



सत्यमेव जयते

Department of Biotechnology
Government of India



GLOBAL BIO-INDIA 2023

4-6 December

Bharat Manadapam, Pragati Maidan, New Delhi



A Technical Report Prepared by ABLE

Global Bio-India 2023 deliberated on the opportunities and key challenges in the areas of bio-manufacturing, capacity-building, clinical trials, drug discovery, regulation & policies creating global supply chains for achieving a growth-oriented road-map for the biotechnology sector in the country. Technical Sessions & Policy dialogues on topics of National & Global Importance, Bio- Partnering, Startup Pavilion, B2B meetings and Mega Biotech Exhibition by Startups & SMEs, Biotech Large Companies, BioIncubators, Bio-Services, were a few salient components of the event.

The three day event from 4-6 December at Bharat Mandapam, Pragati Maidan, New Delhi drew a global audience, bringing together representatives from over **30 countries**. With a vibrant showcase of innovation and industry expertise, **more than 500 exhibitors** contributed to the dynamic atmosphere. There was a participation of **over 5,000 delegates** with the presence of **1000+ startups** adding a dynamic and entrepreneurial element to the event. This diverse and extensive gathering underscored the event's significance as a premier platform for networking, collaboration, and the exchange of ideas within the international biotechnology community.



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Registration Overview

The global event had **6,901** delegate registrations who participated in the conference.

The delegates represented various categories, showcasing the diverse spectrum of the audience:

- Startups & SMEs, Entrepreneurs **795**
- Incubators **184**
- Services, CROs **46**
- Industry **160**
- Research Institutions/Universities **110**
- Consultants, Mentors, Experts, Investors **38**
- State representatives **84**
- Others (Academia-Faculty, Research Scholars from Universities & Research Institutes, Speakers, Investors, Government representatives, Organizers, Media, etc.) **5,484**

This diverse and engaged audience contributed to the event's overall success and vibrancy.



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_____ Agenda

Program at a glance



DEPARTMENT OF BIOTECHNOLOGY
Government of India

**Global
Bio-India
2023**



Program



**Global Bio-India 2023
4 - 6 December 2023
Biosciences to Bioeconomy
Transforming Lives**

**Registration desk
Bharat Mandapam (West Entry) & Hall No.14 GF Foyer
3rd December 2023: 2 pm onwards (Hall 14)
4th - 6th December 2023: 8:30 am onwards (Bharat Mandapam & Hall 14)
Entry from Gate 7 / Gate 10**

DAY 1 - Monday, 4 December 2023

**Auditorium, Level 2
10:00 am - 11:15 am
Plenary Session
Biotech Ecosystem: Views from Key Opinion Leaders**

10:00 am - 10:05 am: Global Bio-India video

10:05 am - 10:10 am: Welcome address by Dr. Jitendra Kumar, Managing Director, BIRAC

10:10 am - 10:15 am: Setting the context: Dr. Rajesh S. Gokhale, Secretary, Department of Biotechnology and Chairman, BIRAC

10:15 am - 11:15 am: Panel discussion

Moderator: Dr. Jitendra Kumar, Managing Director, BIRAC

Panelists:

- Sh. Ashok Chandra Panda, Hon'ble Cabinet Minister, S&T Department, Govt of Odisha
- Dr. Rajesh S. Gokhale, Secretary, Department of Biotechnology and Chairman, BIRAC
- Dr. (Mrs.) N. Kalaiselvi, Director General, CSIR & Secretary, DSIR
- Dr. Soumya Swaminathan, Chairperson, M S Swaminathan Research Foundation and Former Chief Scientist, WHO
- Dr. Kiran Mazumdar-Shaw, CMD, Biocon group & Chairperson, ABLE
- Dr. PM Murali, President - ABLE Council of Presidents and CMD - Jananom Pvt Ltd.
- Mr. G S Krishnan, President, ABLE





Program

MAJOR SESSIONS (Bharat Mandapam)

**11:15 am – 12:15 pm
(Auditorium 1, Level 2)
SUPER SESSION 1**

**Biomanufacturing: Biosciences to Bio-Economy
for 'Atmanirbhar Bharat'
A Conversation with the Policy Leaders &
Industry Representatives**

**Moderator: Dr. PM Murali, President, ABLE
Council of Presidents and CMD, Jananom Pvt.
Ltd.**

Panelists:

- Dr. Sanjay Singh, Chief Executive Officer, Gennova Biopharmaceuticals Limited
- Dr. GSK Velu, Chairman & Managing Director, Trivitron Healthcare Group of Companies
- Dr. Rajiv Gandhi, Chairman & Managing Director, Hester Biosciences
- Mr. Ram Rangarajan, Vice President, SGTC – R&D, Stryker
- Dr. Chhitiz Kumar, Vice President, Health Systems, Philips
- Dr. Shailesh Ayyangar, Senior Advisor – Goldman Sachs Life Sciences
- Ms. Sneha Singh, Managing Director, The Good Food Institute India
- Dr. Anand Ghosalkar, Chief Scientist, Praj Industries Limited

MAJOR SESSIONS (Bharat Mandapam)

**11:30 am – 1:00 pm
(Meeting Room 12, Level 1)
High level Roundtable Discussion on
Biomanufacturing**

Science Attaches, Country representatives, Govt Ministry

(By Invite only - Closed door)

**12:15 pm – 01:15 pm
(Meeting Room 15, Level 1)**

**SUPER SESSION 2: Preparing for the
next Pandemic**

- Accelerate Biotech Innovations and deliver biotech products for sustainable future

Moderator: Dr. Harish Iyer, Bill and Melinda Gates Foundation

Keynote: Dr V. K. Paul, Member, Niti Aayog

Speakers:

- Dr. Umesh Shaligram, Executive Director, Serum Institute of India
- Mr. Harshet Jain, General Manager - Business Development, Panacea Biotech
- Dr. Ankur Muthreja, Head of Strategic Alliances, CEPI
- Mr. Rajinder Suri, CEO-DCVMN International
- Dr. Jaideep Gogtay, Chief Medical Officer-Global Cipla
- Dr Monalisa Chatterjee, Director, Sekkei Bio Limited

Exhibition – Biotech Showcase (Exhibition HALL NO. 14)

**11:00 am – 12:00 pm
SPARSH felicitation
(Startup Pavilion)**

**12:00 noon to 1:15 pm
(Startup Pavilion)
जनCARE Healthcare
Technologies for Low
resource settings**

- Mr. Sanjeev Malhotra, CEO, NASSCOM, Centre of Excellence for IoT & AI
- Ms. Nidhi Bhasin, CEO, NASSCOM Foundation
- Dr. Shirshendu Mukherjee, Mission Director, GCI
- Dr. Manish Diwan, Head-SPED, BIRAC

**1:00 pm – 2:00 pm (Exhibition Hall 14)
Networking at Lunch**



DEPARTMENT OF BIOTECHNOLOGY
Government of India

**Global
Bio-India
2023**



Program



2:00 pm – 3:30 PM

**Inauguration of Exposition & Inaugural session
Plenary Hall, Level 3, Bharat Mandapam, Pragati Maidan**

2:00 pm	Arrival of Hon'ble Union Minister Dr. Jitendra Singh, Union Minister of State (Independent Charge), Science & Technology, MoS PMO, Personnel, Public Grievances, Pensions, Atomic Energy and Space, Government of India	
2:00 pm – 2:05 pm	Opening Address	Dr. Jitendra Kumar, Managing Director, BIRAC
2:05 pm – 2:10 pm	Welcome Address	Dr. Rajesh S. Gokhale, Secretary, Department of Biotechnology
2:10 pm – 2:15 pm	Industry Perspective	Dr. Kiran Mazumdar Shaw, Chairperson and Managing Director, Biocon Ltd.
2:15 pm – 2:20 pm	Remarks	Dr. (Mrs.) N. Kalaiselvi, Director General, CSIR & Secretary DSIR
2:20 pm – 2:25 pm	Remarks	Prof. Abhay Karandikar, Secretary, Department of Science & Technology
2:25 pm – 2:30 pm	Remarks	Shri Rajesh Kotecha, Secretary, Ministry of AYUSH
2:30 pm – 2:35 pm	Remarks	Prof. Ajay Kumar Sood, Principal Scientific Adviser, Government of India
2:35 pm – 2:40 pm	India BioEconomy Report Overview	Mr. G S Krishnan, President, Association of Biotech Led Enterprises
2:40 pm – 2:50 pm	Release of Reports MoU Announcements	
2:50 pm – 3:00 pm	Special address	His Excellency Freddy Svane, Ambassador at Royal Danish Embassy in New Delhi
3:00 pm – 3:20 pm	Address by Chief Guest	Hon'ble Minister Dr. Jitendra Singh, Union Minister of State (Independent Charge), Science & Technology, MoS PMO, Personnel, Public Grievances, Pensions, Atomic Energy and Space, Government of India
3:20 pm – 3:23 pm	Vote of thanks by Dr. Subhra Ranjan Chakrabarti, Director-Operations, BIRAC	
3:23 pm onwards	Inauguration of Global Bio-India 2023 Exhibition (Hall No. 14)	





Program

MAJOR SESSIONS (Bharat Mandapam)

3:45 pm – 4:30 pm
**(Plenary Hall, level 3, Bharat Mandapam,
Pragati Maidan)**
SUPER SESSION 2a
Cell and Gene Therapy

Moderator: Prof. Alok Srivastava, CMC Vellore
Panelists:

- Mr. Arun Chandru, Co-founder, Pandorum Technologies Pvt. Ltd
- Mr. Satyen Sanghvi, Chief Scientific officer and Executive Director, Regrow Biosciences Pvt. Ltd.
- Dr. Shirish Arya, Co-founder, ImmunoACT Therapeutics Pvt. Ltd.
- Dr. Anil Kamat, Head - Clinical Development, Immuneel Therapeutics
- Dr. Albeena Nisar, Scientific officer D, TMC, ACTREC

3:45 pm – 4:30 pm
(Meeting Room 15, Level 1)
Supersession 2b
**How Artificial Intelligence and Big Data will
drive future biotech innovations**

Moderator: Dr. Prathyusa Pitta, VP, EY-Parthenon,
Pharma & Life Sciences

Speakers:

- Dr. Felciano, Founder, Qiagen Digital Insights, Alchemy Company
- Dr. Bharat Sarvepalli, Head of Clinical Trials at Karkinos Healthcare Pvt. Ltd.
- Prof. Johan Frostegard, Karolinska Institutet
- Dr. Kousik Rajendran, Principal Solutions Architect, Amazon Web Services
- Dr. Vijay Chandru, Co-founder and Chairman, Strand Life Sciences

Startups:

- Haystack Analytics
 - Qure.ai
 - Niramai
- (2 minute video to be played)

SPECIAL SESSIONS (Bharat Mandapam)

3:30 pm – 5:00 pm
(Meeting Room 16, Level 1)
CEO Roundtable: Plans for India, Asks from India

CEOs of MNC biotech companies
(by Invite only)

3:30 pm – 5:45 pm
(Meeting Room 12, Level 1)
WnER Final Jury/ Pitching
(Powered by TiE)

- Ms. Aditi Kumar, Assistant Vice President - Indian Angel Network
- Mr. Srikant Sastri, Chairman - i3g Advisory Network
- Mr. Anand Govindaluri, Founder & Chief Executive Officer - Govin
- Mr. Rajnish Kapur, Managing Partner - Indian Angel Network
- Mr. Kunal Kishore Dhawan, Venture Advisor - Blume Ventures
- Mr. Shiva Shanker, Investment Director - Ankur Capital
- Ms. Ashita Gupta, Principal - Merak Venture
- Ms. Alka Goel, Founding Partner - Alkemi Growth Capital
- Ms. Sonisha Kukreja, Investment Analyst - Blume Ventures
- Dr. Vishal Gandhi, Founder & CEO - BIORx Venture Advisors

5:00 pm – 6:15 pm
(Meeting Room 16, Level 1)
States promoting Biotech Policies & investments

Moderator: Ms. Akriti Bajaj, Senior - AVP, Invest India

State Representatives:

- Mrs. Mona Khandhar, Principal Secretary, Department of Science & Technology, Gujarat
- Mrs. Chithra Arumugam, Principal Secretary, Science and Technology Department, Odisha
- Dr. Dinesh Kumar Sundaravelu, Associate Vice Principal, Tamil Nadu StartUp and Innovation Mission, TN
- Dr. Ajit Dua, Chief Executive Officer, Punjab Biotechnology Incubator, Punjab
- Dr. Vivek Mogal, Maharashtra State Innovation Society, Maharashtra
- Dr. Nagaraj, Department of Electronics Information Technology, Biotechnology and Science & Technology, Karnataka

Startup
Pavilion

3:00 pm – 5:00 pm
Startup Pitches
(Startup Pavillion)



DEPARTMENT OF BIOTECHNOLOGY
Government of India

**Global
Bio-India
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Program

4:30 pm – 6:00 pm

(Bharat Mandapam, Auditorium 1, Level 2)

Public Session: Science Connect with Society

Track: Life Sciences & Health

Session 1 - 4:30 pm – 5:15 pm

Presented by Indegene

Medicine's next frontier: Detect, Decode, Decipher

Speakers:

- Mr. Ashish Tripathi, Founder CEO of Tzar Labs and Epigenres
- Dr. Soumya Swaminathan, Former Chief Scientist, WHO
- Dr. Ravi Jasuja, Harvard Medical School

In Conversation with Dr. Ambarish Satwik, Vascular surgeon, Sir Ganga Ram Hospital & Writer

5:20 pm - 5:30 pm - Stories of Young Changemakers - CortX- Your Health, Our Priority (Aarav Wadhvani, Ritwic Verma, Varun Sahni, Aarush Agarwal and Shreedhar Raj) & Sainish Tapuria's Pollution Alert App - Empowering Youth, Inspiring Action!

Session 2 - 5:30 pm – 6:15 pm

Presented by Indegene

Tech for Treatment: AI in Life Sciences & Biotech

Speakers:

- Mr. Ram Yeleswarapu, SVP, Enterprise Clinical Solutions, Indegene
- Dr. Arun Kumar, Academic & Former Chair of International Conferences on Translational Nanomedicine & Research Collaborator, Johns Hopkins University

In conversation with Mr. Jaspreet Bindra, Writer, AI Expert, Motivational speaker & Founder, The Tech Whisperer

Powered by BE INSPIRED

6:30 pm – 7:30 pm

(Bharat Mandapam, Amphitheatre)

Cultural Evening

India's Music and Dance performance

7:30 pm onwards

(Exhibition Hall 14 - First floor)

Networking Dinner



Program

DAY 2: Tuesday, 5 December 2023

MAJOR SESSIONS (Bharat Mandapam)		SPECIAL SESSIONS (Bharat Mandapam)	STARTUP PAVILION
<p>10:30 am – 1:00 pm (Meeting Room 15, Level 1) SUPER SESSION 3</p> <p>Food and energy through biological manufacturing</p> <p>Moderator: Mr. G S Krishnan, President ABLE</p> <p>10:30 am – 10:45 am</p> <p>Keynote Address: Dr. V. Prakash, Former Director of CFTRI Mysore and Distinguished Scientist of CSIR, India</p>	<p>11:30 am – 1:00 pm (Meeting Room 14, Level 1)</p> <p>Accelerating Biomanufacturing: Fostering enabling ecosystem with conducive regulatory frameworks</p> <p>Moderator: Dr. Vijayaraghavan Kannan, Sathguru Management Consultants</p> <p>Panellists:</p> <ul style="list-style-type: none"> • Dr. Sarfaraz K. Niazi, Consultant US Senate, USA • Dr. H. Bhuvanendra Kumar, Head of Regulatory Affairs, Novozymes • Dr. Ravi P. Gupta, IOCL R&D Centre • Dr. Venu Polineni, Telluris Biotech • Dr. Bharat Char, Chief Science Officer, Mahyco <p><i>Powered by Sathguru Management Consultants</i></p>	<p>11:00 am – 12:30 pm (Meeting Room 12, Level 1)</p> <p>Investors Roundtable</p> <p>Closed door - Invite only</p> <p>Chair: Secretary, DPIIT (TBC)</p> <p>Powered by IVCA</p>	<p>10:30 am-11:30 am (Startup Pavilion)</p> <p>“India - Germany Startup connect”</p> <p>Moderator: Dr. Katja Lasch, German Center for Research and Innovation (DWIH) New Delhi</p> <ul style="list-style-type: none"> • Dr. Christopher Dormeier, Entrepreneurship Hub, Technical University of Braunschweig • Dr. Mrutyunjay Suar, KIIT TBI • Dr. Chhaya Chauhan, BIRAC • Dr. Ashwita Karkera, CCAMP • Dr. Tanay Bhatt, KoshKey
<p>10:45 am – 11:45 am (Meeting Room 15, Level 1) SUPER SESSION 3a</p> <p>Harnessing the unlimited opportunities of Smart Proteins in India</p> <ul style="list-style-type: none"> • Dr. Shannon Olsson, Founder and Global Director, Echo Network-Denmark • Mr. Subramani Ramachandrapa, Founder, Fermbox Bio • Ms. Chandana Tekkatte, Science & Technology Specialist, The Good Food Institute India • Dr. Arjun Goyal, Business Development Manager, Wageningen Food and Biobased Research-Netherlands • Mr. Abhishek Sinha, CEO, GoodDot Enterprises Pvt. Ltd. • Dr. Prabodh Halde, Chairman, Chamber for Advancement of small and medium Businesses. • Prof. Sonal Chaudhary, Chair Professor of Sustainable Management, School for Business and Society, University of York <p>11:45 am – 11:55 am Startup show case (2 videos – 2 min each)</p>	<p>11:55 am – 12:50 pm (Meeting Room 15, Level 1) SUPER SESSION 3b</p> <p>Powering the Future: Bio-Based Energy Solutions</p> <p>Moderator: Dr. Shams Yazdani, ICGEB</p> <p>Panelists:</p> <ul style="list-style-type: none"> • Dr. Preeti Jain, Global Director, LanzaTech • Shri S. Bharathan, Director-Refineries, HPCL • Dr. Bhaskar Bhadra, Senior General Manager, R & D, Synthetic Biology Group, Reliance Industries Ltd. • Dr. Anand Ghosalkar, Chief Scientist, Praj Matrix- R&D Center (a division of Praj Industries Ltd.) • Mr. Rajagopal, Sr. BDM & RMM, BioEnergy & Distilling, APMEA, Novozymes • Mr. Edwin Hamoen, Programme Manager, Nature based materials, Wageningen Food & Biobased Research (WFBR), Netherlands <p>12:50 pm – 1:00 pm</p> <p>Startup show case - bioenergy (3 videos – 2 min each)</p>	<p>10:30 am – 1:00 pm (Meeting Room 13, Level 1)</p> <p>Niche Area meeting: AI in Drug Discovery</p>	<p>11:30 am – 12:30 pm (Startup Pavillion)</p> <p>Advancing biologics product development – from PoC to pilot</p> <p>11:30 am – 11:35 am</p> <p>Setting the context: Dr. Subhra Chakrabarti, Director Operations, BIRAC</p> <p>11:35 am – 11:45 am</p> <p>Keynote: Dr. Alex Cole, Director, Market Strategy, CPI, UK</p> <p>11:45 am – 12:30 pm</p> <p>Panel Discussion:</p> <p>Moderator:</p> <p>Dr. V. Premnath, Director, Venture Centre, NCL Innovation Park, Pune, Maharashtra</p> <p>Panelists:</p> <ul style="list-style-type: none"> • Dr. Anit Singh, Founder and CEO, Clinical Research Network India, Noida • Dr. Alex Cole, Director, Market Strategy, CPI, UK • Dr Sunit Maity, General Manager, Syngene International Limited, Bengaluru • Dr. Ravi Krovidi, CEO, Ingenuity Biosciences, Ahmedabad



Program



1:00 pm – 2:00 pm

(Exhibition Hall no 14 – 1st floor)

Networking Lunch

Recognizing Healthtech Innovations for Low Resource Settings

1:45 pm – 2:36 pm

(Bharat Mandapam, Auditorium 1, Level 2)

1:45 pm – 1:46 pm	Welcome by Ms. Rashmika Singh, BIRAC
1:46 pm – 1:49 pm	Welcome Address by Dr. Jitendra Kumar, MD BIRAC
1:49 pm – 1:52 pm	Remarks by Ms. Debajani Ghosh, President NASSCOM (जनCARE partner)
1:52 pm – 1:57 pm	Address by Secretary, DBT and Chairman, BIRAC – Dr. Rajesh S. Gokhale
1:57 pm – 2:24 pm	PRODUCT LAUNCH IN PRESENCE OF DIGNITARIES - Facilitated by Dr. Manish Diwan जनCARE Healthtech Startup products for low resource setting (upto 10) Release of जनcare report
2:24 pm – 2:34 pm	Address by Hon'ble Minister Dr. Jitendra Singh, Union Minister of State (Independent Charge), Science & Technology, MoS PMO, Personnel, Public Grievances, Pensions, Atomic Energy and Space, Government of India
2:34 pm – 2:36 pm	Vote of Thanks by Dr. Shirshendu Mukherjee, Mission Director, GCI
	Group Photo

MAJOR SESSIONS (Bharat Mandapam)

2:00 pm – 3:00 pm
(Meeting Room 15, Level 1)
SUPER SESSION 4

Harnessing the power of Genomics for personalized medicine

Moderator: Dr. Vamsi Veeramachaneni, Chief Scientific Officer, Strand Life Sciences

Panelists:

- Dr. Naveen Ramalingam, Senior Director, Standard BioTools Inc., USA
- Dr. Ratnakar Palakodeti, VP Offerings & Solutions, Persistent Systems
- Dr. VL Ramprasad, CEO, MedGenome
- Dr. Gaurav Ahuja, Associate Professor in Department of Computational Biology, IIIT, Delhi
- Dr. Anurag Agarwal, Dean, BioSciences and Health Research, Trivedi School of Biosciences, Ashoka University
- Dr. Anirvan Chatterjee, CEO, Haystack Analytics Pvt. Ltd.

SPECIAL SESSIONS (Bharat Mandapam)

2:15 pm – 5:30 pm
(Meeting Room 12)

Niche Area meeting: Valorization of Industrial Lignin and Biomass Derivatives

3:30 pm – 5:00 pm
(Meeting Room 13, Level 1)

Roundtable for Biopharma: Next decade

Moderator: Dr. Vijay K. Vijayaraghavan, Chairman & CEO, Sathguru Management Consultants

Theme 1: Biopharma Trends in the Next Decade

Overview of national biopharma mission:

Dr. Raj K Shirumalla, Mission Director, NBM

Moderator: Dr. Vijay K Vijayaraghavan, Sathguru Inc.

Panelists:

- DCGI, CDSCO (TBC)
- Dr. N K Arora, INCLIN Trust
- Dr. J. B Gupta, Aragon Biosciences
- Dr. Sanjay Singh, Gennova Biopharmaceuticals
- Dr. Umesh Shaligram, Serum Institute
- Dr. Amitava Ray, Exsegen
- Dr. Sadhna Joglekar, Novartis
- Dr. Raj Shirumalla, National Biopharma Mission

STARTUP PAVILION

3:00 pm – 5:00 pm
Startup Pitches

Session 1: 8-10 startups

Session 2: 8-12 startups

(Powered by Alkemi Growth Capital)

5:15 pm – 6:30 pm

FIRST Hub-Facilitation for innovators & entrepreneurs
(Interactive session with Government bodies)

Representative from Government Bodies:

- Dr. Rubina Bose, Deputy Drugs Controller, Central Drugs Standard Control Organisation
- Dr. Kalaivani Ganesan, Scientist F, Department of Biotechnology
- Dr. Jerin Jose Cherian, Scientist E (Med), Indian Council of Medical Research
- Dr. Gauri Mishra, Senior Scientist, National Institute of Biologics



Program

MAJOR SESSIONS (Bharat Mandapam)

**3:00 pm – 4:15 pm
(Meeting Room 15, Level 1)
SUPER SESSION 5**

Emerging Agri-technologies for a Sustainable Future

Moderator: Dr. KK Narayanan, Founder, Managing Director, Sthayika Seeds, Bangalore

3:00 pm – 3:15 pm

Keynote: Prof. Avraham A. Levy, Department of Plant and Environmental Sciences. The Weizmann Institute of Science, Israel

3:15 pm – 4:15 pm

Speakers:

- Dr. Usha Barwale, Executive Director, Grow Indigo Private Limited, Director Mahyco (Jalna)
- Mr. Rajvir Singh Rathi, Head, Agricultural Policy and Stakeholder Affairs, Bayer Crop Science, Bayer (New Delhi)
- Dr. Markandeya Gorantla, Executive Chairman & Managing Director, ATGC Biotech Pvt. Ltd. (Hyderabad)
- Mr. Agam Khare, CEO & Founder, Absolute Gurugram
- Dr. Vimala Prakash, Head, Technology and Innovation center, IPL Biologicals Limited

SPECIAL SESSIONS (Bharat Mandapam)

Theme 2: Investing in Biopharma—Opportunities and challenges in the Next decade

Moderator: Dr Pushpa Vijayaraghavan, Sathguru Inc.

Panelists:

- Ms. Anu Nagar, Joint Secretary, DHR
- Joint Secretary, Department of Pharma (TBC)
- DG, CSIR or nominee (TBC)
- Dr. Jyoti Logani, DBT
- Dr. Harish Iyer, Bill & Melinda Gates Foundation
- Dr. Suresh Kuhni Mohammed, World Bank
- Dr. Anand Govindaluri, Govin Holdings Pte Ltd. Singapore
- Dr. Arvind C Ranade, NIF (TBC)
- Dr. Jogin Desai, Eyestem
- Dr. Saurabh Maheshwari, SKLZ TECT
- Dr. Vijay K Vijayaraghavan, Sathguru Inc.
- Dr. Raj K Shirumalla, National Biopharma Mission

**2:15 pm – 4:15 pm
(Meeting Room 14, Level 1)**

**National & Global Regulatory Trends Shaping the Future of Biotech and MedTech Innovation
(Engagement with national and International regulators)**

Speakers:

- Dr. Rubina Bose, Deputy Drugs Controller, Central Drugs Standard Control Organisation
- Dr. Sarfaraz K. Niazi, Consultant US Senate, USA
- Ms. Pallavi Trivedi, Global Regulatory Affairs, RAPS EU COUNCIL
- Dr. Manisha Shridhar, Regional Advisor, WHO-SEARO, India
- Dr. Daniela Lifschitz Tabak, Zalika farmaceutica, Brazil

STARTUP PAVILION

- Dr. Manju Sharma, Additional CEO, Government e-Marketplace
- Dr. K. Suseela Branham, CEO, Bio Valley Incubation Council
- Dr. Chandan Kumar, Scientist, Bureau of Indian Standards
- Dr. PKS Sharma, Head & GM, Biotechnology Industry Research Assistance Council
- Dr. Shirshendu Mukherjee, Mission Director, Grand Challenges India (DBT-BMGF)



Program



4:30 pm – 5:20 pm

(Bharat Mandapam, Auditorium 1, Level 2)

Women Biotech WinER Fellowship Awards & Women Founding Product Launch

4:30 pm	Welcome of the dignitaries on the Dias
4:30 pm – 4:33 pm	Welcome by Ms. Diksha Rathore, BIRAC
4:33 pm – 4:38 pm	Address by Dr. Alka Sharma, Senior Advisor, DBT
4:38 pm – 4:41 pm	Address by Ms. Geetika Dayal, Executive Director, TiE Delhi NCR
4:41 pm – 4:44 pm	Address by FCA Nidhi Shrivastava, Director – Finance, BIRAC
4:44 pm – 4:47 pm	Address by Dr. Penna Krishna Prasanthi, Senior Diabetologist and Independent Director, BIRAC
4:47 pm – 4:52 pm	Address by Dr. Rajesh S. Gokhale, Secretary, DBT and Chairman, BIRAC
4:52 pm – 5:20 pm	AWARD CEREMONY IN PRESENCE OF DIGNITARIES • Women Biotech WinER Fellowship Awards (3 nos) • Announcement of 5th edition of BIRAC-TiE WinER Fellowship awards • Product launch (upto 10 nos)
5:20 pm	Vote of Thanks by Dr. Manish Diwan, Head- SPED, BIRAC
	Group Photo

5:15 pm – 7:00 pm

(Bharat Mandapam, Auditorium 1, Level 2)

Public Session: Science Connect with Society

Session 1: 5:15 pm – 5:20 pm

Stories of Young Changemakers - Arjun Sharma's Fast Radio Bursts: Unlocking Cosmic Whispers

Session 2: 5:25 pm – 6:05 pm

Space Exploration: India's Interstellar - Chandrayaan, Aditya, Gaganyaan

Speakers:

- Dr. Sankarasubramanian, Principal Scientist, Aditya L1, ISRO
- Dr. Veeramuthuvel, PD, Chandrayaan-3, ISRO
- Dr. Imtiaz Ali Khan, Director, DHSP, ISRO

In conversation with Sh. Vishnu Som, Executive Editor, NDTV

Session 3: 6:10 pm – 6:45 pm

Artificial Intelligence: The Ethics of AI - We don't need no thought control !

Speakers:

- Prof. Toby Walsh, Chief Scientist at UNSW AI Institute, Laureate Fellow & Scientia Professor of Artificial Intelligence, School of CSE, UNSW Sydney
- In Conversation with Sh. Jaspreet Bindra, Writer, AI Expert, Motivational Speaker and Founder, The Tech Whisperer

Session: 6:50 pm – 6:55 pm

Stories of Young Changemakers - Zephyrus - A Breath of Fresh Innovative Air! (V Sahil Seshadri, Lakshya Goswami, Uday Singh, Sourish Grover, Armaan Sharma)

6:55 pm – 7:00 pm

The Story of Manthan - Empowering India's Innovators - by Soumanil Mukherjee, Office of the Principal Scientific Adviser, Government of India



Program

DAY 3: Wednesday, 6 December 2023

MAJOR SESSIONS (Bharat Mandapam)	SPECIAL SESSIONS (Bharat Mandapam)	Exhibition – Biotech Showcase (Exhibition HALL NO. 14)
<p>10:00 am – 11:15 am (Auditorium 1, Level 2) SUPER SESSION 6: Raising Funds</p> <p>Keynote: Mr. Saurabh Srivastava, Chairman, Indian Angel Network</p> <p>Moderator: Dr. Shreefal Mehta, Executive Chair and Board Director, Pulmokine Inc.</p>	<p>10:30 am – 11:30 am (Meeting Room 12, Level 1)</p> <p>Global Panel on Countries and Clusters Collaborating for cross-border tech transfer and deployment to solve global challenges (Powered by Global Business Inroads)</p> <p>Participating Speakers, Countries, Clusters:</p> <ul style="list-style-type: none"> • Mr. Marcio Canedo, Coordinator, International Relations, Brazilian Institute of Information in Science and Technology & Coordinator, Enterprise Europe Network Brazil Consortium • Ms. Amali Ranasinghe, Founder and Chief Operating Officer, Sri Lanka Institute of Biotechnology • Mr. Pierrick Fillon Ashida, Head of Research and Innovation, Delegation of the European Union to India • Ms. Sukanya Dutta, Investment Advisor, AWEX, Wallonia/Embassy of Belgium • Ms. Abhinav Pathak, Head-Investment Promotion, Swiss Business Hub, Embassy of Switzerland • Mr. Derek Sear, Engagement and Partnerships Manager – WMHTIA, School of Chemical Engineering, University of Birmingham, UK • Mr. Daniel Zamora, Program Director for Health Innovation Manchester's Health Innovation Accelerator, UK • Mr. Levente Kardos, Counsellor Economy and Trade, Embassy of Hungary • Ms. Leena Pise Thomas, Director, Global Business Inroads • Mr. Harsha Lingam, Enterprise Europe Network (EEN) India – Global Business Inroads 	<p>11:30 am – 1:30 pm (Startup Pavilion) Startup Pitches</p>
<p>10:15 am – 11:15 am</p> <p>Entrepreneurs & Investor's View from India and Abroad</p> <ul style="list-style-type: none"> • Dr. Rajeev Dadoo, Managing Partner, SR One Capital Management, USA • Mr. Sandeep Sinha, Founder and CEO, Arficus Pvt. Ltd, India • Mr. Sunil Shah, CEO, o2h Ventures; Cambridge, UK • Mr. Nitin Deshmukh, Senior Advisor, Kotak Investment Advisors Ltd., India • Mr. Mohan Uttarwar, CEO, OneCell Diagnostics India P. Ltd. 	<p>11:00 AM - 1:00 PM (Meeting Room 14, Level 1)</p> <p>Strategic Blueprint for Catalyzing Investments in Biotech Industry (By Invite only) Moderator: Dr. Anand Govindaluri, Govin, Singapore Session Partners: FICCI, ABLE & USISPF</p>	



DEPARTMENT OF BIOTECHNOLOGY
Government of India

**Global
Bio-India
2023**



Program



DAY 3: Wednesday, 6 December 2023

11:15 am to 12:00 pm

(Bharat Mandapam, Auditorium 1, Level 2)

Super session 7: Masterclass for Startups - Art of Pitching

Speaker: Mr. Ankur Warikoo - Founder, WebVeda, Content creator, WariCrew; Speaker, Author

Powered by TiE-Delhi NCR

12:00 pm - 12:45 pm

(Bharat Mandapam, Auditorium 1, Level 2)

Public Session: Science Connect with Society

SESSION - Are we what we eat? - Sustainable foods for the world's survival

Speakers: Prof. Sonal Chaudhary, Chair Professor of Sustainable Management, School for Business and Society | University of York, in conversation with Gargi Rawat, Environment Reporter & Anchor, NDTV

R&D and Future of Biotechnology in India: Dr. Penna Krishna Prasanthi - Senior Diabetologist and Non-official Independent Director, (BIRAC)

Powered by BE INSPIRED

12:45 pm - 2:00 pm

(Bharat Mandapam, Auditorium 1, Level 2)

VALEDICTORY SESSION

12:45 pm - 12:49 pm	Welcome by Ms. Kavita Anandani, Company Secretary, BIRAC
12:49 pm - 12:52 pm	Welcome Address by MD, BIRAC - Dr. Jitendra Kumar
12:52 pm - 12:57pm	Address by Secretary, DBT and Chairperson, BIRAC - Dr. Rajesh S. Gokhale
12:57 pm - 1:30 pm	GLOBAL BIO-INDIA 2023 AWARD CEREMONY IN THE GRACIOUS PRESENCE OF HON'BLE MINISTER BIRAC's Innovators Awards Exhibitor awards for Incubation Centre Exhibitor awards for Startup SPARSH Awards Product launch Call Launch
1:30 pm - 1:35 pm	Special Announcement
1:35 pm - 1:45 pm	Address by Dr. Jitendra Singh, Hon'ble Union Minister of State (Independent Charge), Science & Technology, MoS PMO, Personnel, Public Grievances, Pensions, Atomic Energy and Space, Government of India
1:45 pm - 2:00 pm	Recognizing the partners
2:00 pm	Vote of Thanks Group photo

2:00 pm onwards

(Exhibition Hall no. 14 - 1st floor)

Networking Lunch and Departure



Detailed Agenda

Inauguration of Exposition & Inaugural Session at Global Bio-India 2023



Hon'ble Minister Dr Jitendra Singh emphasized our country's wealth of resources, instilling confidence that India is destined to be a global hub for innovation and a key destination in biotechnology.

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Dr Rajesh S Gokhale, Secretary, Department of Biotechnology (DBT) and Chairman of BIRAC during the inaugural session of the 3rd edition of Global Bio-India 2023 organized by DBT-BIRAC in New Delhi on December 4, 2023 said that “The Indian story of Bioeconomy is that of innovation. The innovation economy continues to flourish and we aspire to become the top 5 global hubs in Bioeconomy. India’s bio-economy now accounts for approximately 4% of the \$4 trillion national economy

which is robust and growing even as a very young economy and is slated to grow at a much faster rate from before”.



“Today we are at the cusp of a major breakthrough when it comes to creating this enormous bio-economy. Hon’ble PM of the country promotes the Biovision of Bharat, and we have to pay attention to innovation and entrepreneurship.,” said **Dr. Kiran Mazumdar Shaw, Honorary Chairperson of ABLE and CMD, Biocon Group** in her inaugural speech.

She added: “What we have to really focus on now is to scale up the bio-economy. We have to use the bio-economy to address many challenges and opportunities that we have in climate change, sustainability, energy security, food and nutrition, healthcare and other aspects of economic development. Biotech and bio-economy are very inclusive and every part of our society can engage in them. The opportunities are greater today due to technology convergence and we are gradually seeing more investment and an unprecedented talent pool.



Addressing the need for scaling efforts, **Prof. Abhay Karandikar, Secretary, Department of Science & Technology**, stressed the need to elevate bio-economy efforts to significantly contribute to India's GDP and overall economy.



H.E Freddy Svane, Ambassador at Royal Danish Embassy in New Delhi, emphasized sustainability and the integration of science in all endeavors, advocating for a balanced approach that supports Mother Earth



Prof. Ajay Kumar Sood, Principal Scientific Adviser, Government of India, shed light on the transformative impact of the biomanufacturing revolution, permeating diverse sectors like health, biofuels, chemicals, agriculture, and more, driven by sustainability objectives.



ABLE President, Mr G S Krishnan, presented the highlights of the India BioEconomy Report 2023. The bio-industrial segment was the largest contributor to the economy. Every region is looking at how it can contribute to the bioeconomy by leveraging its advantages. There has also been an increase in private equity investments, Mr Krishnan pointed out.

The top five states for Biotech startups are Maharashtra (1,162), Karnataka (852), Telangana (699), Delhi (712), and Uttar Pradesh (544). These states account for over 50% of all biotech startups in India. The other states have a relatively smaller number of biotech startups, with the exception of Gujarat (522) and Tamil Nadu (458).

The India BioEconomy Report (IBER) was launched by **Hon'ble Minister Dr. Jitendra Singh, Union Minister of State (Independent Charge), Science & Technology, MoS PMO, Personnel, Public Grievances, Pensions, Atomic Energy and Space, Government of India** along with esteemed personalities, signals a commitment to advancing the bio-economy in India.



Additionally, the **Exhibitors Compendium**, showcasing innovations supported by BIRAC, was also unveiled.



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The Inauguration of Exposition was done by **Hon'ble Minister Dr. Jitendra Singh, Union Minister of State (Independent Charge), Science & Technology, MoS PMO, Personnel, Public Grievances, Pensions, Atomic Energy and Space, Government of India.**

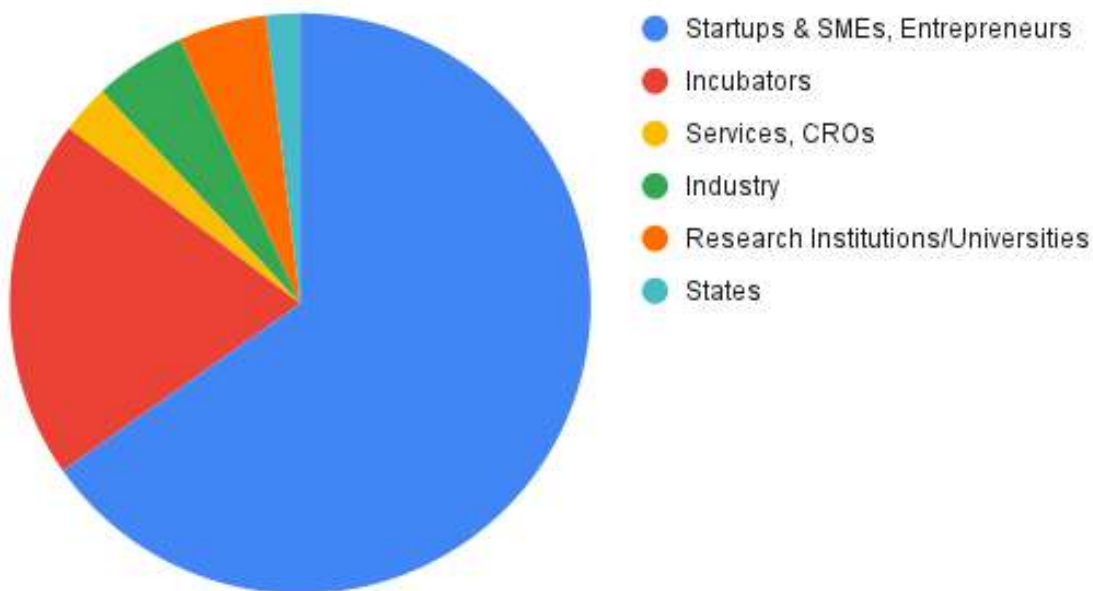
Exhibition Overview

Global Bio-India 2023 was the Largest Biotech Exhibition organized by the Department of Biotechnology, Government of India and Biotechnology Industry Research Assistance Council (BIRAC).

The exhibitors got an opportunity to showcase their innovations and expand their networks in the biotechnology sector. It was a platform where they demonstrated their latest products, technologies, and services to a global audience, gaining exposure and recognition for their breakthroughs. The event served as a prime networking hub, offering avenues to connect with potential investors, mentors, industry experts, and fellow exhibitors, fostering collaborations crucial for growth.

Additionally, exhibitors also explored international partnerships and collaborations, tapped into funding opportunities, and attracted investor interest to fuel their expansion. With media exposure, educational insights, and opportunities for product launches and regulatory guidance, Global Bio India 2023 provided a comprehensive ecosystem for exhibitors to thrive and propel their organizations to new heights of success.

The mega event showcased **370 exhibitors** actively participating and exhibiting their products and services. This diverse range of exhibitors across various categories enhanced the overall richness of the exhibition, providing attendees with the latest advancements and offerings in the biotechnology sector.



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Plenary session “Biotech Ecosystem: Views from Key Opinion Leaders”

The Plenary Session on the Biotech Ecosystem, featuring insights from key opinion leaders, was a significant event. The session aimed to provide a comprehensive overview of the current state and future prospects of the biotechnology sector, bringing together experts from various domains.



The Welcome Address was given by **Dr. Jitendra Kumar, Managing Director of BIRAC** outlined the essential components of the Biotech ecosystem: academic research institutions, Biotech Parks, Incubation centers, funding avenues, and equipment suppliers, emphasizing their collective role in holistic industry development.

The S&T innovation ecosystem in the 21st century is evolving rapidly, shifting focus from knowledge-based infrastructure to problem-solving mechanisms, making a profound impact on millions

of lives. As emphasized by **Dr. Rajesh S. Gokhale, Secretary of the Department of Biotechnology and Chairman of BIRAC**. He stressed the remarkable growth of bio-innovation and bio-economy in India, urging support for an unprecedented ecosystem transformation that directly influences millions globally. "To become a top innovator, India must move its R&D headquarters into the top 5 economies," urged Rajesh Gokhale, highlighting the imperative shift for India's Bioeconomy in the global landscape.

The plenary session was a dynamic panel discussion **moderated by Dr. Jitendra Kumar**. The panelists, distinguished leaders in their respective fields, shared their views and insights.

The Panelists were:

- **Sh. Ashok Chandra Panda**, Hon'ble Cabinet Minister, S&T Department, Govt of Odisha said that "Sustainability is key; the marine sector offers immense untapped potential in Biotech". He embarked "If we are going to the new vistas in the Biotechnology sector, then we have to leverage the marine sector as well Odisha with a long coastline and Chilika is happy to support and take advantage of this and provide more opportunities in this sector."
- **Dr. Kiran Mazumdar-Shaw, CMD, Biocon group & Chairperson, ABLE** Highlighting PM's vision of "Biovision for Bharat," Dr. Kiran emphasized the need to harness technology effectively for ecosystem development. She emphasized that "Biotech is a mega ecosystem, and not just a sector. There is the potential and need to leverage to

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scale up in the Biotech sector. Incubation technology, digital technology and gene editing technology and synthetic biology are setting a new context in the bio-innovation and bio-manufacturing ecosystem. Bio-manufacturing needs to be a 100 million USD segment. More venture funding and other means of funding is required so that great ideas are converted to great businesses and great business leads to a great economy.”

- **Dr. PM Murali, President - ABLE Council of Presidents and CMD - Jananom Pvt Ltd** highlighted that there are three drivers needed in the Biotechnology sector- the first is funding, the second is a mechanism for the Biotechnology department to be more involved in the regulation process. The third is tapping into the industry, CSR, family businesses, and private business to funnel more funding into startups. There is a need for the Government to incentivize this funding so that the 6000+ startups in this sector can grow faster.
- **Mr. G S Krishnan, President, ABLE** highlighted that Industrial Biotech has gained momentum in many ways. “India is a sought-after destination for biomanufacturing and this is something we should capitalize on”, he said.
- **Dr. (Mrs.) N. Kalaiselvi, Director General, CSIR & Secretary, DSIR**
- **Dr. Soumya Swaminathan, Chairperson, M S Swaminathan Research Foundation and Former Chief Scientist, WHO**

SUPER SESSION 1 “Biomanufacturing: Biosciences to Bio-Economy for ‘Atmanirbhar Bharat’. A Conversation with the Policy Leaders & Industry Representatives”



The session focuses on India’s journey towards self-reliance and sustainability in the biotechnology sector.

The session was moderated by **Dr. PM Murali, President, ABLE Council of Presidents and CMD, Jananom Pvt. Ltd.** He highlighted the pivotal role of government policies and regulations in fostering innovation in Biotechnology. States like Kerala, Karnataka, Odisha, and others are gaining momentum, aligning with the path set by M. S. Swaminathan's pioneering Biotech document.

The Panelists for the session were:

- **Dr. Sanjay Singh, Chief Executive Officer, Gennova Biopharmaceuticals Limited** quoted, “The 6 things we need to focus on, if we want to build a strong Biotechnology ecosystem; Substitute an import-based supply system with an in-house supply chain. Use next-generation manufacturing technology so that we can have an edge and move away from rudimentary technologies. Skill our workforce in Biomanufacturing. Better regulations that are at par with our innovations. The state and the Centre should put forward merit and need-based funding so that more startups can benefit. Upgrade our Biosecurity and Biosafety.”
- **Dr. Rajiv Gandhi, Chairman & Managing Director, Hester Biosciences** emphasized the colossal potential of animal vaccines, crucial in combating emerging Zoonotic diseases under the 'One Health' concept with recombinant vaccines.
- **Mr. Ram Rangarajan, Vice President, SGTC – R&D, Stryker** aspired to innovate from India for India & the world, setting innovation and funding as pillars to drive the medical device sector towards a \$50 billion milestone by 2030.
- **Dr. Shailesh Ayyangar, Senior Advisor – Goldman Sachs Life Sciences** underscored Biotechnology's incremental growth story, uniquely transforming lives and economies.
- **Ms. Sneha Singh, Managing Director, The Good Food Institute India** deliberated the surge of Smart Proteins, emphasizing Biomanufacturing's potential in addressing food, nutrition, and SDGs.
- **Dr. Anand Ghosalkar, Chief Scientist, Praj Industries Limited** spotlighted the vital role of sustainable aviation fuels and biofuel blending, shaped by government policies like the National Policy On Bio-Fuels, propelling Biomanufacturing forward.

SUPER SESSION 2 “Preparing for the next Pandemic”

Accelerate Biotech Innovations and deliver biotech products for sustainable future



The session discussed the tools and innovative technology platforms that are required to enable rapid research and development, regulations to enable acceleration of preclinical and clinical trials during a pandemic, the push and pull mechanisms that will prepare the nation to be ready for the next pandemic. The session was **Moderated by Dr. Harish Iyer, Bill and Melinda Gates Foundation**

In the keynote address, **Dr V. K. Paul, Member, Niti Aayog** quoted “If India hadn’t been strong enough and resource rich in terms of our capabilities in

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vaccine manufacturing, we wouldn't have been able to handle the pandemic like we did.”

The Speakers were:

- **Dr. Umesh Shaligram, Executive Director, Serum Institute of India** delineated the bifurcated pandemic response: pre-pandemic preparedness and post-pandemic readiness, crucial elements in tackling future health crises.
- **Mr. Harshet Jain, General Manager - Business Development, Panacea Biotech** discussed the need for targeted platforms in disease management, emphasizing the market-capturing strategy's criticality.
- **Dr. Ankur Muthreja, Head of Strategic Alliances, CEPI** emphasized CEPI's collaborative efforts in pandemic preparedness, forging partnerships with experienced entities to confront and combat future pandemics effectively.
- **Mr. Rajinder Suri, CEO-DCVMN International** highlighted the unprecedented motivation for vaccine manufacturers during the Covid period, spearheaded by the Honourable PM's direct engagement with manufacturers – a significant first-time event in India's history.
- **Dr. Jaideep Gogtay, Chief Medical Officer Global Cipla** highlighted the significance of supportive drugs in addition to setting goals and efficient clinical trials for pandemic response
- **Dr Monalisa Chatterjee, Director, Sekkei Bio Limited** echoed the startup journey's challenges, stressing the necessity to scale lab technologies for market deployment.

SUPER SESSION 2a “Cell and Gene Therapy”



The session focussed on knowing the experience and lesson learned by the panelists and a way forward to grow this sector in India.

Prof. Alok Srivastava, CMC Vellore was the moderator for the session. He emphasized critical requisites in cell and gene therapy development: technology access, proof of concept studies, intellectual property access, industrial scalability, and regulatory pathways, outlining the pathway for advancement

The Panelists were:

- **Mr. Arun Chandru, Co-founder, Pandorum Technologies Pvt. Ltd** highlighted the pivotal role of innovation and maximizing the benefits of stem cells to ensure substantial real-world benefits at the 'Cell and Gene Therapy' session.
- **Mr. Satyen Sanghvi, Chief Scientific officer and Executive Director, Regrow Biosciences Pvt. Ltd.** delineated three fundamental pillars for the cell and gene therapy ecosystem: efficient regulatory frameworks, accelerated market product delivery, and a proficient workforce, shaping the pathway for success.
- **Dr. Shirish Arya, Co-founder, ImmunoACT Therapeutics Pvt. Ltd** stressed the necessity for scalability in cell and gene therapy, transcending niche therapy by integrating affordability, innovation, and scalability, transforming the therapy's significance and impact.
- **Dr. Albeena Nisar, Scientific officer D, TMC, ACTREC** underscored the collective focus on cost-effective development and the crucial need for increased funding to meet the rising demand and necessity in cell and gene therapy advancements.
- **Dr. Anil Kamat, Head - Clinical Development, Immuneel Therapeutics** underscored the imperative of innovation, emphasizing the need for a swift regulatory process and uniform approval standards for BIRAC-supported projects with complete datasets. Additionally, he advocated for the establishment of a manufacturing ecosystem to make cell and gene therapy more affordable. His insight resonated with the belief that innovation is key, and maximizing the benefits of stem cells is essential for substantial and meaningful impact.

SUPER SESSION 2b “How Artificial Intelligence and Big Data will drive future biotech innovations”



The session focussed on continued advancements and collaborations, the future of biotechnology with AI which holds great promise for improving human health, sustainability and innovation.

Dr. Prathyusa Pitta, VP, EY-Parthenon, Pharma & Life Sciences was the moderator for the session. She highlighted AI and big data stating, “Typically for a biotech or pharma product, there's a typical timeline for development and discovery. AI can help India in finding the right lead and reducing the time, effort, and cost in the discovery process.”

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The Speakers were:

- **Dr. Felciano, Founder, Qiagen Digital Insights, Alchemy Company** highlighted that AI had a strong marketing engine. He mentioned that all the algorithms had been in use for more than 20 years, and biology was evolving into more of an information discipline. Dr. Felciano emphasized that AI and genomic data went hand-in-hand and had a great success rate overall.
- **Dr. Bharat Sarvepalli, Head of Clinical Trials at Karkinos Healthcare Pvt. Ltd.** mentioned that the potential existed for AI to assist in clinical trials to a certain extent, but we were yet to be there. He noted that a lot of work was being done using AI in the drug discovery and development area.
- **Dr. Kousik Rajendran, Principal Solutions Architect, Amazon Web Services** highlighted the challenges and opportunities in data preparation and the growing interest in generative AI, offering valuable insights into the technological landscape.
- **Dr. Vijay Chandru, Co-founder and Chairman, Strand Life Sciences** stated that biological sciences didn't have the tools and emphasized the need to build something. He believed that real innovation in India was only possible if there was Indian data.
- **Prof. Johan Frostegard, Karolinska Institutet** discussed the future of biotechnology with AI.

SUPER SESSION 3 “Food and energy through biological manufacturing”



The session was **moderated by Mr. G S Krishnan, President ABLE.**

In the keynote address, Dr. V. Prakash, Former Director of CFTRI Mysore and Distinguished Scientist of CSIR, India, highlighted the crucial intersection of sustainable development goals and food. He underscored that out of the 17 sustainable development goals, 13 were related to food, with 4 specifically focusing on protein. Post-COVID, Dr. Prakash emphasized the connection between nutrition, immunity, and the critical role of protein. He asserted that the imperative for change was immediate; otherwise, opportunities might be lost forever. Dr. Prakash strongly advocated for

planning and adopting smart protein strategies, emphasizing their versatility.

Dr. Prakash quoted, “Smart protein means versatility in nature. Isolating even 1 gm of protein from plants and animals creates a major carbon footprint. Hence, we need to look at more sustainable forms of protein. India with its rich biosector has the potential to work on smart

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protein.” While acknowledging that an overnight shift from traditional plant sources was unlikely, Dr. Prakash highlighted the deep-rooted food culture in India, spanning over 6000 years. He suggested that the transition towards smart protein needed to occur gradually, passing down through generations. Dr. Prakash emphasized the potential of reaching a significant population by introducing smart protein to cereal eaters in India.

SUPER SESSION 3a “Harnessing the unlimited opportunities of Smart Proteins in India”



The session mainly emphasized on the solutions to harness the unlimited opportunities in this sector.

The speakers for the session were:

- **Dr. Shannon Olsson, Founder and Global Director, Echo Network-Denmark** highlighted the potential of regional diets and holistic approaches for wider adoption.
- **Mr. Subramani Ramachandruppa, Founder, Fermbox Bio** advocated for nature-inspired downstream methods to enhance Smart Protein outcomes.
- **Ms. Chandana Tekkate, Science & Technology Specialist, The Good Food Institute India** stressed the necessity for affordability and accessibility, ensuring inclusivity within Smart Protein initiatives.
- **Dr. Arjun Goyal, Business Development Manager, Wageningen Food and Biobased Research-Netherlands** emphasized that the key lay in strategy, execution, and iteration, pivotal in developing a robust Smart Protein ecosystem in India.
- **Mr. Abhishek Sinha, CEO, GoodDot Enterprises Pvt. Ltd.** said that Smart Protein has to be really smart and in India, smart protein has to be affordable, accessible, and available to not just the cream, but the masses
- **Dr. Prabodh Halde, Chairman, Chamber for Advancement of small and medium Businesses** advocated for stringent regulatory paths, prioritizing safety within Smart Protein initiatives.

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- **Prof. Sonal Chaudhary, Chair Professor of Sustainable Management, School for Business and Society, University of York** stressed on millets as a promising superfood for India's Smart Protein revolution.

SUPER SESSION 3b “Powering the Future: Bio-Based Energy Solutions”



The session engaged in collaborative brainstorming to identify strategies for enhancing India’s bio-energy research and development through the necessary policy interventions.



The session was **moderated by Dr. Shams Yazdani, ICGEB**



The Panelists were:

- **Dr. Preeti Jain, Global Director, LanzaTech** stressed the need for a shift to sustainable manufacturing for everyday products, emphasizing the necessity of patience, perseverance, and capital investment.
- **Shri S. Bharathan, Director-Refineries, HPCL** emphasized the government's role as a facilitator in reducing CO2 emissions, fostering ethanol and biofuel production in collaboration with industries.
- **Dr. Bhaskar Bhadra, Senior General Manager, R & D, Synthetic Biology Group, Reliance Industries Ltd.** shed light on Reliance's New Energy Initiatives, focused on green hydrogen, solar energy, battery technology, and agri-waste management, transforming India's energy sector..
- **Dr. Anand Ghosalkar, Chief Scientist, Praj Matrix- R&D Center (a division of Praj Industries Ltd.)** discussed global sustainability goals on how bioenergy can help reduce dependency on fossil fuels.
- **Mr. Krishna Mohan Puvvada, Vice President - Consumer Biosolutions and Regional President - Middle East, India & Africa, Novozymes** advocated for exploring 2G ethanol production alongside traditional 1G methods to drive impactful change in India's energy landscape.
- **Mr. Rajagopal, Sr. BDM & RMM, BioEnergy & Distilling, APMEA, Novozymes** emphasized the importance of ensuring the desired output regardless of the raw material used. In India, the predominant source of ethanol was the first generation (1G), but he

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highlighted the necessity of exploring second-generation (2G) ethanol to instigate transformative change. He noted that the challenges faced in India were similar to those encountered in the Netherlands. He identified substantial opportunities for knowledge sharing and transitioning into a system of global relevance, fostering collaboration and synergy between the two regions.

- **Mr. Edwin Hamoen, Programme Manager, Nature based materials, Wageningen Food & Biobased Research (WFBR), Netherlands** highlighted the importance of optimizing biomass, exploring its components like proteins and cellulose for profitable utilization.

SUPER SESSION 4 “Harnessing the power of Genomics for personalized medicine”



The panel provided insights on the challenges in diagnosis using genomics and also discussed the latest breakthroughs in disease treatment.

The session was moderated by **Dr. Vamsi Veeramachaneni, Chief Scientific Officer, Strand Life Sciences.**

The Panelists were:

- **Dr. Ratnakar Palakodeti, VP Offerings & Solutions, Persistent Systems** emphasized the need for a more significant effort in the Indian context to establish a database registry and integrate genetic data. He highlighted that achieving an organized registry of all patients would greatly facilitate the process of genome mapping.
- **Dr. Naveen Ramalingam, Senior Director, Standard BioTools Inc., USA** discussed cutting-edge software solutions.
- **Dr. VL Ramprasad, CEO, MedGenome** provided insights on the challenges in diagnosis using genomics.
- **Dr. Gaurav Ahuja, Associate Professor in Department of Computational Biology, IIIT, Delhi** discussed the latest breakthroughs in disease treatment.
- **Dr. Anurag Agarwal, Dean, BioSciences and Health Research, Trivedi School of Biosciences, Ashoka University** pointed out that the challenges of scale and cost needed addressing in genomic treatment. The Government's focus was on low-cost diagnostics and prevention, but with the right push, Dr. Agarwal believed that genomics could also become more affordable and scalable.

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- **Dr. Anirvan Chatterjee, CEO, Haystack Analytics Pvt. Ltd.** addressed on the evolution of genomics in scientific research over the past 10-15 years. He highlighted the transformative potential of genomics in treatment solutions. Dr. Chatterjee emphasized the crucial step of making genomics applicable and comprehensible to clinicians. He expressed that the specific method employed at the initial stages was less critical than the necessity of conveying the information effectively and ensuring affordability throughout the sequencing process

SUPER SESSION 5 “Emerging Agri-technologies for a Sustainable Future”



The session focussed on emerging global trends in agri-biologicals for sustainable agriculture.



The session was **moderated by Dr. KK Narayanan, Founder, Managing Director, Sthayika Seeds, Bangalore.**



Keynote address was given by **Prof. Avraham A. Levy, Department of Plant and Environmental Sciences, The Weizmann Institute of Science, Israel.** He quoted that “We are in the midst of a climate crisis and this affects our ability to grow plants & do agriculture. So, we need to devise new solutions & unique sets of tools such as genomics,

gene editing, proteomics & others that can help us address this challenge.”

Speakers:

- **Dr. Usha Barwale, Executive Director, Grow Indigo Private Limited, Director Mahyco (Jalna)** highlighted that the key challenges in Biologicals has been productivity consistency in terms of the quality of the products and shelf-life. But, with more players coming in and offering multitudes of products.
- **Mr. Rajvir Singh Rathi, Head, Agricultural Policy and Stakeholder Affairs, Bayer Crop Science, Bayer (New Delhi)** quoted that “A farmer might not relate well to issues of climate change, but we have a decarbonization program with them which makes more sense to them as they see water conservation, better production, and quality.”
- **Dr. Markandeya Gorantla, Executive Chairman & Managing Director, ATGC Biotech Pvt. Ltd. (Hyderabad)** discussed On identifying the gaps, challenges and Roadblocks In technology adoption.
- **Mr. Agam Khare, CEO & Founder, Absolute, Gurugram** discussed the Global agri biological ecosystem.

- **Dr. Vimala Prakash, Head, Technology and Innovation center, IPL Biologicals Limited** said that there is a lot of potential in microbes and with the right technology, innovative approach, and regulations, microbes can be the next revolution.

SUPER SESSION 6 “Raising Funds”



Mr. Saurabh Srivastava, Chairman, Indian Angel Network stated in his keynote address that BIRAC has been extremely successful in creating a startup revolution in India. It has gone much beyond & tried to build by itself an entire early stage ecosystem. Today, there's a huge pipeline of 6000+ startups in the Biotech sector alone.



The session was moderated by **Dr. Shreefal Mehta, Executive Chair and Board Director, Pulmokine Inc.** Dr Shreefals said that as BIRAC has seeded the ecosystem for the last few years, we've seen many incubators & startups & entrepreneurs being supported through the various

stages of development & as they are growing up, we see a need for larger funding to grow with the ecosystem.

Entrepreneurs & Investors View from India and Abroad.

The speakers were:

- **Dr. Rajeev Dadoo, Managing Partner, SR One Capital Management, USA** said that India's role domestically as well as internationally in the space of entrepreneurial activity in biotech can have a huge and fundamental impact on the world in the coming decade.
- **Mr. Sandeep Sinha, Founder and CEO, Arficus Pvt. Ltd, India** discussed the modalities of fundraising.
- **Mr. Sunil Shah, CEO, o2h Ventures; Cambridge, UK** emphasized that one should have dived in completely and made things happen. He stated that running a company required the passionate, go-getter spirit of an entrepreneur. Mr. Shah mentioned that they were on the lookout to invest in companies that, down the line, wanted to team up with big and major players in the industry.
- **Mr. Nitin Deshmukh, Senior Advisor, Kotak Investment Advisors Ltd., India** highlighted that considering the innovation so far, Kotak Investment Advisors Ltd, being one of the biggest players specifically in the healthcare & pharma sectors ventured into the early-stage Biotech startups- be it AI-based diagnosis, and other domains at a broad level.

- **Mr. Mohan Uttarwar, CEO, OneCell Diagnostics India P. Ltd.** stated that Adoption of digital technology in healthcare and life sciences has been so low that it provides an incredible opportunity and that began with the journey of digital pathology.

SUPER SESSION 7 “Masterclass for Startups - Art of Pitching”



In this enlightening masterclass, **Mr. Ankur Warikoo - Founder, WebVeda, Content creator, WariCrew; Speaker, Author** shared invaluable insights on the art of pitching for startups. He said, “If you run a business based on customers' money rather than investors' money, it is the perfect path for your startup. Hence, the best time to raise money is when no one is chasing you. If your business does well because of your customers, not big investors, that's the sweet spot for your startup. Look for funding when you're not scrambling for it. Business is more than just buying and selling; it's about turning potential into real success.”

Other Major Sessions

The event featured a diverse array of special sessions that covered crucial aspects of the biotech landscape, fostering insightful discussions among industry leaders, policymakers, and experts.

States Promoting Biotech Policies & Investments

The session was moderated by **Ms. Akriti Bajaj, Senior - AVP, Invest India.**

The State Representatives were:

- **Mrs. Chithra Arumugam, Principal Secretary, Science and Technology Department, Odisha** quoted “Odisha had a conducive policy supporting the Biotechnology sector. Every clearance had been moved to online portals, making it easier for investments to pour in. One of the biggest advantages was stable governance. Biotech was a trust sector for Odisha and had been ranked first in the investment implementation role.”
 - **Mrs. Mona Khandhar, Principal Secretary, Department of Science & Technology, Gujarat** discussed enhancing the biotechnology sector in the state.
 - **Dr. Dinesh Kumar Sundaravelu, Associate Vice Principal, Tamil Nadu StartUp and Innovation Mission, TN** quoted “When it came to ease of doing business, the state was the most friendly due to its best practices, conducive policies, and the support for the biotechnology sector.”
 - **Dr. Ajit Dua, Chief Executive Ocer, Punjab Biotechnology Incubator, Punjab** quoted “An example had been set in terms of integration across ministries to ensure that the infrastructure was accessible and created value for the biotechnology sector.”
 - **Dr. Vivek Mogal, Maharashtra State Innovation Society, Maharashtra** discussed biotech policies.
 - **Dr. Nagaraj, Department of Electronics Information Technology, Biotechnology and Science & Technology, Karnataka** quoted “More incentives had been added to the industrial policy to support the Biotechnology sector, and the region was ready to offer the best environment in the country.”
-

Niche Area meeting on AI in Drug Discovery



A roundtable discussion was conducted on AI in Drug Discovery.



Investors Roundtable



Investor Roundtable focussed on “Attracting Global Capital in India's Biotech Sector”. The discussion revolved around India as emerging biosimilars hub: capitalizing global opportunity India's vaccine manufacturing prowess: the next frontier of “vaccine innovation” hub Embracing the next chapter of innovation and growth – India for the world India's talent - Unveiling the powerhouse behind India's thriving biotech industry.



India - Germany Startup connect

The session was moderated by **Dr. Katja Lasch, German Center for Research and Innovation (DWIH) New Delhi**. The session focused on fostering collaboration between India & Germany in the realms of innovation & startups. The Participants explored key aspects of the partnership, providing valuable insights into the strengths, challenges & potential areas of growth for businesses in both countries.

Dr. Christopher Dormeier, Entrepreneurship Hub, Technical University of Braunschweig; Dr. Mrutyunjay Suar, KIIT TBI; Dr. Chhaya Chauhan, BIRAC; Dr. Ashwita Karkera, C-CAMP and Dr. Tanay Bhatt, KoshKey were a part of the panel discussions.



Advancing biologics product development – from PoC to pilot

This session navigated the transformative impact of biologics and advanced therapies, ushering in new opportunities and challenges across the biologics development and manufacturing value chain. The session aims to explore the intricacies of biologic development, with speakers sharing experiences in filing Investigational New Drug (IND) applications. The key points included the importance of biologics, the drug development process, challenges in scaling up, quality parameters, and the need for collaboration and mentorship for startups in the biologics sector.

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Dr. Subhra Chakrabarti, Director Operations, BIRAC gave the opening remarks for the session. He emphasized the ecosystem beyond funding for biologics and advocated for leveraging stakeholders' strengths in biologics development.

The keynote address was given by **Dr. Alex Cole, Director, Market Strategy, CPI, UK**. He discussed the significance of biologics in FDA approvals and Provided an overview of the drug development pipeline and various innovative networks. He also Explored collaboration opportunities between the UK and India in the biologics sector and Emphasized the importance of startups considering details and user perspectives.

Dr. V. Premnath, Director, Venture Centre, NCL Innovation Park, Pune, Maharashtra was the moderator and provided valuable insights. He discussed India's position as the lowest-cost destination for medicines and highlighted the potential cost increase with the growing prominence of biologics. Dr. Premnath acknowledged biologics as the significant blockbuster in healthcare and delved into the UK approvals for sickle cell anemia, addressing early-stage developments. Additionally, he emphasized the rigorous filtering process involved in clinical trials.

The panelists for the session were:

- **Dr. Anit Singh, Founder and CEO, Clinical Research Network India, Noida** provided valuable insights during the session. He emphasized the diverse disease pool in India, which significantly contributes to global clinical trials. Dr. Singh highlighted the expedited timelines observed in Indian trials, demonstrating a remarkable 20-30% faster pace compared to the UK. Outlining the phases I, II, and III in drug development, he shed light on the inherently time-consuming nature of the process. Dr. Singh advocated for increased government support, a stronger research orientation, and capacity building as essential measures to reduce trial costs and enhance the efficiency of clinical research endeavors.
- **Dr Sunit Maity, General Manager, Syngene International Limited, Bengaluru** shared key insights. He emphasized the imperative of a well-defined process in the development of

biological drugs. He highlighted the pivotal role of media in the process, underscoring the significance of adhering to stringent quality parameters. Additionally, he delved into the latest developments in cell-line advancements and discussed the challenges associated with scaling up these processes.

- **Dr. Ravi Krovidi, CEO, Ingenuity Biosciences, Ahmedabad** provided valuable insights during the session. He underscored the significance of analyzing various parameters and effectively addressing low-risk factors in biologics development. He highlighted the crucial role played by proprietary methods and technology in advancing biologics research. Additionally, he discussed the instrumental role of incubation centers and stressed the importance of mentorship for the growth of startups in the biotechnology sector.

Roundtable for Biopharma: Next decade



The first theme session focussed on “Biopharma Trends in the Next Decade”. The session was moderated by **Dr. Vijay K. Vijaraghavan, Chairman & CEO, Sathguru Management Consultants**. The Overview of the national biopharma mission was shared by **Dr. Raj K Shirumalla, Mission Director, NBM**. The panelists for the session were **Dr. N K Arora, INCLEN Trust; Dr. J. B Gupta, Aragon Biosciences; Dr. Sanjay Singh, Gennova Biopharmaceuticals; Dr. Umesh Shaligram, Serum Institute; Dr. Amitava Ray, Exsegen; Dr. Sadhna Joglekar, Novartis; Dr. Raj Shirumalla, National Biopharma Mission**.



The next theme session focussed on “Investing in Biopharma Opportunities and challenges in the Next decade.” **Dr Pushpa Vijayaraghavan, Sathguru Inc.** was the moderator for the session. The panelists who were a part of the session were **Ms. Anu Nagar, Joint Secretary, DHR; Dr. Jyoti Logani, DBT; Dr. Harish Iyer, Bill & Melinda Gates Foundation; Dr. Suresh Kuhni Mohammed, World Bank; Dr. Anand Govindaluri, Govin Holdings Pte Ltd. Singapore; Dr. Jogin Desai, Eystem; Dr. Saurabh Maheshwari, SKLZ TECT; Dr. Vijay K Vijayaraghavan, Sathguru Inc. and Dr. Raj K Shirumalla, National Biopharma Mission**.



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The kind of action India was able to take to tackle the Covid pandemic was mainly due to the existing talent and expertise that the Indian Bi-pharma sector had grown to. The industry with the government's regulatory and emergency support system helped in a big way to expand and build on the infrastructure it had in place. It so happened that diagnostic and genome sequencing labs were set up in as remote areas as Bastar and Arunachal Pradesh which also helped and ensured that India was able to sequence all of the strains and varieties of infections which helped not just India, but the world to fight against and put in measures to control the spread of Covid.

Although the infrastructure in place can be repurposed to study different diseases and infectious microorganisms, there is a need for investments to actually focus on a wide range of solutions that India can provide to the world and create models that can create economic opportunities for India. The infrastructures and talent pool that we have built will lead us towards knowledge creation, drug developments and discovery, and also focus on rare diseases, in combination, creating a strong potential for India to lead in the next phase (4th generation) of pharma creations using tools like AI and ML.

Snapshots from Global Panel on Countries and Clusters Collaborating for cross-border tech transfer and deployment to solve global challenges



“The innovation index of our country is moving very rapidly and the support from the Government is very positive and the vibrancy can be felt globally. ACE Fund has helped bring in alternative funds that can fund on our behalf and we are working on connecting startups to global investors so that they can move forward.



Biomanufacturing Mission, supported by DBT and implemented by BIRAC, is working towards creating manufacturing clusters that can help startups scale up, take care of manufacturing, provide high-end equipment and everything needed for a startup to come to fruition.” quoted **Dr. Jitendra Kumar, Managing Director, BIRAC.**

Public Session: Science Connect with Society

The session was on “Are we what we eat? - Sustainable foods for the world’s survival”.

Prof. Sonal Chaudhary, Chair Professor of Sustainable Management, School for Business and Society | University of York, was in conversation with **Gargi Rawat, Environment Reporter & Anchor, NDTV. Dr. Penna Krishna Prasanthi - Senior Diabetologist and Non-ocial Independent Director, (BIRAC)** gave an overview on the R&D and Future of Biotechnology in India:



“The food system has a lot of impact on the environment and vice versa. The current agricultural system is very unsustainable and just providing farmers a sustainable framework without incentive will not work. Hence, incentivizing the farmers to make agriculture more sustainable is really important”, quoted **Prof. Sonal Chaudhary**.

The session was powered by BE INSPIRED. Another session on Science Connect with Society was also held.

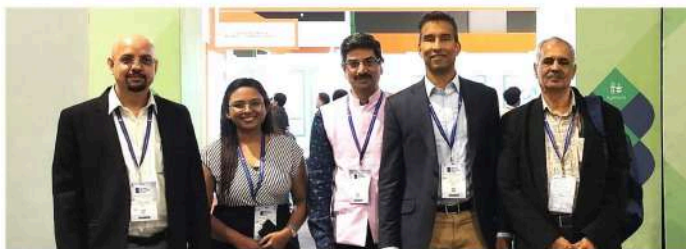
In addition to this few special sessions were also conducted in closed door meeting rooms on High-Level Roundtable Discussion on Biomanufacturing; CEO Roundtable: Plans for India, Asks from India; Accelerating Biomanufacturing: Fostering Enabling Ecosystem; Valorization of Industrial Lignin and Biomass Derivatives; National & Global Regulatory Trends Shaping the Future of Biotech and MedTech Innovation; Public Session: Science Connect with Society; Strategic Blueprint for Catalyzing Investments in Biotech Industry.

Furthermore, sessions by Indegene were also conducted parallelly on cutting-edge topics like the Medicine’s next frontier: Detect, Decode, Decipher; Tech for Treatment: AI in Life Sciences & Biotech. These sessions, held in parallel, enriched the overall event experience, offering diverse insights and fostering meaningful connections.

Bio-partnering

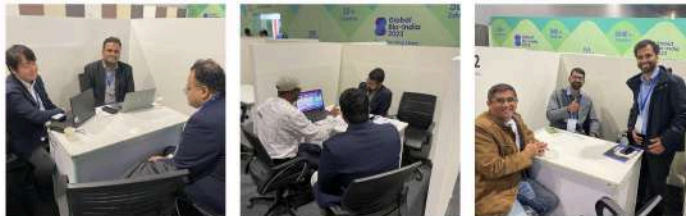
The Bio-partnering experience at Global Bio-India 2023 was powered by the Inova One-on-One Partnering™ System, a global industry standard trusted by leading Pharma, Biotech, and Life Sciences companies. Bio-partnering offered in person meetings in special Biopartnering booths at the meeting venue in the three days of Global Bio-India (4-6 December) and virtual meeting post event for two days (7-8 December), thereby ensuring flexible networking experience. The platform gave access to a robust company directory offering direct communication and providing meeting slots, ensuring maximum flexibility across various time zones.

Global Bio-India witnessed an impressive engagement in bio-partnering activities, reflecting a robust platform for networking and collaboration within the biotech community. The following key metrics outline the success of the bio-partnering endeavors during the event:



Number of Delegates Registered on the Platform: **785**

Number of Companies Registered on the Platform: **633**



Total Number of Meeting Requests: **1868**

Total Meetings Scheduled: **690**



Request Acceptance Rate: **37%**

These statistics underscore the significant interest and participation in collaborative opportunities, with a remarkable 37% request acceptance rate indicating a high level of engagement among the delegates.

In conclusion, the bio-partnering activities at GBI demonstrated a vibrant ecosystem to actively collaborate in a given platform.

जनCARE Healthcare: Technologies for Low resource settings

The session brings an opportunity to interact with HealthTech Innovators for Investment and Technology Transfer.



“The JanCare talent program was created, designed and implemented by what can be said to be a truly PPP model. The Govt. of India, DBT Birac, and Nasscom and GCI came together with some investors to make this as a successful venture.” quoted **Dr. Manish Diwan, Head-SPED, BIRAC.**

innovations developed in low-cost settings like India, if wrapped in a good marketable way can disrupt the global market. Right mentorship, funding, and innovation can help us take these products global.” quoted **Dr. Jitendra Kumar, Managing Director, BIRAC.**

“The cost of healthcare even in developed countries is huge, but



The Jancare session witnessed the launch of 9 innovative products by startups such as Spandan Portable ECG Device by Mr. Apoorv Gupta, AI Wearable based Virtual maternal care platform by Mr. Dinesh Koka, HaemurEx: a lightweight clinical chemistry analyzer by Mr. Rajiv Mondal, Gaze Pattern-based Screening for Risk of Dyslexia in children by Ms. Teena Paul, Telehealth Platform, Swasthya Doot, Multi Speciality E Clinic by Mr. Vibhor Chopra, PreSco – AI/ML-based platform for early diagnosis of Neonatal Sepsis by Mr. KVKLN Rao, Computational Pathology platform Mr. Adarsh Natarajan and Virtual Reality-Metaverse: Auticare by Mr. Sathyanarayanan A R.

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Glimpses from the SPARSH Felicitation at the Startup Pavilion



Snapshots from the WinER Final Jury/ Pitching



Glimpses from the Startup Pitches held at the StartUP Pavilion



FIRST Hub-Facilitation for innovators & entrepreneurs



The FIRST HUB Session helped solve queries related to regulatory pathways and regulation, funding and investment opportunities, mentorship, market access, Industry-academic partnerships, and intellectual property. **Dr. Rubina Bose, Deputy Drugs Controller, Central Drugs Standard Control Organisation; Dr. Kalaivani Ganesan, Scientist F, Department of Biotechnology; Dr. Jerin Jose Cherian, Scientist E (Med), Indian Council of Medical Research; Dr. Gauri Mishra, Senior Scientist, National Institute of Biologics; Dr. Manju Sharma, Additional CEO, Government e-Marketplace; Dr. K. Suseela Branham, CEO, Bio Valley Incubation Council; Dr. Chandan Kumar, Scientist, Bureau of Indian Standards; Dr.**

PKS Sharma, Head & GM, BIRAC; Dr. Shirshendu Mukherjee, Mission Director, Grand Challenges India (DBT-BMGF) were the Representative from Government Bodies.

Women Biotech WInER Fellowship Awards & Women Founding Product Launch

The event featured insightful addresses from prominent speakers, contributing to the overall success of the session. **Dr. Alka Sharma, Senior Advisor at the Department of Biotechnology (DBT)**, set the stage with a compelling address, followed by **Ms. Geetika Dayal, Executive Director of TIE Delhi NCR**, who shared valuable perspectives. **Dr. Penna Krishna Prasanthi, Senior Diabetologist and Independent Director at BIRAC and FCA Nidhi Shrivastava, Director of Finance at BIRAC** provided expertise in her address. **Dr. Rajesh S. Gokhale, Secretary of DBT and Chairman of BIRAC**, delivered a comprehensive address, further enriching the event with his expertise. The diverse range of speakers ensured a well-rounded and informative session for all.

“In the last 10 years, science has changed. From questioning if we can do it, to exploring what all can be done, we have come a long way. As Hon’ble PM’s vision is , this is the time we bring "Bio-vision" of Bharat into play.” quoted **Dr. Rajesh S Gokhale**.



Dr. Alka Sharma quoted, “DBT with BIRAC has supported women in STEM research and has provided funds and support. We would like a large number of women entrepreneurs to have a remarkable journey with the support of the Govt. of India.”

“Women have the inherent quality of multitasking and so entrepreneurship is also an area where women would like to outshine. This Naari Shakti was also exemplified by the Chandrayaan experience and with the leadership of our PM, this will only grow in future.” stated **Dr. Penna Krishna Prasanthi**.

“DBT and BIRAC deserve a special appreciation for the way they have been supporting and encouraging such innovators that can very well be said to be the height of innovation. With the kind of accuracy, transparency, ease of use, and the problems that these ideas are solving, this is very well the height of innovation that DBT and BIRAC has been supporting, encouraging and enabling.”, quoted **Dr. N. Kalaiselvi, Director General, CSIR & Secretary DSIR**.

Powered by BIRAC and TIE- Delhi NCR, **The 5th Edition of BIOTECH WINER Awards was also announced** promoting Women in Entrepreneurial Research.



The winners for the Women Biotech WINER Fellowship Awards were Dr. Pooja Goswami from Ramja Genosensor Pvt. Ltd.; Ms. Santosh Jangir from Newndra Innovations Pvt. Ltd. and Dr. Rachna Dave from MicroGO.



जनCARE Healthcare Innovation Challenge Field Deployment Report” showcases on ground impact created by जनCARE healthtech innovative solutions. These solutions were deployed in PHCs, CHCs & last mile across 12 States bringing together State Government, Industry & other stakeholders.

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Grand Challenges India (GCI), BIRAC and WomenLift Health announced a leadership development program titled "**Women Leadership in STEM**". The programme is targeted at mid-career women working in STEM.



The session saw **seven BIRAC-supported women start-ups to launch their products** in front of the global community.

VALEDICTORY SESSION

Welcome address was given by **Dr. Jitendra Kumar, MD, BIRAC**. He quoted that, “Without the partnerships and participation of the stakeholders and states, a holistic development of the industry is not possible.”

“New beginnings will provide us towards bigger opportunities. Bio-manufacturing, this is what we would like to take to the higher stage as we look forward to make a positive impact on the people and all the stakeholders in the industry and the government”, said **Dr. Rajesh S. Gokhale, Secretary, DBT and Chairperson, BIRAC**.

“This association between Biotechnology and Ayush in drug development will impact the whole healthcare industry in the world. As we embrace the potential of Ayush based solutions, we embark towards the journey towards a healthier and more sustainable future”, quoted **Shri Rajesh Kotecha, Secretary, Ministry of AYUSH**. He also added that “As we embrace the potential of Ayush based solutions, we embark towards the journey towards a healthier and more sustainable future.”



Appreciating and Encouraging Innovation at Global Bio-India 2023

1. Awardees under the Outstanding Contribution to Pandemic Management included:

- Gennova Biopharmaceuticals Pvt. Ltd.
- Bharat Biotech International Ltd.
- Zydus Lifesciences Pvt. Ltd.
- Biological E Ltd.

2. Affordable Vaccine development for India

- Serum Institute of India Pvt. Ltd.

3. Innovator Award in the area of Healthcare-Therapeutics and Vaccines went to:

- Eystem Research Pvt. Ltd.
- Levim Biotech LLP

4. Innovator Award in the area of Healthcare-Devices & Diagnostics

- Althion Tech Innovations Pvt. Ltd.

5. Innovator Award in the area of Industrial Biotechnology

- OmniBRx Biotechnologies Pvt. Ltd.

6. Innovator Award in the area of Agriculture

- Ascen Hyveg Pvt. Ltd. in collaboration with ICAR-IARI, Kullu

7. Innovator Award in the area of AI

- Salcit Technologies Pvt. Ltd. in collaboration with Christian Medical College, Vellore

8. Innovator Award in the area of Genomics

- Haystack Analytics Pvt. Ltd.

9. Best BioIncubation Centre Exhibit

- Centre for Healthcare and Entrepreneurship, Hyderabad

10. Best Incubation Centre (Tier I Cities)

- Bangalore BioInnovation Centre, Bengaluru

11. Best Incubation Centre (Tier II Cities)

- BioNEST Punjab University, Chandigarh & Yenepoya Technology Incubator, Mangalore

12. Best Bio Incubation Centre (Tier III Cities)

- Association for Bio-inspired Leaders & Entrepreneurs at SASTRA TBI (ABLEST), Thanjavur



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Startup Awards

1. Under the category of **Healthcare (Devices and Diagnostics)** was given to Pragmatech Healthcare Solutions Pvt. Ltd, Gujarat
2. Under the category of **Healthcare- Therapeutics** was given to Zzwick Hygiene Pvt. Ltd., New Delhi
3. Under the category of **Industrial Biotechnology (including secondary agriculture)** was given to Greenshift Energy Private Limited, Maharashtra
4. Under the category of **Agriculture (including aquaculture and Veterinary)** was given to Chimertech Private Limited, Tamil Nadu
5. Under the category of **Woman Entrepreneurs** was given to Ahammune Biosciences Private Limited, Maharashtra
6. Under the category of **International participant** was given to Water & Soil Ltd, Budapest, Hungary



Product launch session at Global Bio-India 2023



In his closing remarks, **Dr. Jitendra Kumar, Managing Director of BIRAC**, expressed his gratitude for the tremendous success of Global Bio-India 2023. He remarked, "Global Bio-India 2023 has been so successful that it shall be an annual event from next year. Let's make Global Bio-India the global event in real form. India is well capable of leading the world in the biotech sector. Global Bio India as an Annual event will set the course for great things going forward."



Dr. Kumar then announced the 4th edition of Global Bio India, scheduled to take place from 19th to 21st September 2024. The declaration marked a commitment to fostering ongoing collaboration, innovation, and leadership in the global biotechnology community.



List of Exhibitors showcased at Global Bio-India 2023

5W Ventures Private Limited (VeriPure)	ICMR-IIT Kharagpur
a-IDEA, ICAR-NAARM	IIT Jodhpur TISC
AAARNA Therapeutics Private Limited	IKP Knowledge Park - Hyderabad
Aasya Healthcare Pvt Ltd	ImmuGenix Biosciences Pvt Ltd
Aathma Pranavaayu Pvt Ltd	Inav Agro Mech Pvt. Ltd
Abhignya Biotechnology Consultants, Hyderabad	Increeks Private Limited
AbrinAldrich Agronic Products Pvt Ltd	Indian Angel Network
Adarsa Private Limited	Indian Institute of Science
AG Organicz	Indigram Labs Foundation
AgHub Foundation	Indo-German Science & Technology Centre
Agrifood Tech Private Limited	INERA Cropscience Private Limited
Agrilogy Bioscience Private Limited	Inger Therapeutics Pvt Ltd
Agrovrdhhi	Innaumation Medical Devices Private Limited
Agverse Technologies Pvt Ltd	Invocept Global Solutions Pvt Ltd
Ahammune Biosciences Private Limited	Inochi Care Pvt Ltd
Aindra Systems	Inovocare Healthsoft Solutions Private Limited
AKB Innovant Healthcare Pvt. Ltd.	Institute of MEDical Education and Research Chandigarh
AKON Scientific Pvt Ltd	Institute of Chemical Technology- Nanomedicine Research Group
Alacris Research & Development Private Limited	Inte-E-Labs Private Limited
Ambinova Technologies Pvt Ltd	Integrated DNA Technologies
AMDUS Technologies Pvt. Ltd.	Interactive Research School for Health Affairs
Amity University - Uttar Pradesh	International Biotech Park Limited
Amrita Institute Of Medical Science	Intessence Solutions Pvt. Ltd.
Aquasynthesis Pvt Ltd	Invati Creations Private Limited
Arcapsis Technosolutions Pvt Ltd	Inventigen Technologies Private Limited
Ardor Biomed India Private Limited	Inventohack Innovations Pvt Ltd
Arkni PhotoBioLife	Invisiobiome
Arogyam Medisoft Solution	IOM Bioworks Private Limited
Arthro Biotech	IOTA Diagnostic Pvt. Ltd.
Asahi KASEI India Pvt Ltd	IP Global Services
Ashva Wearable Technologies Pvt Ltd	iPanelKlean Solar Private Limited

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ASPIRE BioNEST	IPE Global Limited
Association for Bio-inspired Leaders & Entrepreneurs at SASTRA TBI (ABLEST)	IPL Biologicals Limited
Atal Incubation Centre- Centre for Cellular and Molecular Biology	ISMO Bio-Photonics Private Limited
ATGC Biotech Pvt Ltd	ITX Care Private Limited
Avay Biosciences Pvt Ltd	J.P Life Sciences
Aves FoodTech Private Limited	Jagriti Products
Avyantra Health Technologies Pvt Ltd	Janitri Innovations
BabyCue Private Limited	JC OrthoHeal Private Limited
Bangalore Bioinnovation Centre (BBC)	Joyita Chowdhury
Bannari Amman Institute of Technology - Technology Business Incubator	Karnataka
BeAble Health Pvt Ltd	Kempegowda Institute of Medical Sciences
bEarly TechnoVations Pvt. Ltd.	Kidaura Innovations Pvt. Ltd.
Beckman Coulter India Private Limited	Knowledgepie Private Limited
BETIC IIT Bombay	Kodai hill garlic and vegetables collective farming producer company limited
BGIIES, BITS BIRAC BioNEST, BITS, Pilani K K Birla Goa Campus	Koncepo Sciencetech International Private Limited
Bharat Biotech International Ltd	Kore Additive Manufacturing and Medical Reconstruction Pvt Ltd
Bhojpatta Agripreneur Private Limited	Lab Iconics Technologies LLP
BigOHealth	Levim Biotech
Bihar	M S Ramaiah Medical College and Hospitals
Bio 360 Life Sciences Park	M/s Neela Pahar Harvest
Bio Resources Development Centre, Shillong	Machphy Solutions Private Limited
Bio Valley Incubation Council, AMTZ	Maharashtra State Innovation Society
Bio-Ayurvedic Naturals Pvt Ltd	Manipal-GoK Bioincubator
Bio-NEST NIPER Guwahati	Marathwada MedTech Lab
Biocon Limited	MARS Healthtech pvt ltd
Biodimension technology private limited	Mazumdar Shaw Medical Foundation
Bioheaven360 Genotec Pvt Ltd	Medaara Partners
Bioklone Biotech Pvt Ltd	MedClinica Private Limited
Biomakerz	Medtra Innovative Technologies Private Limited

BioNEST Agri Innovation Centre, University of Agricultural Sciences, GKVK	Mestastop Solutions Private Limited
BioNEST IIT Guwahati	Meukron Technologies Private Limited
BioNEST-Banaras Hindu University (BHU)	MG Biological Pvt Ltd
BioNEST-Dr. Moopen's Medical College	MicroGO LLP
BioNEST, Panjab University, Chandigarh	Mild Cares Private Limited
Biopharma Incubation Centre - NIPER Ahmedabad	Mizoram University BioNEST
Biopioneer Pvt.Ltd	Mokshaa Wellness
Bioscan Research Pvt Ltd	MolVerse Pvt Ltd - Accelerating Molecular Discoveries
BioSouk Life Sciences LLP	MP Biomedicals India Pvt Ltd
Biotech Consortium India Limited	Mr Biologist LLP
Biowave Technology Pvt. Ltd.	Nasscom Foundation
BIRAC E-YUVA Center, GIET University	National Research Development Corporation, New Delhi
BITS BioCytiH Foundation	Navyukti Innovations Pvt Ltd
Blackfrog Technologies Pvt. Ltd	Neat meatt biotech private limited
Boltzmann Labs Private Limited	Nemocare Wellness Pvt Ltd
Bramhansh Technologies Pvt Ltd	NeoDx Biotech Labs Pvt Ltd
BSC BioNEST Bio-incubator	Neurostellar Private Limited
Bycus Therapeutics Pvt. Ltd.	Newndra Innovations Private Limited
Bylin Medtech Pvt Ltd	Nex Fitzap Private Limited (Logy Ai)
Cambrian Bioworks	NHAP Regenerative Solutions PVT LTD
Canectar Foods Pvt Ltd	North-Eastern Hill University, Tura Campus, Meghalaya
CAPSBER AGRISCIENCE	NRGC BIO, CSIR-IMTech, Chandigarh
CAREER COLLEGE	Nubiogenx Pvt. Ltd
Centre for Cellular and Molecular Platforms (C-CAMP)	Nwarehouse Private Limited
Centre for DNA Fingerprinting and Diagnostics (CDFD), Hyderabad	OmniBrx Biotechnologies Pvt Ltd
Centre For Medical Innovation and Entrepreneurship (CMIE), AIIMS	ONI
Chayi Trails Private Limited	Orish J Bioworks Pvt. Ltd
CHENNAI INSTITUTE TECHNOLOGY BUSINESS INCUBATION FORUM	Pacify Medical Technologies Private Limited
Chimertech Private Limited	Papersens Pvt Ltd
Clear Meat Pvt Ltd	Parisodhana Technologies Pvt. Ltd.
Clinical Research Network India Pvt. Ltd	Parks Biolabs LLP
Cology biosciences Private limited	Phyx44 Labs

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Conscious Products	Pilani Innovation and Entrepreneurship Development Society
Council of Science & Technology, UP	PlebC Innovations Pvt Ltd
CRC Research	Pragmatech Healthcare Solutions Pvt.
Crescent Innovation and Incubation Council	Prescience Insilico Private Limited
Crimson Healthcare Pvt Ltd	Proantek Research Laboratories Private Limited
Crop Labs	ProCyto Labs Pvt. Ltd.
CSIR	Psaizi
CSIR- Central Food Technological Research Institute	PSG-STEP
CSIR-IIIM, Jammu	PSGR Krishnammal College for Women
CSIR-IITR-CITAR BioNEST	PumasAI
Curem Biotech LLP	Punjab
Cureous Labs	Pusa Krishi- Indian Agricultural Research Institute
Cyone Med Solutions (OPC) Pvt. Ltd.	Qaaf Healthcare International
Cytiva, Learning Candid India Private Limited	RAMJA Genosensor Pvt. Ltd.
D-NOME PRIVATE LIMITED	Reazent
Datta Meghe Institute of Higher Education and Research	Reinste Nano Ventures Private Limited
Department of Biotechnology	Revelations Biotech Private Limited
DBT ILS Bioincubator, Institute of Life Sciences	REVY Environmental Solutions Pvt Ltd
Denovo Bioinnovations Pvt Ltd	Rigel Bioenviron Solutions Pvt Ltd
Descign AI LLP	RISE Foundation IISER
DessinRx healthcare Private limited ltd	RNA VAXBIO PRIVATE LIMITED
DIAGNO INTELLIGENT SYSTEMS PRIVATE LIMITED	Roundworks Technologies Private Limited
Diagopreutic Pvt Ltd	RR Animal Health Care Limited
DPSRU Innovation and Incubation Foundation	Rubizon Dxbidt Enzymes
Dr. Sethis Laboratories Private Limited	Ryot Agro Pvt Ltd
DST	Samsrushti Health Technology Solutions Pvt Ltd
E YUVA Centre, Adamas University	Savemom private limited
E-Yuva Center, Anna University, Chennai	Savli Technology & Business Incubator
E-YUVA Centre , UAS Dharwad	School of Agriculture , GIET University , Gunupur
E-YUVA Centre Univ of Rajasthan	Science & Technology Department, Govt. Of Odisha
E-YUVA Centre, Adamas University (Supported by BIRAC)	Scitechesy Research & Technology Private Limited
E-YUVA Centre, Panjab University, Chandigarh	SearchMyTenders (Aero Telcom Solutions Pvt Ltd)
East Ocyon Bio Pvt. Ltd.	SEASPIRE PRIVATE LIMITED
Ecophytocare India Private Limited, Mysuru	Serum Institute of India Ltd

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Edna Biolabs Private Limited	Shodh Clinical Solutions LLP
Elmentoz Research Pvt. Ltd.	Siddaganga Incubation Foundation
Elomatic Pharamalab Consulting & Engineering Pvt Ltd	SINE IIT Bombay
Embright infotech Private Limited	Social Alpha
Emys Bionics Pvt Ltd	Sodhani Biotech Pvt. Ltd.
Ensect Farm Pvt Ltd	Sparrotronics Pvt Ltd
Entrepreneurship Development Center (Venture Center)	SPMVV Society For Innovation Incubation Enterprenuership (SSIIE)
Envisage Medtech Private Limited	Sravathi AI Technology Pvt Ltd
ExSURE Pvt. Ltd.	Sri Ramachandra Innovation Incubation Centre
Eyuva Centre , Atmiya University -Rajkot	SRIGP AVENS LIFE SCIENCES PVT LTD
F3 Biotechnology Private Limited	SRM Institute of Science & Technology (SRMIST)
Fabiosys Innovations Pvt. Ltd.	SS Innovations Private Limited
Famnutra millet foods private limited	Startoon Labs Pvt Ltd
Federation of Asian Biotech Associations (FABA),	Startups Valley TBI
Fermentech GSV Private Limited	StemRx Bioscience Solutions Pvt. Ltd.
Fermentech Labs Pvt. Ltd.	Sunfox Technologies Private Limited
FIB-SOL Life Technologies Pvt.Ltd.	Suparna Chemicals Limited
FIBROHEAL WOUNDCARE PRIVATE LIMITED	Synersense Private Limited
FINS AND TAILS AGRITECH PVT LTD	Tamil Nadu Startup And Innovation Mission
FIRST IIT Kanpur	Tata Memorial Hospital
Fluoresight Bioprobes Private Limited	Tech Cell Innovations Private Limited
Focelite Goodness India Private Limited	Techinvention Lifecare Pvt Ltd
Foundation for Innovation and Technology Transfer, IIT Delhi	TechMedZ Labs Private Limited
Freshily19 Agri-Tech private limited	Telluris Biotech India Private Limited
GAURICO.	TestRight Nanosystems Pvt Ltd
GBACT Solutions Pvt. Ltd.	The Foundation for the Center for Healthcare Entrepreneurship
Gecco biotech B.V.	Theraxcel Healthcare Pvt. Ltd.
GenElek Technologies Pvt Ltd	Third Ai Platforms Private Limited
Genera Smart Lab	Ticel Bio Park Ltd
Genes2Me Private Limited	TIDES
GeneSpectrum Life Sciences	TMJ Foods(India)Pvt Ltd
GeNext Genomics Pvt Ltd	TNAU E YUVA centre
Genext Genomics Pvt Ltd	Torchit Electronics Pvt Ltd

Gennova Biopharmaceuticals Ltd.	Translational Health Science and Technology Institute, Faridabad
GENOMIKI Solutions private limited	Translational Oncology Council
Genotypic Technology	Translational Research and Innovations
Giftalexia Solutions Private Limited	Triedge Platform Services Private Limited
Gods Own Store LLP	Trish I R&D Private Limited
Golden Jubilee Biotech Park For Women Society	Trishveda Naturals Pvt. Ltd.
Government Institute of medical Sciences ,Gr Noida	U R Advanced Therapeutics Pvt. Ltd.
Grailmaker Innovations Private Limited	UKCAS Culture Innovation (PVT) Ltd
Greenathon Technologies Pvt. Ltd.	University of Delhi South Campus
Greenevon Bio Private limited	URBAN HYPHAE
GreenGrahi Solutions Pvt Ltd	Vaxfarm Life Sciences
GreenShift Energy Pvt. Ltd.	Vayuguard Climate Tech Pvt Ltd
Hatchlab Research Centre - SRM University Andhra Pradesh	VeGen Labs LLP
Healthledger Group	Venture Studio Ahmedabad University
Healyantra Healthcare Innovations Private Limited	Veterinary Incubation Foundation @ TANUVAS
Helyxon Healthcare Solutions Pvt Ltd	Vgenomics India Pvt. Ltd.
Herbal Aura	VIA Energicals Private Limited
Heyan Health Solution Pvt Ltd	Vignana Jyothi Foundation for Entrepreneurial Excellence
HiMedia Laboratories Pvt Ltd	Vipragen Biosciences Pvt. Ltd.
Hoynoza Technologies Pvt Ltd	VIRCHOW BIOTECH PRIVATE LIMITED
HTIC, IITM	VIT-Technology Business Incubator (VITTTBI)
Human Biogenesis	Water & Soil Ltd.
Humane Society International/India	WeTranslate
Huskage Innovations Private Limited (HISPL)	Yenepoya Technology Incubator
Huwel Life Sciences	Yuvitel technologies pvt ltd
ICMR	Zydus Lifesciences Limited