNCHPAD IN NEW JERSEY, USA

Choose New Jersey, Association of Biotechnology Led Enterprises (ABLE), BioNJ, and the Institute for Life Science Entrepreneurship (ILSE) organized the virtual launch of the ABLE Launchpad in New Jersey on November 30, 2021 at 06.30pm. ABLE had signed two separate memoranda of understanding (MOUs) with BioNJ and ILSE to increase collaboration and expand ABLE

member companies' presence in the U.S., encouraging more Indian companies to do business in New Jersey. This event was a unique opportunity to learn more about New Jersey's assets and facilities the ABLE member companies can benefit from. Speakers at the launch included Dr P M Murali (President, ABLE CP); Mr Narayanan Suresh (COO, ABLE); Ms Catherine Scangerella (ChooseNJ); Ms Debbie Hart (President & CEO, BioNJ; Dr Thomas P Richardson (President, ILSE) and Mr Tarun Gupta (NJ rep in India). 40+ members participated and showed lots of interest is using facilities and funding available in New Jersey.

#### 'voice for BT' 2021

December 10-20, 2021









'Voice for BT', an Inter-Collegiate Public Speaking Competition, is currently India's only public-speaking contest on biotechnology for college students. The event is conducted for Biotechnology students from all the four regions in India to provide a platform for them to exhibit their knowledge and understanding of various aspects of biotechnology.

In its 9th edition, the event was conducted by ABLE, with support from our Patron Gold member company, Novozymes South Asia. Other prominent biotech companies like Laurus Bio were our supporting partners.

The four regional coordinators Amity University from North, Sastra University from South, KIIT University from East and DY Patil University from West were our regional partners for the event.

The zonal rounds started off with the West and East zone on 10<sup>th</sup> December followed by North and South zone on 17<sup>th</sup> December. Candidates receiving the first, second and third positions were awarded with a cash prize of 20,000 INR, 15,000 INR and 10,000 INR respectively. They were also offered a 6 months internship at major biotech companies.



The first two winners from each zone were selected to participate in the National Finale round on 20<sup>th</sup> December.

**Sneha Roy** from NIT Durgapur (East Zone) was the winner for the competition.

Jeril Phillip from Amity University, Uttar Pradesh (North Zone) was the 1<sup>st</sup> runner up.

Eminent scientists/academicians/ Industry leaders were a part of the jury to select the winners. Mr G S Krishnan (ABLE), Dr. Ravi Bhola (K&S Partners), Mr Subramani Ramachandrappa (Laurus Bio), Mr Krishna Mohan Puvvada (Novozymes India), Dr. Balasubramanya S (K-tech Govt. of Karnataka), Dr Padmavathi B (Laurus Bio), Dr Mohan BH (Novozymes India), Ms Sowmya Shresth (Novozymes India), Dr Goutam Das (ABLE) and Mr Narayanan Suresh (ABLE) were the jury for the contest.

## ABLE RESEARCH REPORTS

#### India BioEconomy Report 2021

September 2021



India's BioEconomy by the end of calendar year 2020 was valued at \$70.2 Billion recording 12.3 percent growth. The Indian BioEconomy for the period January-September 2021 (First 9-Months of Calendar Year) is estimated at \$53.34 billion.
The BioEconomy registered 58% jump over the AMJ 2021 Quarter (April-June 2021).

The growth has come on account of \$9.34 billion Covid Economy consisting of Covid Vaccination and Covid Testing. BioPharma still accounts for the largest share of the BioEconomy. With a 51 percent share, the nine-month value of BioPharma economy is estimated at \$27.2 billion.

#### ASSOCIATION OF BIOTECHNOLOGY LED ENTERPRISES (ABLE)

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## Karnataka BioEconomy Report 2021 November 2021



Karnataka is marching towards \$50 billion bioeconomy by 2025. Aiming to contribute half of India's bioeconomy target. The state's BioEconomy at \$24.4 billion accounted for nearly 33 percent share of the national BioEconomy of \$70.7 Billion for FY2021-22. The state during the first half of FY2021-22 registered for nearly 38 percent share of the national BioEconomy of \$40.8 Billion in FY2021-2022.

BioEconomy of Karnataka for FY2020-21 was valued at 11% of the Gross State Domestic Product (GSDP) of \$224.36 billion. In the Covidhit year FY2020-21, Karnataka's BioEconomy has registered 8 percent growth to reach \$24.4 billion compared to \$22.6 billion in FY 2019-20.

On an average 7-8 Bioscience companies are started every Month in Karnataka. State was home to 70 new biotech companies from January to September 2021.

## ABLE MEMBERS IN NEWS

## Serum Institute receives approval for Covovax in India | WHO grants emergency use listing as well

ABLE Patron Gold member **Serum Institute of India Pvt Ltd (SII)** receives emergency use authorization (EUA) for Novavax' recombinant nanoparticle protein-based COVID-19 vaccine with Matrix-M™ adjuvant by the Drugs Controller General of India (DCGI). The vaccine will be manufactured and



marketed in India by SII under the brand name Covovax.

Sharing his views, Adar Poonawalla, Chief Executive Officer, Serum Institute of India (SII), said, "The approval of Covovax by DCGI is a significant milestone in strengthening our immunization efforts across India and LMICs. We are proud to deliver a highly-effective protein-based COVID-19 vaccine of more than 90% efficacy rate, based on clinical data demonstrating a favorable safety profile."

The World Health Organization (WHO) has also granted Emergency Use Listing (EUL) for NVX-CoV2373. The EUL is for vaccine manufactured and marketed by SII as Covovax.

## Bharat Biotech's Covaxin approved for emergency use in children

ABLE Member Bharat Biotech received approval for emergency use of Covaxin in



Children 12 - 18 years of age. Covaxin is formulated uniquely such that the same dosage can be administered to adults and children. "Bharat Biotech is thankful to the Ministry of Health and Family welfare, DCGI and NTAGI for their diligent review of all data and for their fastidious approval process. Over 2 crore teenagers in the age group of 15-18

years have received their first dose of Covid-19 vaccine in less than a week of the inoculation since January 3, 2022," said Dr Krishna Ella, CMD, Bharat Biotech.

Bharat Biotech has announced that Covaxin (BBV152) booster dose study shows promising results. The phase 2, double-blind, randomized controlled Covaxin trial demonstrated long-term safety with no serious adverse events. Further Bharat Biotech and Dunc Minh Donate 200,000 doses of Covaxin to Vietnam.

#### Strand COVID Mutation Miner plays a key role

When a new variant like Omicron (B.1.1.529) is detected and the mutations characteristic to the variant have been identified, the next step is to see if there is information available about the



mutations in published literature. **The Strand COVID Mutation Miner tool makes this possible by indexing CORD-19** – a free resource of more than 280,000 scholarly articles about the novel coronavirus made available by the Semantic Scholar team at the Allen Institute for AI. The CORD-19 dataset consists of full text articles and associated metadata from multiple literature databases like bioRxiv, medRxiv and PMC. It can be accessed freely using the following credentials (user:covidmm.guest, password: guest123).

In September Reliance Strategic Business Ventures Limited (RSBVL), a wholly-owned subsidiary of Reliance Industries (RIL), acquired over 2.28 crore equity shares stake in Strand Life Sciences Pvt Ltd for Rs 393 crore. Strand is member of ABLE.

#### Yokogawa Acquires Insilico Biotechnology | Develops Single Cellome System



Yokogawa Electric Corporation, the parent company of ABLE Patron Gold member Yokogawa Life Sciences, announced that it has acquired all shares of Insilico Biotechnology AG ("Insilico"), a Stuttgart, Germany-based developer and provider of bioprocess software

and services. Fostering the development of the bioeconomy is one of the priority issues within Yokogawa's sustainability goals, and in line with that the company aims to leverage this acquisition to build total bioprocess solutions that support biopharmaceutical development through to manufacturing.

Insilico's digital twin technology uses an advanced hybrid model formed from a mechanistic model of the unique characteristics of an intracellular metabolic network and a data-driven model constructed from process data using the machine learning process.

Yokogawa also announced that it has developed the Single Cellome™ System SS2000, a single-cell analysis solution that utilizes high-resolution images captured with a confocal microscope to automatically and accurately collect samples of specific cells and intracellular components. The SS2000 will be released in Japan, the US, and China in February 2022.

#### Sea6Energy revolutionizes ocean farming with its "sea combine harvester": CNN

ABLE member Sea6Energy was featured in CNN for its innovation in the Ocean **Farming**. According to CNN, the company has "Sea Combine," an automated catamaran that simultaneously harvests and replants seaweed in the ocean. The machine travels back and forth between lines of seaweed, harvesting the fully-



grown plants and replacing them with freshly-seeded lines.

A prototype is currently deployed at the company's seaweed farm off the coast of Indonesia. The Southeast Asian nation has a tradition of seaweed farming that involves villagers tying pieces of seaweed to ropes and hauling them out to sea, before manually harvesting the lines, and there is a strong appetite for the crop there, according to Suryanarayan. As the technology develops and the market widens, the company intends to deploy more Sea Combines, including in India.

#### Biocon Enters Dow Jones Sustainability Emerging Markets Index | Clinical Study for Itolizumab in **Lupus Nephritis**



ABLE Patron Gold member, **Biocon Ltd** was selected to be in the Dow Jones Sustainability Index (DJSI) in the Emerging Markets (EM) category for its progressive Environmental, Social and Governance (ESG) practices, which

underscore its commitment to the larger goal of sustainable development. Biocon made a formal submission for Corporate Sustainability Assessment for its listing on the DJSI for the first time this year and made it to the DJSI EM Index with a Total Sustainability Score of 45 as against an industry average of 18, achieving a 93rd percentile position.

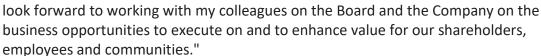
**Biocon Biologics and Viatris** announce Insulin Glargine (insulin glargine-yfgn) Injection will be offered through the Walgreens Prescription Savings Club

In yet another development, Biocon Biologics Ltd announced that USA-based Equillium Inc., Biocon's partner, has expanded its EQUALISE study in Systemic Lupus Erythematosus (SLE) and Lupus Nephritis for Itolizumab (ALZUMAb-L\*) to clinical centers in India. EQUALISE is a Phase 1b open-label, proof-of-concept clinical study currently studying Lupus Nephritis patients in the Part B portion of the clinical trial.

#### Aurobindo Pharma appoints K Nithyananda Reddy as Managing Director | Launches Covid-19 Drug

Patron Gold of ABLE, Aurobindo Pharma announced the appointment of Mr K Nithyananda Reddy as the Managing Director while continuing as the Vice Chairman of the Company, effective from January 1, 2022. Mr Reddy has been a key member of Aurobindo leadership and has played a pivotal role in the company's growth journey since inception.

Mr. K Nithyananda Reddy added, "I am humbled to assume the responsibility of Managing Director and



Aurobindo also launched COVID-19 treatment drug Molnupiravir under brand name "Molnaflu" in India. Molnupiravir is for treatment of adult patients with COVID-19, under certain conditions, a press release from the city-based drug maker said. Aurobindo had signed a bi-lateral non-exclusive voluntary licensing agreement with Merck Sharpe Dohme, Singapore (MSD) to manufacture and supply Molnupiravir to over 100 low and middle-income countries (LMIC), including India.

#### Syngene joins BUMHI project | Amgen collaboration extended



ABLE member, Syngene International partners with the National Institute of Mental Health and Neurosciences (NIMHANS) through the Biocon Foundation to help address the Putting Science to Work growing mental health concerns among the urban population as a part of the Bangalore

Urban Mental Health Initiative (BUMHI). As an extension of this commitment, the organizations launched Self Care Health Kits intended to improve the community's knowledge base in protecting and promoting mental health.

Syngene International announced the extension of its long-standing multi-discipline research collaboration with Amgen Inc. The contract is currently extended until the end of 2026 and its scope includes integrated drug discovery and development solutions. In addition to operating the existing Syngene Amgen R&D Center (SARC), under the new contract, Syngene will also build and operate a dedicated laboratory which will enable R&D project acceleration

## Thermo Fisher Scientific completes acquisition of PPD & PeproTech

Thermo Fisher Scientific Inc., the parent company of ABLE's Patron Gold member, Thermo Fisher Scientific India, has



announced the completion of **acquisition of PPD Inc.**, a leading global provider of clinical research services to the biopharma and biotech industry, for \$17.4 billion.

Thermo Fisher also completed the acquisition of PeproTech for a total cash purchase price of approximately \$1.85 billion. PeproTech is a privately held provider of bioscience reagents known as recombinant proteins, including cytokines and growth factors.

#### Bugworks Research announced the First in Human Phase 1 Study of BWC0977 for the Treatment of Critical Bacterial Infections

ABLE member **Bugworks** announced that the first human dose was administered in a Phase 1 clinical trial evaluating BWC0977: a next generation broad-spectrum, novel bacterial topoisomerase inhibitor (NBTI), supported by Combating Antibiotic-Resistant Bacteria Biopharmaceutical Accelerator (CARB-X).



#### Combating Antibiotic-Resistant Bacteria

BWC0977 is a highly potent, intravenous broadspectrum antibiotic with the potential for oral administration, for the treatment of

serious multi drug resistant (MDR) Gram-negative infections such as Acinetobacter baumannii, Pseudomonas aeruginosa, carbapenemase producing Enterobacteriaceae, and drug resistant Gram-positive infections such as methicillin resistant staphylococci (MRSA), vancomycin resistant enterococci (VRE) and penicillin resistant streptococci (PRSP).

BWC0977 can address many serious hospital and community infections and combat a broad spectrum of biothreat pathogens. It has the potential of becoming a breakthrough antibiotic, not seen since the 1960's.

#### Jefferies bullish on Laurus Labs

Jefferies India has been bullish on the Indian pharma companies. It believes that Indian contract development and manufacturing companies are seeing significant order flow improvement with strong growth visibility. The research firm has initiated coverage with a 'buy' rating on two pharma stocks -- Gland Pharma and Laurus Labs.



Jefferies India has a 'buy rating on Syngene International, and Piramal Enterprises as well. Jefferies India noted that Laurus Labs have a proven API capability which is helpful in CRO (Contract Research Organisation) or CDMO.

Laurus has initiated a large capex cycle that will increase its gross block by 67% in the next 18

months with investments in API, Finished Dosage, and Custom Synthesis, the research firm noted. The recent acquisition of ABLE member Richcore is likely to provide the company a launching pad in recombinant animal-free food proteins.

