

biroc e3

Ignite • Innovate • Incubate

Power to Transform Lives

BIO-SCIENCE TO BIO-ECONOMY

Features:

 **Global
Bio-India
2019**



Bio-Pharma



Bio-Agri



Bio-Industrial



Bio-Energy



Bio-Services



birac

Ignite Innovate Incubate
Biotechnology Industry Research Assistance Council
(A Government of India Enterprise)



December 2019

No. 4 | Vol. 6

In this issue

Leader's Message	3
Chief Editor's Take	4
BIRAC Feature	
Global Bio-India 2019	5
BIRAC Success Stories	
Transforming Lives	13
BIRAC Reports	
Ayushman Bharat: Aarogya Manthan	14
Exhibition Cum Workshop on Technologies in Food Processing Developed by CSIR	15
Third meeting of the Scientific Sub-Committee (SSC -NTBN)	15
2019 World Conference on Access to Medical Products - Achieving the SDGs 2030	16
BIRAC Awards	16
BIRAC Activities	
HR & Admin	18
Partnerships	
Grand Challenges India	21
National Programmes	
National Biopharma Mission	25
Call launches	12, 17, 20, 27

Editorial Committee

Dr. Shirshendu Mukherjee
Mission Director, Grand Challenges India

Dr. Hafsa Ahmad
Consultant (Comm.)
National Biopharma Mission

Ms. Ginny Bansal
Consultant (Comm.)
Grand Challenges India

Dr. Varsha Sirohi
Officer, Make in India Cell

Dr. Chhaya Chauhan
Manager (Incubation)

Ms. Anjana Seshadri
Manager (Policy), Grand Challenges India

Design and Production:
Chiranjn Advertising, E-170, East of Kailash, New Delhi, Email : chiranjn@hotmail.com

Leader's Message



Dr. Renu Swarup
Secretary DBT
& Chairperson BIRAC



डॉ. रेणु स्वरूप
DR. RENU SWARUP

सचिव
भारत सरकार
विज्ञान और प्रौद्योगिकी मंत्रालय
जैव प्रौद्योगिकी विभाग
ब्लॉक-2, 7वां फ्लोर, सी० जी० ओ० कॉम्प्लेक्स
लोधी रोड, नई दिल्ली-110003
SECRETARY
GOVERNMENT OF INDIA
MINISTRY OF SCIENCE & TECHNOLOGY
DEPARTMENT OF BIOTECHNOLOGY
Block-2, 7th Floor, C.G.O. Complex
Lodhi Road, New Delhi-110003

Message

The Biotechnology sector has today entered a new era of growth. It holds immense potential to provide innovative affordable solutions to the challenges of Health Care, Agriculture, Clean Energy, Environment and other key sectors impacting the country's growth and addressing the Sustainable development Goals. India is today positioned as one of the top 12 destinations globally and the recent statistics clearly indicates the key advantages internis of being cost competitive with quality manufacturing. We now have ambitious targets of achieving \$150b Bioeconomy by 2025 and India becoming a world class \$100b Biotech manufacturing hub to contribute to this growing economy. The current growth targets give us the confidence of achieving this ambitious target.

From building human resource and infrastructure capacities for cutting edge research to creating a robust translational ecosystem and fostering and nurturing a vibrant startup and entrepreneurial innovation culture, The Department of Biotechnology along with Biotechnology Research Assistance Council (BIRAC) have strived to achieve this in a very short timeframe. The enabling policies of the Government have contributed to this growth rate of 14.7%. The recent estimates clearly indicate that with these key drivers in place in Biotech sector will continue to growth at 14% to achieve approximately 19% of the Global Market share by 2025.

It is important that we now put in a focussed attention not just on building a large innovator pool but ensuring the scalability and sustainability of the growth of this sector. It is now time to move from incremental to exponential growth and focus on some of the critical factors, such as delivering complete value from the R&D effort, to encouraging industry academia partnership for enhanced quality of research output, targeting key sectors, such as Genomics, Agriculture, Biofuel, Enzyme etc., which have the potential to grow and contribute to the Bioeconomy, strong stakeholder networks to achieve these targets.

As always BIRAC will work to leverage the strength of partnership and collectively we will help the sector to grow and exhibit the potential of Biotechnology to transform the lives of society.


(Renu Swarup)

Secretary, DBT & Chairperson, BIRAC

Chief Editor's Take



Dr. Mohd. Aslam
Advisor DBT
& MD BIRAC

India is the 3rd largest biotech destination in the Asia Pacific region and among the top 12 destinations for biotechnology in the world with approximately 3% share in the global biotechnology industry. Biotechnology is recognized as the sunrise sector – a key potential driver for contributing to India's USD 5 Trillion economy target by 2025.

The biotechnology sector has witnessed an exponential growth in recent decades. It is an important and exciting time for the industry. The challenges are as great as the opportunities. As the sector of biotechnology is moving forward, we are on the cusp of breakthroughs in medical innovations that will benefit patients as well as the societies for decades to come. The advancements will not only have dramatic implications for people and society but will also reshape the vast sectors of the world economy.

Biotechnology has a multitude of advanced technologies which is beneficial in various domains such as agriculture, pharmaceuticals, scientific discoveries etc. Biotechnology has the potential to create innovative solutions to current challenges & healthcare problems. Policy initiatives of Government of India (GoI) such as Make in India, Skill India, Start-up India programs are aimed to develop India as a world-class Biotechnology and Bio-manufacturing hub. It is because of all these contributing factors that today India is emerging as a favoured partner for all global biotechnology collaborations.

Recognizing the importance of this sector, the Department of Biotechnology (DBT), along with BIRAC organized Global Bio-India 2019 during November 21-23, 2019 at Aerocity, New Delhi. The associated partners for this event were Confederation of Indian Industry (CII), Association of Biotechnology Led Enterprises (ABLE) and Invest India. The three-day event was a representation of entire biotechnology stakeholders to the national and international community. The event focused on the opportunities and key challenges in the areas of bio-manufacturing, clinical trials & drug discovery, capacity-building, creating global supply chains for achieving a growth-oriented road-map for the biotechnology sector in the country.

Today's vibrant environment gives us the trust that our innovators will be noticed globally to provide solutions to major societal issues.

We at BIRAC firmly believe that ideas shouldn't fail due to lack of support. I am hopeful that we will continue to showcase India's potential both within the country and to the world in order to chart out an actionable roadmap to catapult India's biotech sector on the global map.

Dr. Mohd. Aslam
Advisor DBT & MD BIRAC

Global Bio-India 2019

Global Bio-India 2019 was organized by Department of Biotechnology (DBT), Ministry of Science & Technology, Government of India in association with its Public Sector Undertaking, Biotechnology Industry Research Assistance Council (BIRAC) from 21st – 23rd November 2019 at Aerocity, Delhi. Confederation of Indian Industry (CII), Association of Biotechnology Led Enterprises (ABLE) and Invest India were the partnering agencies for the event.

The event showcased India's potential in the biotech sector both within the country and to the international community. The three-day long event witnessed a rich technical program with various parallel sessions covering important Biotech sessions i.e. Vaccines, Biosimilars, Medical Devices & diagnostics, Agriculture, Industrial Biotech, Bioservices, Emerging therapeutics, AI, Big Data, Discovery Research and Development, Regulatory Compliances, Intellectual Property Rights, Incubation Centres, Entrepreneurship, Start-ups, Social Innovation, Integration of Start-ups with National Missions such as Make in India, Ayushman Bharat, Swach Bharat etc. Various unique features of the programme were Investors Reverse Pitching, International Ecosystem Connect, Partnerships, Translational Research, Global partnerships, Conversations with policy leaders, CEOs, Discussions with national and international product development experts, Regulatory experts, and talks by luminaries of the Indian Biotechnology Industry. All together there were 40 sessions, 3 super sessions, 3 CEO panels, 2 workshops, policy dialogues, and a boot camp that took place during the whole Technical programme over a period of 3 days.

Who should attend?

- Government
- Academia
- Industry
- Investors
- Start-ups
- Entrepreneurs

A billion reasons to invest in India

USD 50 Bn	270+	2700+
USD 100 Bn	200+	10,000+
800+	57 th	#1

Destination India

#1	#2	#3
2 nd		2700+
3 rd	3 rd	100+

Event at a glance

- 40 Sessions
- 3 Super Sessions
- 3 CEO Panels
- 2 Workshops
- Policy Dialogues
- Boot Camp

Logos: BIRAC, CII, ABLE, Invest India

In addition, there were 2 Satellite conferences on Nanobiotek and Nano for Agri. Dr. Harsh Vardhan, Hon'ble Union Minister for Science and Technology, Health & Family Welfare and Earth Sciences applauded the efforts taken up by entrepreneurs, innovators in the

Biotech sector, for shaping the Start-up economy of India and the government enablers efforts in facilitating the Start-ups. He gave an honourable mention to Late Shri Atal Bihari Vajpayee's vision that Biotechnology will craft the future of India. He also shed light on the Biotechnology Kisan movement aimed for the protection of the agriculture sector.



The event attracted 2500+ delegates, 190 exhibitors, 25+ countries, 300+ Start-ups, 50+ incubators, 60+ Research Institutes, 800+ business meetings scheduling and representation from 9 States. There were over 60 government, research and educational institutions that took part in the event.

Day 1 – 21st November 2019

Dr. Harsh Vardhan, Hon'ble Union Minister for Science and Technology, Health & Family Welfare and Earth Sciences and the Hon'ble Minister of Petroleum and Natural Gas and Steel Shri Dharmendra Pradhan along with Dr. Renu Swarup, Secretary DBT, Chairperson BIRAC inaugurated the event. The inaugural session was also graced by various other dignitaries including Dr. Vinod Paul, Member Health, NITI Aayog, Dr. Kiran Mazumdar Shaw, Chairperson and Managing Director, Biocon Limited, Dr. Naresh Trehan, Chairman, CII National Health Care Council and Chairman & Managing Director, Medanta and Mr. Chandrajit Banerjee, Director General, CII. Afterwards, Hon'ble Minister for Science and Technology along with other dignitaries also inaugurated the Global Bio-India exhibition.

Three sectoral reports were also released during inaugural namely:

1. Assessment of Indian Biotechnology Landscape,
2. India Bioeconomy Report 2019.
3. India: the emerging hub for biologics and bio-similars along with the release of Global Bio-India exhibitor's catalogue.



Inauguration of the Event and Exhibition

Pertinent Bioeconomy related topics were discussed by the forum of Ministries and Departments elaborated on the government initiatives that will steer India towards USD 5 Trillion Economy by 2024-25 highlighting the action points, policy framework to establish India as a global hub of Biological manufacturing sector and creating new supply chains for regulated and non-regulated market. Additionally, various policy interventions and reforms that have resulted India to achieve 1st Ease of Doing Business ranking in South Asia and 52nd rank in the Global Innovation index, were also discussed in the session deliberated on the why India is a vibrant innovation destination for the biotech Start-ups.

Sessions were designed to promote investment at the State level, State showcase and State connect, Nine states exhibited their innovative strength through no. of technologies developed, IPs generated, etc. States also utilized this platform to talk about their Start-ups, Entrepreneurs & SME Biotech policies, incubation support, tax incentives & facilitation provided to attract investment in the states. A MoU was signed between DSTE –State of Punjab and BIRAC as knowledge partner to jointly promote biotechnology innovation ecosystem in the state.

Biosimilars are poised to transform healthcare sector. It has opened tremendous opportunities for manufacturing investments in capex, highly skilled human resources and of course, a competitive field that

has influenced Biotech Industry in India and South East Asia. Regulators and Industry CEOs discussed the regulatory landscape in light of few under development/ developed products in India, SE Asian countries with Indian and Global regulatory authorities. The International Partnership focussed sessions highlighted the best practices, activities, initiatives and achievements of the partner country's Biotechnology sector viz. Healthcare, Life sciences, Industrial Biotech, Agri-tech, Clean Energy & Bio-services and also focussed on the government and private sector of the countries to do joint ventures and collaborations.

Antimicrobial resistance (AMR) being a global public health challenge is viewed as posing one of the most serious health threats. The Industries and Lead innovations shed light on the AMR and representatives from DBT, BIRAC, ICMR, CARB-X and discussed the solutions for addressing this imminent health challenge.

To solve a myriad of socio-economic as well as environmental challenges for the collaborative research, the session "Showcasing the Strength of international Partnerships" enumerated country wise priorities and thrust areas where extended cooperation would be required to co-create, co-develop and co-scale. India's role at international level and expectations of international community from India would be helpful in improvising existing and developing new strategies & implementation.

Furthermore, Indigenous Big Data, National repositories, Gene banks providing characterized cell lines, tissue samples and reference material of Indian population have been an invaluable resource. Efficient utilization of the wealth of healthcare data would allow health systems to create holistic views of patients, personalize treatments, improve communication, and enhance health outcomes, the focussed session on Global examples of big Data in Health provided an overview

of India's readiness, execution plans and learnings from countries with experience in this area. A separate session on the Compliance Program on Global Harmonization Roundtable Discussion was deliberated on improving access to affordable healthcare, product quality, patient safety and to set the stage for prioritization of the specific actionable steps towards harmonization.



Glimpses of Day 1

Day 2 – 22nd November 2019

Being the largest producers and exporters of vaccines, every 3rd child in the world is vaccinated by the vaccines produced in India. The Industry representatives shared experience to mitigate risk of the regulatory approval process for vaccination, efforts steering the mass movement and manufactures' readiness to produce and supply the requisite vaccination doses consistently. The New Product Launch session provided a unique opportunity to 9 selected BIRAC supported Start-ups to launch their product before global community.

India is partnering with various organizations in different countries to address globally relevant unmet challenges, the panelists discussed International partnership e.g. Wellcome Trust, UK, to scout and support innovations in translational medicine, Primary Healthcare system through the various initiatives in India to support high quality bilateral research for Affordable Healthcare in India Grand Challenge India program launched by PMU at BIRAC with Bill & Melinda Gates Foundation. A specialized session for boosting the Indian Start-up ecosystem was conducted on the Enablers for Start-up Ecosystem & Market Access Facilitators which deliberated on producing and maintaining Start-up ecosystem in the country and the major initiatives of taken by NITI Ayog, DST were also discussed to foster the culture of innovations in India.

A power packed session on Biofuels deliberated on India's current positioning, thrust & efficiency to match global race of developing renewable & sustainable alternative fuels. This congregation of national/international Biofuel Industry & Academic Fraternity brainstormed to find measures to boost Indian Biofuel R&D through required policy inputs. A focussed session Agricultural waste to Value deliberated on designing and developing better waste-to-energy,

bioenergy and how the waste can be used for variety of applications to develop clean energy & value-added products. Moreover, the session Destination India: Biopharma R&D provided an insight on Discovery, Knowledge Process Contract and conducive for the industry stakeholders who are considering Destination India as an option in near future. A specialized session on the Startups scale to Global markets through partner countries was also deliberated which elaborated on the IP protection and F2F interactions with representatives from partner countries.

With the recent technological advancements, globalization and evolving regulatory framework, the biopharma industry continues to face disruptions. Honing the sector's capability is critical for the Indian biopharmaceutical industry to adapt to the changing landscape and to ensure India's competitiveness in the global market. Taking the same into account, United States Pharmacopeia (USP) organised a panel discussion on "Building Capabilities for Quality Drug Development in Biopharma Industry". This session involved key stakeholders from Industry, Regulators and Government, deliberating on the current Government initiatives, policy framework, major challenges and road ahead to boost India's technological and product development capabilities in biopharmaceuticals to enhance its global competitiveness. In the similar context, angel investors have been instrumental in incentivising and shaping the Indian Start-up ecosystem, leading Start-ups to scalability and success. The recent favourable policy reforms have brought some relief for angel investors, with the government providing a simpler mechanism for Start-ups to claim exemption from angel tax retrospectively. As the government and ecosystem enablers unite to support angels, they, in turn, are helping through angel investments in the ecosystem.

BIRAC Innovators Award

- Algal R Nutra Pharms Pvt. Ltd. in collaboration with IIT, Madras: Production of docosahexaenoic acid from microalgae
- Yostra Labs Pvt. Ltd.: NEURO TOUCH™
- Jubeln Life Sciences Pvt. Ltd. (Bonayu Lifesciences Pvt. Ltd.): Novel oral thin film platform for drug delivery
- Krimmi Biotech LLP: Validation and bench-scale production of beneficial nematodes waste silkworm pupae against agricultural pest to protect crop

BIRAC National Awards for Indigenous Commercialization 2019

- Coeo Labs Pvt Ltd. for VAPCare: An intelligent secretion and oral hygiene management system to reduce risk of acquiring ventilator associated pneumonia

Second edition WinER Award of the BIRAC – TIE Women In Entrepreneurial research awards (WinER)

- Dr. Renuka Karandikar, BioPrime AgriSolutions Pvt. Ltd.
- Ms. Neha Rastogi, Agatsa
- Ms. Ritu Malhotra, Eventuate Innovations Pvt. Ltd.

Launch of New Initiatives

- Hon'ble Minister Shri Piyush Goyal launched the e-Portal www.biotech-solutions.com showcasing BIRAC supported commercialized Biotech Products and Technologies followed by launch of Lab to Market Catalogue 2nd edition featuring 111 innovative products and technologies by Indian Start-ups.
- List of new initiatives launched by BIRAC:
 - a. Special Call for proposals from North Eastern Regions under Biotech Ignition Grant (BIG) (1st December, 2019-15th January, 2020)
 - b. BIRAC-TIEWInER (Women in Entrepreneurial Research) Award-3rd Edition (22nd November, 2019-15th January, 2020)
 - c. Special Edition of WinER (Women in Entrepreneurial Research) Award for North Eastern Region (1st December, 2019-15th January, 2020)
 - d. Grand Challenges India call on Creating Integrated Solutions for Primary Healthcare in India (Open call).
 - e. Grand Challenges India call on Addressing the determinants of low performance of Frontline Health Workers.
- Biotech Angels Network, which would bring together 50+ angel investors, HNIs, early-stage VCs, 10 corporate/family offices leading to 150 investments in 3 years in Biotech Start-ups.
- BIRAC launched 'India Accelerator Platform for Healthcare Innovations' along with United Nation's Health Innovation Exchange (UNHIE) and Social Alpha. This is conceived as a unique program, which aspires to unlock the potential of the Indian Medical Technologies and Digital Health innovations through successful adoption of 100 Indian innovations in the next five years.

Day 3 – 23rd November 2019

The third day commenced with session Academia-Startup policies which focussed on various policies, programmes, interventions that are required to boost Academia Start-ups innovation network. Stakeholders also discussed a strategic roadmap to enhance harmony amongst different Academia –Startup ecosystems across the globe. Additionally, the incubator connect session was designed to work towards an improved cooperation on innovation and technology

development between global innovators and Start-up ecosystems. Through this session Indian researchers, universities, and enterprises were able to team up with global partners to participate in tackling global challenges and learn best practices from the international incubators. A specialized session FIRST HUB resolved queries of Startups, Entrepreneurs, Researchers, Academicians, Incubation Centres, SMEs etc. related to Regulatory pathways and Regulation, Funding opportunities, Mentorship, Investment opportunities, Market access, Industry Academia partnerships, Intellectual Property.

An intensive interactive Boot Camp course was also launched with the focus on development of novel drugs, including recombinant proteins, monoclonal antibodies, fusion proteins, cell therapy, gene therapy and gene editing technologies. The third day of the conference witnessed the strides from Indian Medtech field highlighting the new regulatory regime, expansion/scale-up of certified testing facilities and roadmap for medical device industry in India. As the technological change in the industry requires continuous innovation, which derives from academic research through a transformation process that converts science-oriented knowledge to marketable products, the scientists in various fields witnessed transformation of academic knowledge into products was deliberated in this session. Subsequently the social innovations panel discussion highlighted the ideas, visions and models necessary to manage and scale-up innovative, sustainable businesses which are designed for social good and case studies represented by three successful Start-ups in story telling format; 'Workstation spectrometers' by Dr. R. P. Joshi, Founder & CEO RI Instruments & Innovation India, 'Advanced waste management systems' by Mr. Kabir Udeshi, Founder Director, Flycatcher Technologies and 'Portable labor monitoring device' by Mr. Arun Agarwal, Founder, Janitri.

The conference successfully concluded with a special address made by Ms Gautami Tadimalla, Founder, Life Again Foundation. Secretary DBT Dr. Renu Swarup, conveyed her gratitude to the participants, speakers, panellists, partners and organisers for putting together a wonderful event followed by closing remarks from the partners of Global Bio India, CII, ABLE, Make in India, BIRAC.



Glimpses of Day 2





Glimpses of Day 3



There is enormous potential in India for biotech industry, and it's important to host events like Global Bio-India 2019 that attracts leaders in the industry, academia and give them a platform to exchange ideas. The multi-pronged Global Bio-India 2019 was conducive in bringing together the academia, innovators, researchers, Start-ups, medium and large companies for facilitating the innovation ecosystem in India. This conference provided an interactive base for the academic research teams and successful Start-ups to discuss how to air ideas into markets. The event also saw exhibitors showcasing their products

and drawing attentions of potential investors & stakeholders. The Bio-partnering event was fruitful in helping the stakeholders and investors to connect.

Global Bio-India 2019 was a beacon of interdisciplinary cohesiveness of the Indian biotechnology sector. The knowledge that has been generated and shared needs to be disseminated throughout the biotech sector and stakeholders, academia, innovators, researchers, start-ups, need to continue working together to strive to strive towards the goal of \$150Bn bioeconomy through biosciences by 2025.

**BIRAC Announces the Launch of
Excellence Awards for Women Entrepreneurs**



**5 Awards of
INR 5 Lakhs**



Special Edition of
BIOTECH

WInER
Award

Women In Entrepreneurial Research

for **North East Region**

1st December 2019 - 15th January 2020

Apply online: www.birac.nic.in



Transforming Lives

Vigyan se Vikas

OncoDiscover® Liquid Biopsy Technology



Actorius Innovations and Research has developed a proprietary technology, for detection and enumeration of circulating tumor cells (CTC) in peripheral blood, called the OncoDiscover® Liquid Biopsy Technology. The platform consists of the OncoViu® Liquid Biopsy Kit, a patented bio functionalized magneto-polymeric-antibody system which is synthesized through series of chemical reactions.

OncoDiscover® Liquid Biopsy Technology

OncoDiscover® Liquid Biopsy Technology has been developed to detect and enumerate circulating tumor cells (CTC) in peripheral blood. It is a non-invasive, sensitive and specific method for the detection and enumeration of CTCs. The technology is based on the use of a proprietary magneto-polymeric-antibody system which is synthesized through series of chemical reactions. This system is used to detect and enumerate CTCs in peripheral blood. The technology is based on the use of a proprietary magneto-polymeric-antibody system which is synthesized through series of chemical reactions. This system is used to detect and enumerate CTCs in peripheral blood.

- Features**
- 100% SENSITIVE
 - 100% SPECIFIC
 - 100% ACCURATE
 - 100% REPRODUCIBLE
 - 100% STABLE
 - 100% PORTABLE
 - 100% EASY TO USE
 - 100% COST EFFECTIVE

FEATURES

- Provides highly versatile, sensitive and specific CTC Isolation technique.
- Provides a potent real-time monitoring system that will help in understanding the spread of cancer and the effectiveness of their therapy.
- Cost-effective and minimal invasive technology.

90% of cancer deaths are due to metastasis and early detection of cancer is imperative for improved overall survival. CTC detection as a diagnostic tool is an unmet need in India. OncoDiscover® Liquid Biopsy Technology allows regular monitoring of disease progression and an early indication for relapse. It received the 'Manufacturing for Sale' license from CDSCO.

SUPPORTED BY BIRAC

₹ 15000 excluding GST



www.actarius.co.in

Vigyan se Vikas

Presto Power Strip Ultra-Thin Energy Strip

Novel oral thin film platform for the delivery of Nutraceuticals, Pharmaceutical & Cosmeceuticals

Presto Power Strip gives a power boost of energy and stamina. Helpful to athletes, office goers and students.



- 480: Introductory Pack (8 strips)
- 2184: Starter Pack (56 strips)
- 4320: Charger pack (120 strips)
- 8640: Runner's Pack (240 strips)

Presto Power Strip is an ultra thin soluble oral strip containing caffeine enriched with Vit B6, Theobroma and Cocoa.

Launched by BonAyu

FEATURES

- Quick release with rapid onset of action in chocolate and orange flavors.
- Sugar free and less than 1 calorie

SUPPORTED BY BIRAC



www.bonayu.com

Ayushman Bharat: Aarogya Manthan

The National Health Authority organized a two-day event to mark the completion of one year of Ayushman Bharat scheme at Vigyan Bhawan, New Delhi during 30 Sep-01st Oct 2019. This scheme ensures better treatment to patients across the country. Ayushman Bharat was launched with the aim to give access to quality healthcare to poor and vulnerable Indians covering both Government and Private healthcare centers pan India.

The event was inaugurated by Dr Harsh Vardhan, Honorable Minister for Health and Family Welfare, Science & Technology and Ministry of Earth Sciences. Sri Ashwini K Chaubey, Minister of State for Health and Family Welfare, Dr. Vinod K Paul, Member (Health), NITI Aayog, Ms. Preeti Sudan, Secretary (HFW) and Shri Indu Bhushan, CEO, National Health Authority (NHA) along with senior officials from various States, representatives from Development Partners, State Health Authorities, private hospitals, health insurance companies and exhibitors from different agencies were also present.

The purpose of the Arogya Manthan was to provide a platform to meet for all the important stakeholders of PM-JAY to meet and discuss the challenges faced in the implementation of the scheme in the past year and to forge new understanding and pathways to improving implementation.

Dr Harsh Vardhan inaugurated the exhibition on the first day wherein BIRAC showcased two of its innovations viz-a-viz Neuro Touch and Poorti Kit. He interacted with the innovators and representatives from BIRAC and applauded them for their initiatives in the field of healthcare. Dr. Shirshendu Mukherjee, Mission Director, PMU-Grand Challenges India, Dr. P.K. Sarma, Head, Technical, Dr. Hafsa Ahmad, Consultant (Comms) and Ms. Ginny Bansal, Consultant (Comms) represented BIRAC. Dr Shirshendu Mukherjee deliberated upon the role of BIRAC in funding healthcare innovations at a panel discussion on Innovations by Start-ups at Day 1 of the event.

The valedictory session on 1st Oct 2019 was graced by the Prime Minister Sri Narendra Modi, where he launched a new mobile application for the Ayushman Bharat and interacted with a few beneficiaries of the scheme. He also visited the exhibition on PM-JAY which showcased the journey of the scheme over the past one year. The 'Ayushman Bharat Start-Up Grand Challenge' was launched by him and a commemorative stamp was also released on the occasion. This Grand Challenge is a collaboration between NHA, Start-Up India and BIRAC.

Under this Ayushman Bharat Start-Up Grand Challenge, Start-ups were invited to display cutting-edge technology to support the functioning of the National Health Authority (NHA). The Start-ups were asked to offer a solution for seven identified problems that the scheme



STARTUP GRAND CHALLENGE

Apply today on
<https://www.pmjay.gov.in/GC/>

Last date to apply
15th November 2019

national health authority | BIRAC | PM-JAY

Glimpses of Ayushman Bharat: Aarogya Manthan Event

is currently facing such as securing patients' database, ensuring the quality of care, maximizing beneficiary awareness, building health workforce capacity, reducing the cost of operations and addressing the wider challenges of fraud and abuse control. The last date to apply under this call was Nov 30th 2019.

Exhibition Cum Workshop on Technologies in Food Processing Developed by CSIR

ASSOCHAM with support from Ministry of Food Processing Industries and Council of Scientific and Industrial Research organized a one-day Exhibition Cum Workshop on Technologies in Food Processing-Developed by CSIR on November 13, 2019 in New Delhi. This Exhibition showcased the latest technology and the recent R&D efforts in the food sector, and display of new and innovative products. B2B meetings with the industry people and discussions on ongoing research in the food processing sector were the major highlights of this event.

The exhibition was inaugurated by Dr Harsh Vardhan, Honorable Minister for Health and Family Welfare, Science & Technology and Ministry of Earth Sciences. The inaugural session was presided over by Sri Rameswar Teli, Honorable Minister for State, Smt. Pushpa Subrahmanyam, Secretary MoFPI and Dr Shekhar C. Mande, Director General-CSIR and Mr Deepak Sood, Secretary General-ASSOCHAM.

BIRAC participated in this exhibition and showcased the products and technologies in the food sector coming out of its support. Dr Hafsa Ahmad and Ms. Ginny Bansal represented BIRAC in this event and



BIRAC showcases at Exhibition cum Workshop on Technologies in Food Processing

deliberated upon the role of BIRAC in fostering the innovation ecosystem across spectrums in the country. Some of the BIRAC supported innovations that were exhibited here included MushD+ (Oyster Mushrooms), Honeytose, Spirulina and Phycocyanin dietary supplements. Visitors showed great interest in BIRAC supported innovations and various schemes and programmes of BIRAC.

Third meeting of the Scientific Sub-Committee (SSC – NTBN)

The National Technical Board on Nutrition (NTBN) constituted by the Ministry of Women and Child Development, Government of India makes technical recommendations on policy relevant issues on Nutrition. A Scientific Sub-Committee has been constituted at the Secretariat of the NTBN established at BIRAC, which supports the various strategic programmes of NTBN. The PMU-BIRAC (Grand Challenges India) acts as primary fiduciary agency and is responsible for the execution and management of the secretariat. The secretariat supports the NTBN functioning by preparing the white papers or background notes through review and synthesis of published literature and presentation to the SSC of NTBN. The secretariat supports the coordination of meetings, call on relevant experts for discussions, priority area identification meetings.

Third meeting of SSC-NTBN was organized on December 9, 2019 at BIRAC with the agenda to finalize "Operational Guidelines for prevention of Malnutrition and Community – based Management of Severe Acute Malnutrition (C-SAM)", review of Comprehensive National Nutrition Survey (CNNS) data findings and identification of research priority areas in Public Health and Nutrition (especially related to product development and technology).



Third meeting of the Scientific Sub-Committee (SSC-NTBN)

With the National Nutrition Mission gaining traction within the country, research and innovation in nutrition will continue to remain an important investment for public health, in understanding nutritional requirements across age groups, funding innovations in delivering nutrition and many others.

2019 World Conference on Access to Medical Products - Achieving the SDGs 2030

The 2019 World Conference on Access to Medical Products-Achieving the SDGs 2030 was held in New Delhi during 19th to 21st Nov 2019. It was jointly organized by the Ministry of Health & Family Welfare (MoHFW) and the World Health Organization, in collaboration with the Indian Council of Medical Research (ICMR); Biotechnology Industry Research Assistance Council (BIRAC); and Translational Health Science and Technology Institute (THSTI). Achieving the sustainable development goals (SDGs 2030) agenda requires an enabling trade and legal regime for public health, with access to medical products, sustained dialogue and engagement with key stakeholders. This conference positioned the international and national agenda on access to medical products and provided a forum to promote dialogue on universal health coverage; regulation of medical products and access; and legal and trade landscape in the context of access to medical products.

BIRAC actively participated in this conference. Dr Shirshendu Mukherjee, Mission Director, Grand Challenges India deliberated upon 'Facilitating

Innovation Ecosystem through Grand Challenges India Initiative' in a session on 'Global Partnerships for Drug Discovery, Innovation and Technology Development: Scaling up Adaptive Technology Solutions for Medical Products' on Day 2 of the Conference. Dr Hafsa Ahmad, Consultant (Comm) gave a poster presentation on 'A holistic approach in R&D funding to facilitate innovative healthcare solutions' in a session on 'Funding and Investments in Medical Products R&D: Role of Data Tracking Initiatives'. Sonia Gandhi, Senior Manager (Investment) coordinated a roundtable session on "Updates on Access to Medical Products and Progress from 2nd World Conference on Access to Medical Products-Achieving the SDGs 2030- State Health Ministers, Union Government Secretaries and Principal Secretaries from States" which was chaired by Dr VK Paul, Member, NITI Aayog, Government of India. The panel deliberated on various challenges faced by the state government and possible solutions for integrating the innovative technologies with state run programs.



BIRAC Awards

BIRAC received the "IP Excellence in India 2019" award during Questel IP Executive Summit 2019 at Gurgaon.



IP Excellence Award 2019



Biotechnology Industry Research Assistance Council

(A Govt. of India Enterprise)



Special Call

BIG

**Biotechnology
Ignition
Grant**



**10 Awards of
INR 25 Lakhs**



Focussed on NORTH EAST REGION

**Innovative Biotech Startup ideas for
Implementation in NER**

BIRAC's BIG NER Call Partner



APPLY BY 15TH JANUARY, 2020 (5:30PM)

APPLY ONLINE:
www.birac.nic.in

For additional info, please contact:
Ms. Taranjeet Kaur
biracbig.dbt@nic.in | sped01.birac@nic.in



HR & Admin Activities

Hindi Maah

This year BIRAC observed Hindi Maah from 1st September 2019 to 30th September 2019 to promote and propagate the use of our National language. During this period, competitions like Hindi Numbers, Hindi Translation and Hindi Muhaware were organized in BIRAC, where all employees participated with great enthusiasm.



Glimpses of activities during Hindi Maah

Swachhata Hi Seva - 2019 Campaign

On account of Swachhata Hi Seva - 2019 Campaign, BIRAC carried out various activities. This year's campaign was focused on Plastic Waste Awareness and Management.

During the campaign employees and housekeeping Staff/Office Attendants were sensitized regarding segregation of waste which leads to higher recovery of recyclables hence saving the limited natural resources, landfill space and also enables a hygienic environment for handling of waste by waste workers. Employees were also briefed about the hazardous effects of single-use plastic on the environment and the health of animals and aquatic life.

Also, an e-forum was made live for employees for putting up innovative ideas on the "Alternative choices for single use plastic". All the ideas received have been shared among employees to create awareness and have alternative choices for single-use plastic in houses, office and work spaces.

BIRAC has already discarded the single-use plastic bottles in meetings and replaced them with reusable Stainless-Steel Water Bottles which are eco-friendly and maintains water's original integrity.



Swachhata Hi Seva - 2019 Campaign

Vigilance Awareness Week and National Unity Day

Vigilance Awareness week was observed in BIRAC from 28th October to 2nd November, 2019. The observance of the Vigilance Awareness Week commenced with the Integrity Pledge taken by all employees of BIRAC. BIRAC also celebrated Rashtriya Ekta Diwas by administering a pledge as part of Birth Anniversary Celebration of Sardar Vallabhbhai Patel on 31st October 2019.



Constitution day

Constitution day was celebrated in BIRAC on 26th November 2019. The event commenced by reading out The Preamble of Indian Constitution which records the aims and aspirations of the people of India and reflects the basic spirit of the Constitution.



Glimpses of the Vigilance Awareness Week and National Unity Day



Glimpses of the Preamble reading on Constitution Day



Biotechnology Industry Research Assistance Council (BIRAC) is a Section 8, Public Sector Enterprise, set up by Department of Biotechnology (DBT), Government of India as an Interface Agency to strengthen and empower the emerging Biotech enterprise to undertake strategic research and innovation, addressing nationally relevant product development needs.

BIRAC-TiE announce the launch of



BIOTECH
WINER
Award
Women In Entrepreneurial Research

WHAT WE PROVIDE

- 10 selected women entrepreneurs will receive seed money of INR 5 lakhs each
- Access to expert mentor network of TiE & BIRAC
- One year membership of TiE Delhi NCR
- Showcase opportunity at TiE
- Access to TiE Startup Accelerator Programme
- Opportunity to go through an Intensive Accelerator Programme

HOW TO APPLY

To submit your application, please click on the link below.

<https://forms.gle/95EYomArjJqupCRE7>

WHO CAN APPLY

A woman entrepreneur in the area of Life Sciences/ biotech/ pharma with an exciting entrepreneurial idea.

The woman entrepreneur should be:

- An Indian citizen (holding Indian passport)
- One of the promoters of the Indian company* working on the above idea and in existence for less than 10 years as on date of closure of call
- The Principal Investigator of the project/idea being pitched for

*A company is considered as Indian company if minimum 51% of the capital in it is beneficially owned by resident Indian citizens and/or Indian Companies which are ultimately owned and controlled by resident Indian citizens.

3 FINAL WINNERS (POST ACCELERATOR PROGRAMME) WILL BE AWARDED

INR 25 LAKHS EACH

IMPORTANT DATES

Submission Start | Submission Close
22nd Nov, 2019 | 15th Jan, 2020

For any Queries, please contact:

Upasana@tienewdelhi.org | sped01@birac.nic.in



Grand Challenges India



Grand Challenges Annual Meeting 2019

The delegation led by Secretary DBT attended Annual Grand Challenges meeting held in United Nations Conference Centre & African Union, Addis Ababa from 28th–30th October, 2019 which was co-hosted by the African Union, Ethiopia's Ministry of Health, Grand Challenges Canada, the United States Agency for international Development and the Bill & Melinda Gates Foundation.

India is a partner of Grand Challenges and has been closely working with a large number of participating countries.

DBT and GCI-BIRAC participated in Grand Challenges Annual meeting to forge new collaborations with African and other partner countries to address the Grand Challenges in Public Health.

The meeting included 11 content area scientific tracks, with sessions running in parallel, and a series of complementary plenary sessions and side meetings.

The Grand Challenges Annual Meeting 2019 was a convening of over 1000 key leaders from across the global community to share best practices, encourage collaboration and seek solutions for common challenges. The meeting had representation from Global Grand Challenges (GC) Network Partners; Government units/councils; prominent academic institutes; research organisations; and development innovation organization that are corroborating breakthrough research and innovation.

Dr Renu Swarup, Secretary and Dr A. Vamsi Krishna, Scientist E, Department of Biotechnology, Govt. of India and Dr Shirshendu Mukherjee, Mission Director, GCI, Dr. Chandra Madhavi, Dr Arshi Mehboob attended the appropriate meetings.

Day 1- 28th Oct, 2019

Women Leaders in Global Health Dinner:

The Women Leaders in Global Health Dinner took place on the sidelines of the Annual Meeting on Monday, 28th October from 7:00-9:30pm in the Delegates Lounge at the United Nations Conference Centre (UNCC). The dinner was jointly hosted by Grand Challenges Annual Meeting organizers and the Women Leaders in Global Health Initiative to provide a platform to discuss how to empower women leaders in an effort to ensure that global health R&D focuses on the needs of women and children.

The dinner began with brief speaking remarks from Kedest Testaforfgis, BMGF who introduced the lead moderator, Dr Anita Zaidi, Director of Vaccine Development, Surveillance, and Enteric and Diarrheal Diseases, Bill & Melinda Gates Foundation and the panelists.

Trevor Mundel, President, Global Health, Bill & Melinda Gates Foundation in his address began by thanking the initiative organizers for this important endeavour and reflected on the journey of struggle that women face across sectors. He concluded with an expression of his confidence that the leadership and the work of this unique initiative will help to make considerable progress in global health.

The panel discussion focused meaningful conversations about strategies they have used to overcome obstacles in their careers, opportunities they see for women leaders in global health, and ways in which male leaders in global health continue to be allies for women and girls.

Day 2- 29th Oct, 2019

Plenary talk on "Inclusive Innovation for Better Lives" was given by Sahle-Work Zewde, President of the Federal Democratic Republic of Ethiopia. She strongly advocated to build a deeper understanding of gender equality issues in the country by addressing systemic gender biases and creating more opportunities for women and girls to prosper. She reinforced the importance of ensuring investments around human capital that benefit women and girls and help to reduce inequality in Ethiopia and committed that her government will continue efforts that prioritize women and children for national development.

There were three spotlights talks which shared Africa networks, innovations programmes and their experiences in managing research grants and activities both from the recipient's and funder's side. There were several side meetings different working groups to discuss and plan the ongoing and future activities.

ki Roundtable (Health Data Sciences Research in Africa, Brazil and India):

The roundtable session discussed the value of using data science approaches to advance scientific questions in the maternal, newborn and child health space in diverse geographical settings. Speakers shared their current progress of programs, including status, scope, goals and goal

expectations. Followed by this initial overview there was a conversation about the potential synergies and collaborations across regions that may help accelerate research and better target health policies.

Dr. Mukherjee spoke about the ten teams who intend to synthesize the existing datasets by analyzing Indian data pertaining to maternal, child health and nutrition to identify the right questions that are important for India, collecting the available data, packaging it for policymakers and identifying research gaps to direct future research.

He also said that GCI looks forward to being part of the global network, working with countries who have similar challenges and issues will help answer the right questions and will provide business, technical and ancillary support to the policymakers in the network. The countries will learn from each other experiences and calibrate their researches in view of the same.

Day 3-30th Oct, 2019

Closing Conversation - Panel Discussion

Trevor Mundel mentioned about the tradition of transferring Grand Challenges meeting from one region to another so from Africa to India and setting a platform to talk about global South collaboration. He spoke about "how the global South has got tremendous lessons to teach the world around many subjects including manufacturing in many of its incarnations".

Dr. Swarup, spoke about India's most exciting journey on vaccine development, manufacture and its delivery. She told that this is a very unique journey and it brings forth a number of key issues which is learning not just for other countries but within India. Dr. Swarup informed that one key principle to take forward innovations further is the principle of public-private development and scale-up helped to create a very strong base in the public-private partnership. She also mentioned the success story of rotavirus vaccine, which was developed in partnership with the Gates Foundation, NIH and many others and within India and the industry, took it forward.

Dr. Renu Swarup in her plenary talk pitched in for a strong South to South collaboration in the field of Public Health Nutrition, Maternal and Child Health with the African Union.

Dr. Swarup also announced and invited the Grand Challenges community to GCAM 2020 to be held in New Delhi in October 2020 and a side session totally focused on "Africa" could be organized during the GCAM 2020.



Grand Challenges Annual Meeting 2019, Addis Ababa, Ethiopia from 28th - 30th Oct 2019

International Knowledge Millennium Conference 2019

The 13th edition of IKP knowledge Park annual conference, International Knowledge Millennium Conference (IKMC) 2019 was held on 8th and 9th November 2019 at Hyderabad. The event also celebrated the 20th anniversary of the establishment of IKP Knowledge Park. The theme for this year's conference was "Planet and We: Our Connected Future". The conference commenced with the inauguration of Agri-Innovation Translation Centre at the Sustainability Innovation Centre (SINC) at the Genome Valley, Hyderabad. The attendees visited IKP's facilities at Genome valley that was a blend of independent translational and wet laboratories. Dr. Renu Swarup, Secretary, Department of Biotechnology, Government of India (GoI) and Chairperson BIRAC in her Inaugural remarks congratulated IKP for successfully completing its 20 years. She enumerated the notable contribution of IKP in fostering innovation and entrepreneurship ecosystem in the country. She pointed out that IKP through support of innovation scouting organisations such as Biotechnology Industry Research Assistance Council (BIRAC); Department of Biotechnology (DBT),

Ministry of Science and Technology (MoST), Government of India (GoI); and Bill & Melinda Gates Foundation (BMGF) should revamp/ strengthen their innovation architecture further. The need to define a vision for the next 20 years i.e. IKP 2.0 was highlighted.

The plenary session on 9th November 2019 witnessed the keynote address by Dr. Bala S. Manian, Serial Entrepreneur, Bay Area, California USA. The lecture enumerated the importance of emerging opportunities in personalized/ engineered gene or cell gene therapy for the treatment of spinal muscular atrophy and lymphoma. Dr. D. Balasubramanian, Distinguished Scientist and Former Director, Prof Brien Holden Eye Research Institute in his address emphasized the need to mitigate climate change. The efforts needed by the country to deal with climate change and its implications on health were discussed.

The conference also showcased innovative products display by the start-ups in the spheres of devices, diagnostics, healthcare, pharma, agriculture, Agritech/Agribiotech, industrial biotech, cleantech, environment, robotics, etc. The Jury members selected the most promising innovation under each theme on the basis of short interaction with the Innovators team.

Besides several parallel tracks and roundtables, the conference also conducted several workshops and mentoring session for the Start-ups.



International Knowledge Millennium Conference 2019

Women Leaders in Global Health Conference

The annual Women Leaders in Global Health (WLGH) conference brings together established and emerging leaders from across the global and national health community to advance gender equity in health leadership. As part of a larger initiative hosted by Stanford University, the annual conference builds momentum, connection and ownership across societal influencers, institutions and change-agents.

The first conference was held at Stanford University in 2017, followed by the London School of Hygiene & Tropical Medicine in 2018. This year's conference was hosted by the University of Global Health Equity in Kigali, Rwanda in 2019.

The conference was hosted across 2 days, 9th-10th November at the Kigali Convention Centre, Kigali Rwanda. Anjana Seshadri from Grand Challenges India team at BIRAC was nominated to attend the conference. This third WLGH conference was a regional conference that focused on the issues and solutions faced by African woman leaders and contributors to the health agenda.

The conference saw 1053 attendees, 119 speakers and 81 countries represented. The conference also sponsored 166 scholarship winners and 126 participants with funded tickets. The conference saw speakers from 33 countries across the globe.

The Opening Ceremony had keynote remarks by Dr. Paul Farmer, Her Royal Highness Princess Dina Mired and Her Excellency Mrs. Jeannette Kagame, First Lady of the Republic of Rwanda.

The speakers of the conference were predominantly women, and mostly from African nations. There was also participation from male attendees and speakers. Every panel in the agenda had a woman moderator and at least 70% of the panel were women. The speakers were luminaries in the field of health care research, service and delivery among others.

The agenda was a mix of plenary and parallel sessions with different thematic discussions on topics such as gender discriminations and gaps in academic societies and professional associations, family and career balance, innovation for health, role of art and artists in global health and women's leadership, gender based violence and workplace harassment, discussions with community health workers, how women can boost research, gender equity in clinical service delivery.

There were closed sessions on both days, the first a session on skills on successful research grant applications for young female researchers and the second, a mentorship breakfast for a select pool of participants. There were also poster and oral presentations from young professionals and researchers.

At the closing ceremony, it was announced on behalf of Secretary DBT, that the next WLGH conference would be held in India which was very well received by the audience and the speakers.

The conference was very well programmed and provided women the opportunity to use their voice, share their experiences, their challenges and how they overcame them, to inspire and motivate the next generation of women leaders in global health. The tenor of the conference was one of positivity and collaborative, with speakers and participants providing positive contributions to the discussions and with a spirit of learning from one another.



Women Leaders in Global Health Conference

Grand Challenges India released its second publication at Global Bio-India 2019



Grand Challenges India Second publication – "From the Canvas – Improving Public Health & Beyond" was released at Global Bio- India Summit 2019.

National Biopharma Mission



Workshop on Electromagnetic Interference and Compatibility (EMI/EMC) Techniques

A one-week QIP Sponsored Course on EMI/EMC Techniques was organized by Prof. M. Jaleel Akhtar at IIT-Kanpur during 9th to 13th Oct 2019. This workshop was mainly designed for teachers and students from engineering colleges as well as for professionals from R&D institutes and industry working in the field of RF, microwaves and high frequency digital electronics. This course provided the participants an insight into various techniques and procedures required for the design of electronic systems, which are in compliance with the EMC guidelines. A number of faculty members from IIT Kanpur experts in various

domains of EMI/EMC and Electrical Testing delivered lectures during the workshop. A live demonstration of experimental setups used for EMI/EMC applications was also given by the Industry.

On fourth day of this week long workshop (12th October), the special event entitled "Electromagnetic Compatibility Techniques and Standards for Industrial and Biomedical Applications" was organized. This event was co-sponsored by the EMI/EMC and Electrical Safety Testing Facility, IIT Kanpur, that has been established with the help of funding from the National Biopharma Mission. The prime objective of this special workshop was to create awareness about the importance of EMI/EMC issue among the industry professionals, the product designers as well as the academic community especially those working on development of medical products. As part of this workshop, lectures on the EMI/EMC standards for medical instruments and the Electrostatic Discharge (ESD) were organized. The participants were exposed to the CST electromagnetic simulation environment, and Hands-on Training on EMI/EMC simulation tools using the CST Studio suite was provided. A total of 59 participants were trained in this workshop including 18 female participants.



Workshop on Electromagnetic Interference and Compatibility (EMI/EMC) Techniques at IIT-Delhi

Workshop on Design for Manufacturing

A one-day workshop tailored for Med-tech Start-ups with design expert Dr Suresh Nair from Design Alpha was organized on 25th Oct 2019 at C-CAMP, Bangalore with support from the National Biopharma Mission. The workshop focused on the intricacies of design considerations and the timeline of considerations. The focus was on designing with future scale up and final product in mind so as to, not have to redo the validation process. The session consisted of a seminar by Dr. Suresh Nair and an introduction to the mentoring and platform technologies support offered by C-CAMP, followed by one-on-one interaction sessions with the participating companies which were interested in discussing their design. About 18 participants were trained including 3 female participants.



Workshop on Electromagnetic Interference and Compatibility (EMI/EMC) Techniques at IIT-Delhi

Advanced Training on Technology Transfer

Under the aegis of the National Biopharma Mission, BIRAC has been engaged in enhancing technology transfer capacity in the country. Advancing science to markets is critical for realizing the socio-economic value of applied research investments in the country. With this goal, BIRAC in collaboration with STEM, the national association of technology transfer professionals and Sathguru Management Consultants previously held two national training programs for technology transfer professionals in the country. The current advanced training held at Hyderabad during 4th-6th Dec 2019 builds on the comprehensive 5 days training held earlier in September 2019.

Together, these programs have converged a cohort of professionals from across public and private sector institutions in the country in the effort to strengthen core foundation of the applied and multi-disciplinary skill needed for accelerating technology commercialization. Selected cohort for advanced training also attended STEM Annual Summit held at Hyderabad from 6th-7th Dec, 2019.

Dr. Abhijit Banerjee, Former Senior Director Business Development Oregon Health & Science University (OHSU), Dr. John A Fraser, Founder, Burnside Development, LLC, Mr K Vijayraghavan Kanan, Founder and Chairman of Sathguru Management Consultants and Ms Pushpa Vijayraghavan, Director & Practice Lead Healthcare Advisory, Sathguru Management Consultants were the lead trainers for the program besides other experts from industry. Participants were given insights on negotiation, IP valuation, intricate elements of license agreement and research contracts, conflict of interest and measuring impact and communicating value of Tech Transfer Offices



Advanced Training on Technology Transfer at Hyderabad, 4th-6th Dec 2019

CBT Course series on Biomufacturing

National Biopharma Mission sponsored a training course on various aspects of biomufacturing at Centre of Excellence, Biopharmaceutical Technology, Indian Institute of Technology Delhi during 10-12th December 2019. Lectures were organized on best practices and cutting-edge technologies on a diverse set of topics by subject matter experts from across the globe. Specialized courses such as regulatory pathways for drug approval, design of experiments, rapid biological development, data analytics and mechanistic modelling of biopharmaceutical unit operation and analytical technologies for biologics characterization was organized for the audience. Total of 57 Participants (28 Male, 29 Female) from industry, academia and other Government bodies were sponsored through National Biopharma Mission to attend the training program for skill enhancement.



CBT Course Series on Biomufacturing at IIT-Delhi



Biotechnology Industry Research Assistance Council

(A Govt. of India Enterprise)



INNOVATIVE IDEA HAVING POTENTIAL FOR COMMERCIALIZATION

More than 500 ideas already supported



INNOVATIONS under Healthcare, Lifescience, Diagnostics, Medical Devices, Drugs, Vaccines, Drug Formulations and Delivery Systems, Industrial Biotechnology, Agriculture, Secondary Agriculture, Waste Management, Sanitation, Clean Energy and related areas.

Eligible entities include

- **Individual Entrepreneur** with Graduate degree in any discipline, Research Scholar, Scientist, Faculty.
- **Start-up** having a registered company / LLP incorporated on/after 1st January, 2015

SEEK MENTORING FROM BIRAC'S BIG PARTNERS



www.ccomp.yes.in



www.fitt-itiitd.org



www.iitb.ac.in



www.kiritincubator.in



www.venturecenter.co.in



www.iitk.ac.in/slic/id



www.aicte.naarm.org.in



www.sineitb.org/sine/home

Apply Online:

<http://www.birac.nic.in>

APPLY BEFORE

15th FEBRUARY, 2020 (5:30 PM)

Refer Guidelines & FAQs

<http://www.birac.nic.in>

For additional info, please contact: Ms. Taranjeet Kaur • E-mail: biracbig.dbt@nic.in, sped01.birac@nic.in

BIRAC IMPACT



Aligning Partnerships for National & Global Impact



Partnerships For Networks, Platforms & Market Access

WISH - BIRAC - Lords Education and Health Society (LEHS), Through its WISH Initiative: Scaling Innovations through Testing Beds

BIRAC - Business Finland: Enhancing Competitiveness

BIRAC - TISS - (Tata Institute of Social Sciences): Mentoring innovators and Assessing Impact

BIRAC - ICMR (Indian Council of Medical Research):

BIRAC AcE Fund Partners: Funding Oxygen for the Next Level

BIRAC - TIE (The Indus Entrepreneurs): Platform for Global Networking

BioCubaFarma: Transfer of technologies and commercialization of innovative healthcare products

BIRAC - ALEAP, BIRAC - TIE: Promote Women Entrepreneurship

For further information please contact:

Biotechnology Industry Research Assistance Council (BIRAC)

1st Floor, MTNL Building, 9, CGO Complex, Lodhi Road, New Delhi-110003, INDIA

Tel: + 91-11-24389600 | Fax: + 91-11-24389611

E-mail: birac.dbt@nic.in | Web: www.birac.nic.in

Follow us on: BIRAC_2012