



Biotechnology | Business and Beyond



No. 4 Vol. 8



birac

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Welcome

We are very pleased to announce the joining of new members in our BIRAC family i.e., Dr. Alka Sharma, Senior Advisor, DBT as a MD BIRAC & Dr. Rajesh S. Gokhale, Secretary DBT as a Chairperson BIRAC.

Dr. Rajesh S. Gokhale, an esteemed scientist of the National Institute of Immunology (NII) New Delhi, has been appointed as the Secretary of the Department of Biotechnology (DBT), Government of India, Chairperson, BIRAC effective November 1st, 2021. His contribution to the scientific world has got him recognition not only in India but also globally. Dr. Gokhale is one of the world leaders in tuberculosis research and is popularly known for his studies on the metabolic diversity of pathogens. He is accredited with the discovery of a family of Long-chain Fatty acyl-AMP ligases (FAAL) and his studies assisted in the elucidation of biochemical crosstalk between fatty acid synthases and polyketide synthases in *Mycobacterium tuberculosis*. Dr. Gokhale has been a member of many professional and academic bodies and societies. Dr. Gokhale has also made critical contributions in understanding the interplay between metabolic reprogramming and immunity autoimmune skin disorder Vitiligo. Dr. Gokhale is a sports enthusiast and strongly believes that sports are a great leveler and thus crucial to maintain balance in life.

Dr. Alka Sharma, Senior Advisor in the Department of Biotechnology (DBT), Ministry of Science & Technology, Government of India, has been appointed as MD, BIRAC effective October 10th, 2021. Dr. Alka has made significant contributions in med-tech innovation with national and international partnerships; early and late translational research on various domain-specific areas of biotechnology such as vaccine research & development; diagnostics; stem cells and regenerative medicine; biomedical engineering; bio-design; setting up bio clusters across the country for innovation-driven research, technology, and product development. She has been instrumental in promoting and supporting public-private partnerships across the country and for the commercialization of indigenous and affordable technologies for a large number of patients in urban/rural settings. Her efforts have resulted in the creation of several start-ups; the development of functional biomedical device prototypes; the transfer of technologies; the creation of a pool of med-tech innovators in the country. She has several international and national patents to her credit and also published research papers and articles in reputed international and national Journals. She received the “CSIR Technology Award for Innovation” for her work.

We are very confident that with the leadership of Dr. Rajesh S. Gokhale and Dr. Alka Sharma, we will continue to deliver great value, support, and innovation. Under the guidance of these esteemed personalities, we envision a great future for BIRAC.



Leader's Message

Shri Rajesh Gokhale

Secretary, DBT & Chairperson, BIRAC

Having been a researcher, entrepreneur and now science administrator, joining the DBT and BIRAC family has been an exciting time for me personally.

The last three years have brought to the fore, the importance of strong basic science skills and capacities in our country, which then provide the foundation to translational science. The Covid-19 vaccines story in around the world and in India stands testament to this. The scientific, industrial and government rallied together, faced with a common threat, and worked tirelessly to provide for everyone.

The biotech industry has had an impressive growth trajectory in the last few decades. The Government of India through the various departments and agencies, such as the DBT and BIRAC, has provided support through various mechanisms to start-ups, researchers, and entrepreneurs and have worked consistently to strengthen the country's innovation ecosystem. BIRAC has been able to nurture a culture of biotech entrepreneurship in the country, creating common access infrastructure, and building 60 world class BioNEST Incubators who are serving 1500+ physical incubatees among others. BIRAC is promoting product/technology development by Indian startups through various partnership programs like Grand Challenges India, National Biopharma Mission, WISH or as innovation awards like TiE winner, and through various funding schemes such as BIG, BIPP, SBIRI, PACE, SPARSH etc.

To accelerate the development and production of indigenous COVID vaccines, BIRAC has been identified by the Department of Biotechnology (DBT), to effectively implement the Mission COVID Suraksha program which focuses on consolidating and streamlining the available resources for accelerated vaccine development at the earliest with a focus on creating an AtmaNirbharBharat.

As the nature of the pandemic hopefully changes for the better, and society and business respond by returning to normal, it remains the responsibility of the scientific community to take lessons from the last 3 years, the good as well as the bad, and be prepared for the next. To do this, we have to consolidate our resources and activities, and make the investments we need to in our people and our institutions. We also need to remember that science needs to serve all of society and that many challenges that were there before the pandemic, are still there today and we cannot forget those.

A lot of good has been done in the last several years, and we need to continue this trajectory in the future. As we move forward into 2022, we have much to look forward to, with new opportunities for growth to serve the nation.

We at BIRAC look forward to working with all our experts, entrepreneurs, researchers and partners to realize the potential that biotechnology has for our nation.



Chief Editor's Take

Dr. Alka Sharma

Senior Advisor, DBT & Managing Director-BIRAC

It is a privilege for me to have the opportunity to be a part of the BIRAC family and to work as an enabler of the Biotech Entrepreneurial ecosystem for leveraging its strength and capacity to bring in transformational change not just for the country but for the rest of the world.

Biotechnology holds great potential to become the industry of the future. BIRAC has taken a lead by showcasing India's potential in order to build out an actionable roadmap to bring India's biotech sector on the global map. DBT-BIRAC has provided an enabling environment to the Indian Biotechnology industry by promoting Research and Development and improving capacity building across the country. Entrepreneurial ecosystem is being converge at a rapid pace which is the larger investment in the ecosystem enlargement. DBT-BIRAC has taken several initiatives that have been developed and aligned to provide opportunities to innovation led entrepreneurship ideas.

BIRAC is supporting its innovators, Startups, SMEs, and Industries to build competencies in producing quality products in a cost-competitive manner that can compete globally. The focus is on helping our startups which have been seeded by BIRAC to successfully grow and become established enterprises. BIRAC's alignment with different national mission programs such as Make in India, Startup India, etc. is also helping in the development of indigenous technologies addressing the unmet needs of the country. Events like Global Bio India 2019 have brought new opportunities for the Indian Biotech Startup ecosystem to the global community and opened up avenues to build partnerships and connect points to several platforms and networks.

BIRAC has been very helpful in facing major societal problems. Our effort is to strengthen the biotech ecosystem and there are many opportunities ahead of us to nurture the innovative ecosystem effectively.

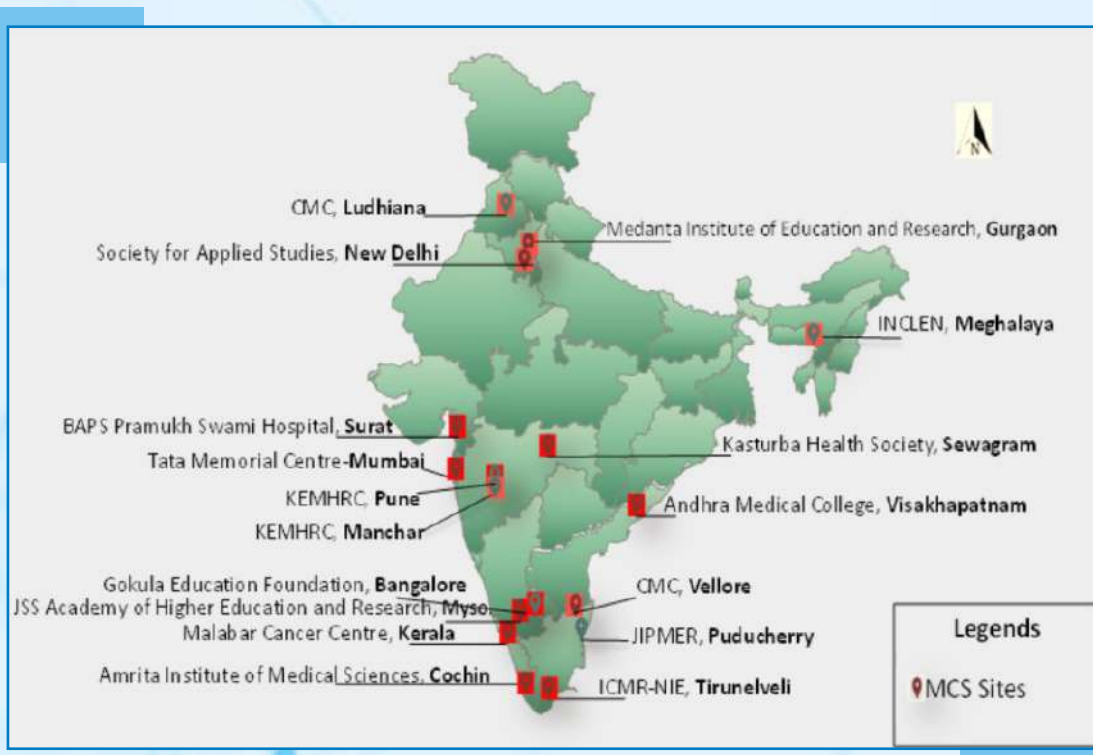
MISSION COVID SURAKSHA

Enhancing capacity to conduct clinical trials for COVID-19 vaccine candidates

Monitoring Site Visit

There are few vaccine candidates already in human clinical trials in India and several promising candidates in various stages of development. To ensure timely development of these multiple COVID-19 vaccine candidates, it is essential that sufficient trial capacity is available to coincide with vaccine readiness for testing. Over the next year, large-scale efficacy trial capacity would be required for candidates in early to late clinical stages towards which community and hospital-based sites would need to be established. The Indian COVID-19 Vaccine Development Mission' Mission Covid Suraksha was launched under the AtmaNirbhar Bharat 3.0 package, for the development of a safe, efficacious and affordable vaccine for COVID-19.

As part of this Mission, with the aim to bolster the existing trial capacity to meet the COVID-19 vaccine trial demand, 19 institutes are supported by BIRAC to ensure availability and access to Good Clinical Practice compliant clinical trial sites to vaccine developers. The trial sites will be both for supporting hospital-based sites for performing early-stage clinical trials and large-scale Phase III clinical trials through access to community based healthy population.

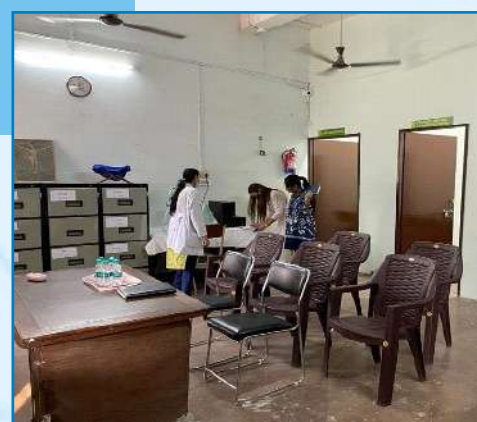


With the joint efforts of Mission Implementation Unit (MIU) – BIRAC and Clinical Development Services Agency (CDSA), these sites are being monitored (on-site and/ or remotely) with an objective to ensure the sites are ready to participate in COVID vaccine trials in Indian population. These Good Clinical Practice (GCP) compliant sites have access to more than 2000 interested healthy volunteers willing to participate in the trials offered by vaccine manufacturers/ Sponsors/ CROs.



CDSA had conducted monitoring site visit to the following sites from August till December 2021;

1. Medanta Hospital(Onsite) -19 Aug 2021
2. CMC Ludhiana(Onsite)- 7-8 Oct 2021
3. KEM Manchar& Pune(Onsite)-11 Oct 2021
4. Symbiosis International University,Pune(Onsite)-12 Oct 2021
5. Centre for Health Research and Development-Society for Applied Studies,Delhi (Onsite)– 20 Oct 2021
6. Tata Memorial Centre, Mumbai(Remote)- 13 Dec 2021



Currently, in India, majority of the sites are being involved for conduct of Phase 1/2/3 of new COVID vaccines and booster dose trials under this mission. As a future scope, these sites may be offered to continue collect more relevant data and evaluate real-world effectiveness to assess and confirm protection against the new variant Omicron and inform the most effective path forward for future variants.

Bengaluru Tech Summit 2021 (BTS 2021)

Driving the Next

24th Edition of **Bengaluru Tech Summit 2021** themed “Driving the Next” was held on 17th to 19th November 2021. Bengaluru is one of the mature biotech clusters in the Country. This is the Annual Tech Summit representing sectors like BioTech, FinTech, EdTech, ITetc. It was jointly organised by Karnataka government’s Department of Electronics, Information Technology, Biotechnology and Science & Technology and Co-Hosted by STPI.



The event was inaugurated by Hon'ble Vice President Venkaiah Naidu, in the presence of Hon'ble Prime Minister of Australia - H.E Mr. Scott Morrison, Hon'ble Prime Minister of Israel - Naftali Bennett. The inauguration function was presided by Hon'ble Chief Minister of Karnataka - Basavaraj Bommai and Hon'ble Governor of Karnataka - Thaawarchand Gehlot, Dr. C. N. Ashwath Narayan, Minister of Science and Technology, Higher Education & IT, BT, Skill Development and Entrepreneurship & Livelihood of Karnataka, Hon'ble Minister of Railways, Communications and Electronics & IT - Ashwini Vaishnaw, was a guest of honor.

BIRAC actively participated in the event. Dr RenuSwarup, Former Secretary DBT & Chairman BIRAC was a distinguished speaker of the Day 3 session on “Highlights of Latest regulatory trends in food Safety, health, biotechnology sectors”. The panel deliberated upon Regulatory trend and challenges faced by the food Safety, health and biotechnology ecosystem. Panel deliberated on the Need of focus on Synthetic, computational biology, big data for precision medicine, quantum biology, Investment for Biotech Sector. Co-panelists included Dr. Kamaljit S Bawa, Distinguished Professor of Biology Founder-President, University of Massachusetts Boston (ATREE), Dr. Balasubramanya S, Senior Consultant - Biotechnology "Karnataka Innovation & Technology Society, Dept. of Electronics, IT, BT and S&T Government of Karnataka" Moderator - Narayanan Suresh, COO, ABLE.

**BIOTECH
TRACK**

Highlights of latest Regulatory trends in Food safety, Health, Biotechnology sectors



Dr. Kamaljit S. Bawa
Distinguished Professor of Biology,
Founder-President, University of Massachusetts
Boston; Ashoka Trust for Research in Ecology
and the Environment (ATREE)



Dr. Renu Swarup
Former Secretary to Government of India,
Department of Biotechnology,
Ministry of Science & Technology



Dr. Balasubramanya S.
Senior Consultant - Biotechnology
Karnataka Innovation & Technology Society
Dept. of Electronics, IT, Bt and S&T
Government of Karnataka



GOVERNMENT OF KARNATAKA
Department of Electronics, IT, Bt and S&T



BTS2021
BENGALURU TECH SUMMIT
17th - 19th November 2021

DRIVING THE NEXT

The session on “Govt: Funding, Grants and schemes for entrepreneurs” was also held on Day 2. Panelist reflected on some of the Initiatives undertaken by Govt of Karnataka to propel startup and Innovation ecosystem. Panelist were Ms. Meena Nagaraj (Director Electronics, Information Technology and Biotechnology at Govt of Karnataka), Ms. Gunjan Krishna (Commissioner, Department of Industries and Commerce, Government of Karnataka), Shruthi Singh, Joint Secretary, DPIIT

The session on “India Innovation Alliance” on Day 2 was deliberated by BIRAC’s BioNEST Incubator CCAMP, SINE, Venture Centre, IIT Kanpur, KIIT-TBI, and NaganandDoraswamy Managing Partner & Founder at Ideaspriing Capital, Ideaspriing Capital.

The three-day event saw participation from 30+ countries; around 300 speakers and 20000 + attendees participated in 4 Parallel Conference Tracks on IT, BT, GIA and Start-Up. More than 146 start-ups showcased innovation in IT, electronics, IoT, healthcare, Medtech, Agritech, Fintech, Edtech, and mobility sectors at the BTS 2021.

BIRAC also received interest in its exhibition booth that showcased BIRAC’s schemes& programs, supported technologies, innovations and Partners.



BIOTECH FIRST HUB - Three years of facilitation and impact

FIRST HUB, established in August 2018 as per the recommendations of Niti Aayog, has successfully completed three years of its operations. FIRST HUB is a platform for Start-ups, Entrepreneurs, Researchers, Academicians, Incubation Centres, SMEs etc for interacting with the government representatives of CDSCO, NIB, ICMR, BIS, KIHT, GeM, DBT and BIRAC.

Dr. Swarup, Secretary-DBT and Chairman BIRAC congratulated members of the participating organisations on the success and highlighted the need of expanding the program to other organisations. On this occasion a special flyer of FIRST HUB and a video was unveiled. As per the analysis, 700+ queries are addressed in three years of operations along with multiple special sessions to address the COVID-19 related queries of innovators. In addition, FIRST HUB session was also conducted during the GBI event of BIRAC. Major queries were related to Regulatory Facilitation and Investments followed by Testing and Standardisation.

Celebrating 3rd Anniversary of

Biotech FIRST HUB

Facilitation of Innovation and Regulation for Startups and Innovators

A facilitation unit set up by BIRAC to address the queries of Startups, Entrepreneurs, Researchers, Academicians, Incubation Centres, SMEs, etc.

Representatives from DBT, BIRAC, CDSCO, NIB, GeM, KIHT and BIS are available to take queries every 1st Friday of the month.

Regulatory Pathways & Regulations

Market Access

Funding Opportunities

Mentorship

Industry Academia Partnership

Investment Opportunities

Intellectual Property

700+ Queries of Startups and Innovators Already Addressed



To submit a query, scan the QR code or visit birac.nic.in/firsthub.php

@BIRAC_2012

DBT-BIRAC

DBT-BIRAC



INAUGURATION OF BioNEST HEALTHCARE INNOVATION INCUBATION CENTRE at SRIHER

Chennai, 12th October 2021

A healthcare innovation incubation centre (Sri Ramachandra Innovation Incubation Centre BioNEST Bioincubator) was inaugurated at Sri Ramachandra Institute of Higher Education and Research by Dr. Renu Swarup, Secretary, Department of Biotechnology, Department of Science & Technology and Chairperson, BIRAC on 12th October 2021. Participating virtually, she said the centre is located in a medical university and will help the entire spectrum of healthcare industry to translate innovative ideas into useful products and services for the patients. End users engagement is key in innovation with proper clinical validation. This centre should define and guide the incubatees into the regulatory pathway. The centre should also help others in early stage of validation and help roll out their products for commercial use, she said.



Dr. Manish Diwan, Head, Strategic Partnership and Entrepreneurship Development, BIRAC said this centre can identify the unmet needs of clinicians and involve entrepreneurs to come out with innovative solutions. A clinician can also be an entrepreneur he said and listed out several products innovated by doctors and surgeons in the over 60 BioNEST incubators functioning in the country.

Speaking on the occasion Dr.P.V.Vijayaraghavan, Vice Chancellor said SRIHER provided the conducive ambience of approved and accredited high-quality research laboratories, testing facilities, fullfledged clinical trial division with institutional ethics committee and a 2200 bedded tertiary hospital and 12 constituent faculties, research scholars which will be accessible to incubating entrepreneurs. Doctors and para medicals were also being encouraged to translate their clinical research into patented products, he added.

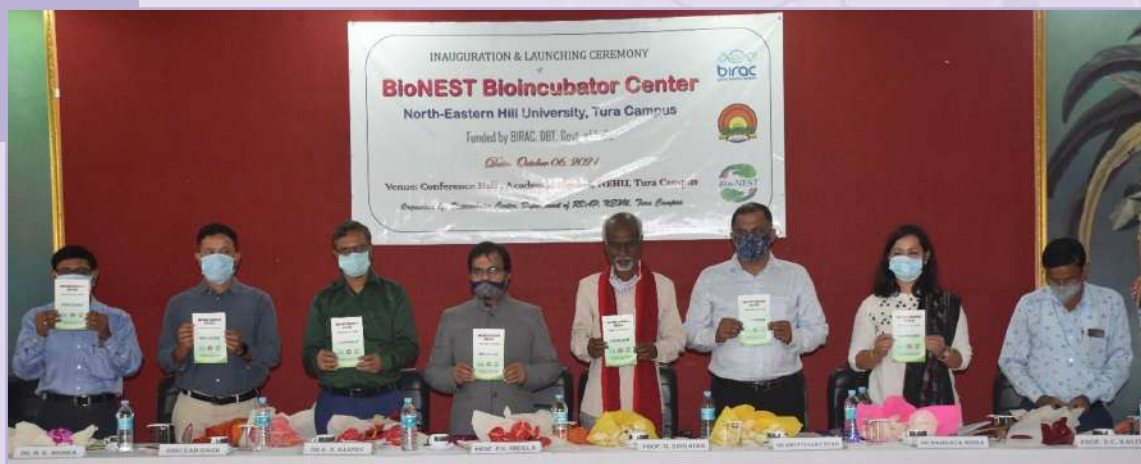
Dr. Kalpana Balakrishnan, Dean Research said, Sri Ramachandra Innovation Incubation Centre (SRIIC) supported under BioNEST programme of BIRAC. The focal areas include clinical validation of medical devices, point of care diagnostic kits, nano technology, artificial intelligence, machine learning based tools in healthcare. First of its kind in Tamil Nadu, it is supported by multiple research facilities, a sophisticated instrumentation facilities with hi-end bio-analytical capabilities and a GLP accredited small animal test facility of SRIHER. For end user validation, CDSCO-approved DCGI-audited full-fledged clinical trial division is also available, she added.

Dr. S.P.Thyagarajan who initiated setting up this centre and presently Chancellor Avinashilingam Institute of Home Science and Higher Education for women, Coimbatore, Dr.Muthu Singaram, CEO, Healthcare Technology Innovation Centre, IIT-Chennai and Dr. Hardeep Vora, CEO, SRIIC were among those who participated in the event.



Inauguration of BioNEST Bioincubator Center at NEHU, Tura Campus, Meghalaya

The first BioNEST Bioincubator Center of Garo Hills, Meghalaya funded by BIRAC, DBT, Govt. of India was inaugurated on 6th October, 2021 at North-Eastern Hill University (NEHU), Tura Campus in the presidency of Prof. Prabha Shankar Shukla, Vice-Chancellor, NEHU. Dr. G. Narahari Sastry, Director, CSIR-NEIST, Jorhat, Assam was present as the Chief Guest while Dr. Mrutyunjay Suar, Director General R&D and CEO, KIIT, Bhubaneswar, Odishagrace the occasion as the Guests of



Honour. Dr. Namrata Misra, Head, Bioinnovation, KIIT-TBI, Bhubaneswar, Odisha and Shri Ram Singh, IAS, Deputy Commissioner, West Garo Hills District, Meghalaya were the other notables in the program.

Dr. BK Mishra, the Project Leader of the BioNEST Bioincubator Centre emphasized on the focus of the center to support innovations and promote entrepreneurship in the field of agriculture, food and nutrition utilizing the natural indigenous resources of NER. Dr. G. Narahari Sastry discussed the challenges and opportunities of Bio-entrepreneurship in NER. Dr. Sastry emphasized on globalizing the local knowledge and localization of the global technology as a sustainable startup building strategy. Dr. Sastry also accentuated on the need of working closely with the State Government and Local Authorities for the success of the Bioincubator. Dr. Mrutyunjay Suar vividly explained the need of incubators in the biotech sector and shared his experience on establishing a bioincubator in a meaningful way to help the innovators. Dr. Suar expressed confidence on the availability of funding for the entrepreneurship development rather stressed on building a new, enriched, easily accessible ecosystem for the startups and appealed the gathering to contribute in the developmental process. Dr. Namrata Misra illuminated the gathering about the funding opportunities for the startups during the different stages of product development starting from ideation to commercialization. Shri Ram Singh assured to provide help of all sorts needed by the center and shared his valuable experience of working in the Garo hills. Prof. P. S. Shukla viewed the center as a part of university's social responsibility and stressed on the need to support innovations and the employment opportunities the center might create. Prof. G. Singaiah described the center as the need of the hour and assured to extend the whole hearted support to the center for the betterment of the society.

A large number of academicians, scientists, government officials and innovators were present in the program including the faculties from Don Bosco College, Tura Government College, College of Community Science and NEHU; scientists from KVK Williamnagar and KVK Tura; representatives from District Commerce & Industries Centre, Skill India Mission, Bakdil NGO and others. The program was courteously summed up by the vote of thanks presented by Prof. D.C. Kalita, Head of the Department of Rural Development & Agricultural Production (RDAP) and finally concluded through the National Anthem. The function ended on a good note with high motivation and encouragement to the future entrepreneurs.



India International Science Festival 2021 (IISF 2021)

The 7th edition of IISF 2021 was held in Panaji, Goa from 10th –13th December 2021 in a hybrid mode. It was jointly organised by Ministry of Science & Technology, Ministry of Health and Family Welfare and Ministry of Earth Sciences in association with Vijnana Bharati (VIBHA). The theme of this year's edition was "Celebrating Creativity in Science".

The Event was inaugurated by Dr Jitendra Singh Hon'ble Union Ministry state (Independent charge) Science and Technology Ministry state (Independent charge) Earth Science, MoS PMO, Personnel, Public grievance, Pensions, Atomic Research and Space. The event was attended by several dignitaries including Hon'ble Union Minister of Ayush, Ports, Shipping and Waterways - Shri. Sarbananda Sonowal; Hon'ble Union Minister of State (MoS) for the Ministry of Tourism and Ports, Shipping and Waterways- Shri Shripad Naik; Hon'ble Chief Minister of Goa - Shri Pramod Sawant; Secretary Ministry of Earth Sciences, Dr M. Ravichandran, President Vijnana Bharati Dr Vijay Bhatkar and many others.

The festival was a celebration of Science and Technology by engaging public from different cross-sections of our society and showcasing how Science, Technology, Engineering and Mathematics (STEM) are providing solutions to improve our lives. The convention was host to an array of activities including ECO fest, GIST Fest, New Age Technology Fest, Mega Science Technology and Industry Expo, Science Film Festival, Science Literature Festival, Students Science village, Engineering student's festival and many more.



Dr. Alka Sharma, Senior Advisor DBT and MD-BIRAC along with BIRAC representatives at BIRAC's stall of Mega Science Technology and Industry Expo at IISF 2021

The event witnessed more than 10,000 delegates physically and 20,000 through virtual mode. Also, the event observed demonstration of 300 models, participation of 200 traditional craft artisans and 174 stalls at Mega Expo. In the festival, Department of Biotechnology, Ministry of science & Technology coordinated the Demonstration Competition naming “New Age Technology Show”. The show was on third day of the event and it was focused on innovation showcase in New Age Technologies in Life sciences. Participants from academia and young start-ups presented their innovative technologies in the life sciences sector. Jury chose three best Innovators for the awards.



Young students, Startups from the entrepreneurial community were inquisitive about the BIRAC's various funding schemes.

Mega Science Technology and Industry Expo at IISF 2021 provided the opportunity to exhibitors and start-ups to showcase their strengths, innovations, products and services to a large audience. The team of BIRAC consisting of Ms Taranjeet Kaur, Ms. Poonam Bishnani, Dr. Vishwadeep Kapre, Dr. Yogesh Ashtkar, also participated in the expo to showcase schemes and programs of BIRAC.

Public Events like IISF can be pivotal for developing scientific temperament among the masses. The ambitious efforts like Digital India, Make in India, Start-up India, Smart Cities and ease of living can truly materialize only when science reaches the last mile.

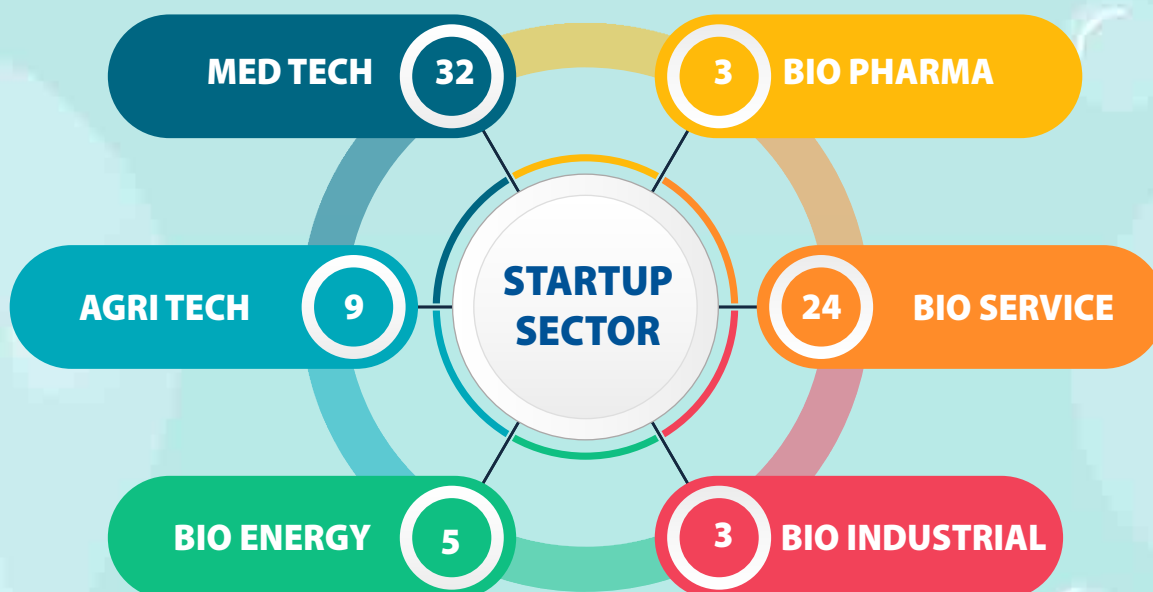


CRESCENT INNOVATION AND INCUBATION COUNCIL (CIIC)

ABOUT THE INCUBATOR: Crescent Innovation & Incubation Council(CIIC), established as a Section-8 not for profit company is the innovation arm of **B.S. Abdur Rahman Crescent Institute of Science and Technology(BSACIST)**, Chennai funded by **BIRAC-BioNEST, Department of Biotechnology, Govt. of India** and positioned as **the 3rd Best Bio-Incubator** of India 2020 by Biospectrum Magazine. CIIC is also funded by **Startup India**, Department of Promotion of Industry and Internal Trade, Ministry of Commerce and Industry, Govt. of India with ₹ **5.25 Cr. under Startup India Seed Fund Scheme (SISFS)**.

CIIC has currently incubated **76 Life science** startups which focusses on **6 sectors** such as Agri-Tech, Med-Tech, Bio-Pharma, Bio-Energy, Bio-Services, Bio-Industrial and has been acting as a **“One Stop Shop – Technology Business Incubator (TBI)”** for startups. Apart from Life sciences, CIIC focusses on other Thrust areas such as **Industry 4.0** and **Mobility & Transportation**. CIIC aims to support & render start-up into a profitable entity through the mission statement called Triple ‘**M**’ – **Market, Money and Mentor** transforming innovation into scalable business models with high productive impact, encouraging interdisciplinary advancement both nationally and internationally. CIIC is recognized by the **European Commission** for collaborative projects and soft landing of startups.

BioNEST SECTORS FOCUSSED:



BioNEST IMPACT CREATED:

RS. 1.86 cr Grant Received from BIRAC, BioNEST,
Dept. Biotechnology, Govt. of India

RS. 5.25 cr Grant Received from DPIIT
Ministry of Commerce & Industry, Govt. of India

European Commission has recognized CIIC as an
Indian Incubation Partner
Recognized as Top Incubator by StartupTN, Govt. of TN
3rd Top Private Bio Incubator in India (2019-2020)

10+ International Partners
36+ National Partners



76 BioNEST Startups

35+ Patent filed by BioNEST Startups

200+ Jobs Created by BioNEST Startups

Rs.5.06 Cr Grant Received by BioNEST Startups
Rs.32.52 Cr Govt/Private investment
raised by BioNEST Startups
Rs.10.70 Cr BioNEST Startups
Total Sales Turnover FY 2020-21

5 BioNEST Facilities Created

- **Location-** Vandalur, Chennai
- **Total space (Incubation, Lab space, common area etc)**

| | |
|------------------------------|------------|
| Incubation Space/Common area | 5000 Sq.ft |
| Lab space | 4000Sq.ft |

CIIC also have facilitated Demo area space for the startups

- **No. of Incubatees supported till now** - 76
- **Total Products/technologies commercialized-**
 - a. Number of products commercialized= 9+
 - b. Number of IP backed services offered by start-ups=3+
- **Total IPs facilitated-** 35
- **Rentals-** Co-working space facility – Rs. 3500 per month
Module facility (180 Sq.Ft.) – Rs. 7500 per month

GENERAL INFRASTRUCTURAL SERVICES:

CIIC has created 6 facilities under BIRAC-BioNEST facility

- **Facility for Life Sciences** – Created highly equipped labs for the startups involving Molecular biology Lab, Analytical Lab, Sterilization Room, Microbiology Lab, Plant Tissue Culture Lab

- **Facility for Research in Precision Agriculture and Rural Technologies** – Created Autonomous Farming involved in automated irrigation systems through sensors
- **Facility for Microalgal and NanoBiotechnology** – Augmented provision for the development of algal based products for the startups.
- **Facility for Omics Analytics** – Created opportunities for data interpretation for various domains like Genomics, Transcriptomics, Proteomics, Metabolomics
- **Facility for Stem Cell Research** – Created provision for Cancer studies for all types of therapeutics
- **Facility for Technology Transfer** – Collaborated with CCAMP for fulfilling the IPR services to startups and over

SCIENTIFIC SUPPORT SERVICES:

1. **Technical support** for the startups by connecting to the Internal and External Mentors
2. Connection for the **Prototype Validation** and **Clinical Trials**
3. **Equipment support** for the startups for carrying out the Research works
4. **In-house Testing services** for the startups
5. **Awareness campaign** for the startups
6. **IPR** (Intellectual Property Rights) & **TT** (Technology Transfer) Facilitation services for the startups
7. **Launch pad Facility creation** for the startups (25000 Sq.Ft)
8. **Recognitions/ Certifications** procurement support

ADVISORY AND MENTOR SERVICES:

- Provide **Mentorship** – IP, Regulatory business
- Provide **Clinical Mentorship** & Support – Tagore Group of Institutions, Dr. Mehta's, Chettinaad Health city
- **Institutional Support** services – CSMCRI (Central Salt and Marine Chemicals Research Institute), TANUVAS (Tamil Nadu Veterinary and Animal Sciences University)



Tagore Group of Institutions

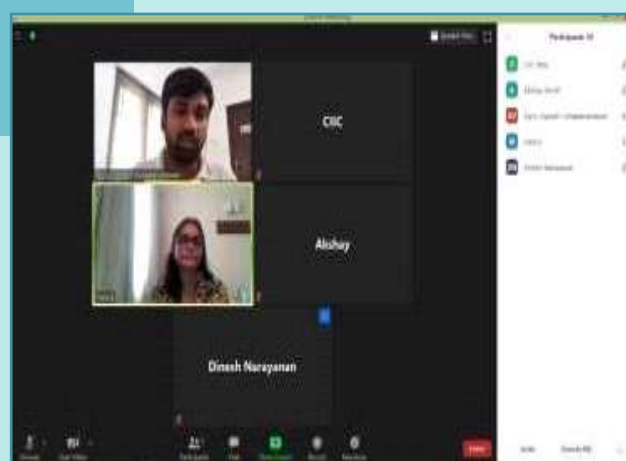
Support for Prototype development and Clinical validation and Ethical clearance



Dr. Mehta's Hospital
Support for product validation and investment



Chettinad Hospital
Support for clinical validation and mentoring



Business, Investment and Technical mentors to all startups

INFORMATION SERVICES:

- CIIC has created the facility **"OMICS ANALYTICS"** with Computational laboratory with high-end specifications for computational biology with high-end software for **Data interpretation, Quantum Chemistry, Structural Biology, Precision Medicine, Molecular simulations**
Current Software available - MAT LAB, MiniTab, Origin, ChemDraw
- The startups have the access to the **University Library** to support the Startup Research

COLLAGE OF THE FACILITIES:



Molecular biology Lab



Analytical Lab



Microbiology Lab



Plant Tissue Culture Lab



Sterilization Room



Microalgal Depository lab



Deep Freezer Room



Pilot study Area



Omics Analytics



Clean Room Facility (Class 10000)

STAR INCUBATEES

| Logo | Description about the startup & technology/product |
|---|---|
|  | <p>Founder – Mr. Sushil Kumar Paul, External Startup</p> <p>Description – Making Aquaculture sustainable through monitoring parameters and optimization by reducing the mortality rate and yielding quality shrimps</p> <p>Stage - Product development</p> <p>IP – Granted</p> <p>Grant received – Rs. 50 Lakh (BIG, BIRAC)</p> |
|  | <p>Founder – Dr. Nithyakalyani, External Startup</p> <p>Description - Redefining health through Genetics and Cell therapy</p> <p>Stage - Ideation</p> <p>Grant received - Rs. 25 Lakh (BIG, BIRAC), Rs. 120 Lakh (ICMR)</p> |
|  | <p>Founder – Mr. Guru Vignesh & Mr. Dinesh Narayanan, External Startup</p> <p>Description – Technology driven products for post-harvest management and protected environment farming techniques</p> <p>Stage – Commercialization</p> <p>Investment Raised – Rs. 0.71 Cr</p> |
|  | <p>Founder – Mr. Adithya, Student Startup</p> <p>Description - Automated Electric Tractor for farming in the absence of human/farmers</p> <p>Stage – Product Development</p> <p>IP – 3 Published</p> |
|  | <p>Founder – Mr. Radhakrishnan, Alumni Startup</p> <p>Description - Development of Smart Intravenous Dripper</p> <p>Stage – Product Development</p> <p>IP – Granted</p> |
|  | <p>Founder – Mr. Mohideen, Alumni Startup</p> <p>Description – Water Management solution for reducing water consumption</p> <p>Stage – Commercialization</p> <p>IP – 2 Published</p> <p>Investment Raised – Rs. 22 Cr</p> |



Ahmedabad
University

VentureStudio

Venture Studio Ahmedabad University

About the Incubator: With a vision towards innovation and entrepreneurship, Ahmedabad University conceptualized VentureStudio, a platform to enable entrepreneurs to translate their innovation into commercial success. Established in 2011, in collaboration with Stanford University, it assists innovative entrepreneurs by providing 360° support ranging from pre-seed funding through multiple grants, personalized mentoring through a network of domain experts, access to cutting edge facilities for product development, market access and support for follow-on Angel and Venture Capital financing.

VentureStudio is supported by the Department of Biotechnology and the Department of Science & Technology. It has a state-of-the-art BioNEST incubator for biotechnology supported by BIRAC and a modern Prototyping Lab funded by DST. As a BIRAC BIG Associate Partner, VentureStudio has supported multiple startups in areas of Biotechnology and Life Sciences. VentureStudio is also an approved Nodal Agency under the Government of Gujarat Startup Policy.

For its contribution to develop and support the entrepreneurship ecosystem in India, National Entrepreneurship Network (NEN) has awarded Ahmedabad University the "Debutante Institution Award" and "High Impact Institution Award".

- **Location** - Ahmedabad University, Navrangpura, Ahmedabad 380009
- **Total space (Incubation, Lab space, common area etc)** - 21,500 sq. ft., which includes 6700 sq. ft. of BioNEST facility and 3300 sq. ft. of NIDHI Prayas Shala facility.
- **No. of Incubatees supported till now** - 65+
- **Total Products/technologies commercialized-**

| |
|---|
| a. Number of products commercialized = 40+ |
| b. Number of IP backed services offered by start-ups = 12 |
- **Total IPs facilitated** - 17
- **Rentals** - Rs 2000 per seat per individual with facilities like Wifi, Access to scanner and printer, AC, Parking, Conference, Security, Access to mentor, fablab, BioLab etc.



Facilities offered and unique features-

| | |
|--|---|
| General infrastructural services | VentureStudio offers 11,500 sq. ft. of incubation space which includes 24x7 co-working space with 80+ seater capacity, meeting rooms, conference rooms. Additionally, the DST NIDHI Prayas Shala prototyping lab offers 20+ seater capacity, additive rapid prototyping, subtractive manufacturing and opto-electronics sections, and the BIRAC BioNest facility offers high-end instrumentation and workspace for research and development of bio-products, including diagnostic kits, therapeutics and biologics. |
| Scientific support services | <ol style="list-style-type: none"> 1) BIRAC BioNest facility - Shared laboratory with 20+ seater capacity, dedicated workbenches with storage, washing area and basic instrumentation. <ul style="list-style-type: none"> - Biochemistry Wet Lab - Microbiology Lab - Sterilization room - Instrumentation lab - Chromatography lab with semi-preparative HPLC, FPLC and GC-FID - Tissue Culture area with separate AHU, biosafety cabinets and imaging equipment - Lyophilizer, electroporator, gel electrophoresis and documentation unit, fume hood, sonicator, and many more high-end equipments - Collaborative workspace and meeting room - Centralized air/gas piping with outlets throughout the facility - Ultrapure water system for deionized water 2) DST PRAYAS SHALA Facility - Prototyping lab with 20+ seater capacity <ul style="list-style-type: none"> - Design cell with Solidworks - 2019, Autocad - 2017 and Fusion 360 softwares. - Additive rapid prototyping section with Ultimaker 3 and Engineering Technique FDM 3D printers having a build area of 200 x 200 x 200 mm. - Subtractive manufacturing section with Haas VF2 vertical Machining CNC Machine, EDM and Surface Grinding Machine and Fabrication set up with Arc and Gas Welding equipments - Metal testing equipment like Inverted metallurgical microscope and Ultrasonic Flaw Detector. - Electronics section with PCB Prototyping Machine, Soldering Desoldering Station, SMD Rework Station, Oscilloscope, Arbitrary Function Generator, DOBOT Robotic arms, Dspace - Control system design kit, Nvidia Jetson and Inforce development kit for Artificial Intelligence, Augmented Reality and Virtual Reality development |
| Advisory and mentoring services | <ul style="list-style-type: none"> • Access to a pool of domain experts comprising of industrialists, technologists, academicians, entrepreneurs, doctors, functional experts, service providers and members of multiple National Trade, Commerce, Industrial and Professional Organisations • Assistance for Market Research & Analysis, Intellectual Property, Developing Value Proposition to address Unmet Needs, Product Design and Development, Strategy & Business Model, Go-to-market Strategy & Scale-up strategy, Organization Building, Financial Planning and Legal. • Access to industry experts spanning many verticals such as healthcare, medical devices, FMCG, waste management, energy, logistics, education, fintech, manufacturing and other deep tech areas such as AI/ ML. |
| Information services (library, database access) | <ul style="list-style-type: none"> • Patent filing assistance. • Access to University Library on Request • Access to University Faculty and Laboratories on Request. |

About the Team: VentureStudio team is led by its CEO, Tanvi Rangwala, a passionate professional with more than 15 years of experience in Technology, Startup Incubation & Investment, and Entrepreneurship. She began her career in Silicon Valley as a Software Engineer at Cisco. Subsequently, she worked with GVFL Ltd in Ahmedabad and also with CIIE incubation centre at IIM-A. At CIIE, Tanvi ran multiple national level programs to support startups through training, investment & networking. She was a founder & CEO of her own startup in the consumer internet space before joining VentureStudio. She has an MBA from Emory University and Masters in Computer Science from the University of Southern California.



Other team members

- Bharti Banwari, Manager - Operations and Administration
 - Role - Startup coordinator, Grant Management Coordinator, Management of overall VentureStudio Operations, University Communications Coordinator
 - Experience - 20+ years in Corporate Communications, Media and Human Resources
- Arun Lokhande, Senior Manager - Accounts and Financing
 - Role - Startup and Grant Accounting, Utilization, Regulations and Audit
 - Experience - 35+ years in Institutional Finance and Accounting
- Nilesh Dattani, Mentor
 - Role - startup mentor, business development coach, portfolio lead
 - Experience - 25+ years in diverse industry domains, Ex. Marine Engineer and MBA from IIM, Bangalore
- Prakash Gawad, Workshop Machinist at NIDHI PRAYAS SHALA
 - Role - manage overall operations, technical support to startups
 - Experience - 15+ years in engineering, product development and manufacturing
- Vaishali Dhamecha, Electronics Prototype Technician at NIDHI PRAYAS SHALA
 - Role - assist in managing overall operations, plan seminars/workshops/outreach events, inventory and procurement management
 - Experience - 10+ years in Electronics and Embedded development
- Dr. Arpit Shukla, Incubation Manager at BioNEST
 - Role - manage overall operations, technical support to startups, plan seminars/workshops/outreach events
 - Experience - 10+ years in Life Sciences with expertise in Molecular Biology, Biochemistry and Biotechnology
- Grusha Joshi, Senior Lab Associate at BioNEST
 - Role - assist in managing overall operations, inventory and procurement management
 - Experience - 2+ years in Life Sciences with expertise in Cancer Biology



Star Incubatees of the Incubator

| Logo & Picture | Description about the startup & technology/product |
|---|--|
|  | Biofics Pvt. Ltd. Proprietary in-vessel process technology and proprietary microbial cocktail for composting organic waste to fertilizer |
|  | Delta H Technologies Pvt. Ltd. Self-heating packaging solution for Ready to Eat (RTE) foods using a proprietary exothermic reaction |
|  | DiaHappy Health Pvt. Ltd. Using AI and Biochemistry to move patients to correct lifestyle reversing Diabetes resulting in reduction in insulin and medicines leading to a happier and healthier life |
|  | IFact Rehabilitative and assisting devices like standing wheelchairs for patients with spinal cord injury or mobility disorders |
|  | Strauss Healthcare AI enabled integrated technology solutions for healthcare delivery across the continuum of care |
|  | EZ Braces Development of customized dental braces which are 3-dimensional movement |
|  | Pragmatech Healthcare Solutions Pvt. Ltd. Development of a cervical self-sampling assay kit, CERVICHECK, to detect early stages of cervical pre-neoplasia and enable point-of-care treatment. |
|  | Vidcare Innovations Pvt. Ltd. A rapid instrument-free point-of-care disposable device for neonatal (newborn) screening. |



OJAS MEDTECH BIONEST – IIIT Hyderabad

About the Incubator: Ojas MedTech BioNEST at IIIT Hyderabad is an incubator for startups building products at the intersection of technology and medicine in areas such as disease prevention, detection, diagnosis, treatment, monitoring, and wellness. The focus of this incubator reflects the massive changes that are happening in the healthcare arena today. As consumers look for more accurate diagnoses, better predictions of disease, tailored therapies, and improved health outcomes, new technologies need to leapfrog current capabilities and innovators need to imagine vastly different ways of practicing medicine. Ojas welcomes entrepreneurs working on futuristic, bold and innovative ideas, harnessing digital technologies in healthcare practice.

- **Location** - Ground Floor, Vindhya C4, IIIT-H Campus, Gachibowli, Telangana 500032
- **Total space (Incubation, Lab space, common area etc)** – 8000 Sq. Ft. (65 seats)
- **No. of Incubates supported till now** – 47
- **Total Products/technologies commercialized-**
 - a. Number of products commercialized = 18
 - b. Number of IP backed services offered by start-ups = 15
- **Total IPs facilitated** - 15
- **Rentals** – 4500 - 5500 Rs. per seat

Facilities offered and unique features –

| | |
|---|--|
| General infrastructural services | <ul style="list-style-type: none"> - State of the art, plug and play co-working space - Meeting Rooms, Lounges - Medtech Lab with equipped with following <ul style="list-style-type: none"> • Acti32 champ system including brain vision recorder • Live amp Wireless System • ZNB Vector Analyzer • GPU Workstation + Peripherals • Jasco Spectrometer • Nano Material Synthesis Detector • Fume Hood • Solid Roman Spectrometer Stage • Ball Mill • Spectrum Analyzer • Oscilloscope • Fn Generator • DC Source Meter • Multi DC Power Supply • CAD Tools (a. Altium CAD Tools (Synopsys VLSI) b. COMSOL CAD Tool |
|---|--|

| | |
|--|---|
| | <ul style="list-style-type: none"> c. HSPICE CAD Tool (Cadence VLSI) - Makers Lab (Fully equipped hardware prototyping lab) |
| Scientific support services | <ul style="list-style-type: none"> • Domain Mentorship • Programs for Clinical Research and Trails • Hospital Connects • Connects with IIIT Hyderabad researchers and professors |
| Advisory and mentoring services | OjasMedtechBioNEST offers a stage specific mentoring to incubate startups for validation, Go To Market, Path To MVP, Path to Clinical Trails, Scaling, Fundraising and going global through OJAS accelerator program Post Doc Entrepreneurship Fellowship and micro accelerator programs. |
| Information services (library, database access) | Incubate startups get access to market research reports from industry. |

Collage of Facilities:



About the Team

OJASMedtechBioNEST at IIIT Hyderabad is led by Mr. Ramesh Loganathan, Principal Investigator and Professor-Co-Innovation and Head Research/Innovation Outreach, Comes with 25+ years of experience in R&D, Software Engineering, Entrepreneurship, Innovation.








He serves Managing Director, Progress Software India and Interim Chief Innovation Officer of Telangana State.

Mr. Anubhav Tiwari, Head of OJAS MedtechBioNEST comes with 10 years of experience in startup incubation and expertise in stakeholders management, Mr. Vikas Sahu, Senior Analyst at OJAS MedtechBioNEST comes with rich experience in medtech and healthcare domain being a dentist and innovator himself, currently leads programs at the BioNEST.

Group Photo of Recent T Health café event : Startup founders meeting doctors and industry experts to validate ideas.



Star Incubatees of Incubator

| Logo & Picture | Description about the startup & technology/product |
|---|--|
|  | Soujhe is building a suite of IoT Enabled Gamified rehabilitation and physiotherapy devices for patients recovering from stroke or accidents |
|  | They help build rapid and scalable Healthcare AI models. The company is developing AI based algorithms for detection of malaria and cervical cancer. |
|  | eSkinDoctor uses a state of the art Artificial Intelligence engine to pre-diagnose your skin problem and help resolve it with the guidance from an elite panel of dermatologists. |
|  | The company is developing a platform for better managing maternity care in rural areas. |
|  | The company is developing an advanced cancer prognostics platform. The platform provides computer vision and ML-based automated diagnostics tools and treatment decision support tools to Histopathologists, Radiologists and Oncologists. |
|  | Rayd8 an early-stage startup focussed on creating a complete range of screening, detection & monitoring systems in a contactless and automated manner. |
|  | Clearcals is a digital health and nutrition startup founded in April 2020. Providing personalized lifestyle interventions to patients suffering from and individuals at risk of chronic diseases is our area of interest. |



विज्ञान से विकास-प्रौद्योगिकी से प्रगति

Roadshows organised by BioNEST Incubators

One-day workshop on 3D Technology (Design & Printing)

Organised By: BioNEST, NIPER-Ahmedabad

Date: 23rd October, 2021

A one-day workshop was organized on 23rd Oct 2021 from 09.00 AM to 5.00 PM. The workshop covered from the basics of 3D printing to the advance level of 3D printing application including SLA and FDM Printers. The participants learnt about the different segments of 3D Printers and the crucial pointers for the usage of the same. Participants were also provided opportunity for a hands on training.



Online lecture series on 'Traditional healing system- showcasing potential journey and role of Biotechnology on mainstreaming the system' to celebrate AzadiKaAmrit Mahotsav

Organised By: BioNEST-NIPER Guwahati

Dates: 26th November, 30th November and 9th December, 2021

Under the banner of AzadiKaAmritMahotsav, the Bio-NEST, NIPER Guwahati organized 'Traditional healing system- showcasing potential journey and role of Biotechnology on mainstreaming the system – A Lecture Series' on 26th November, 30th November and 9th December, 2021, virtually.

Dr. B P Sharma, Professor, Government Ayurvedic College and Hospital, Guwahati delivered the lectures on 'Mainstreaming the Traditional Healing System; an Ayurvedic approach', Prof. Pulok Kumar Mukherjee, Director, DBT-IBSD Imphal, Manipur delivered lectures on 'Mainstreaming the Traditional Healing System; an Ethnopharmacology approach' and Dr N C Talukdar, Vice Chancellor, Assam Downtown University delivered his talk on 'Mainstreaming the Traditional Healing System; an Biotechnology approach' respectively.

Participants from different states of North East Region and across India joined the program and learned about the different aspects of the traditional healing system and the research and practice going on to mainstream the system.

The lectures are uploaded on the Youtube channel of NIPER-Guwahati for the benefit of the society.

Link: <https://www.youtube.com/watch?v=d14zHm5nCrk>





Azadi Ka Amrit Mahotsav



Traditional healing system - Showcasing Potential, Journey and role of Biotechnology on mainstreaming the Traditional Healing System – A Lecture Series

Organized by : Bio-NEST, NIPER-Guwahati

Supported by : BIRAC, DBT, GOI



Dr. B P Sharma
Professor, Government Ayurvedic College & Hospital, Guwahati

Date: 26/11/2021 Time: 3.30pm



Prof. Pulok Kumar Mukherjee
Director, IBSD

Date: 30/11/2021 Time: 10.30am



Dr. N C Talukdar
VC, Assam Downtown University

Date: 9/12/2021 Time: 3.30pm

National Institute of Pharmaceutical Education and Research, Guwahati (NIPER-G)
Sila Katamur (Halugurisuk), P.O.: Changsari, Dist: Kamrup, Assam, Pin: 781101, India

Registration link: https://docs.google.com/forms/d/e/1FAIpQLSeyfHOjji5g5-sFuttDYmRgdIFzTVppxVmNOnBqwyZ6HMMW8DFQ/viewform?usp=pp_url
or <https://bit.ly/3i346HV>

Contact us: # 9678007196,

niperguwahati@ionest@gmail.com incubation.manager@niperguwahati.ac.in roysonali@niperguwahati.in



Appreciating Young Biotechnology Innovators and Innovation

Organised By: BioNEST - University of Delhi

Date: 20th Nov. 2021

BioNEST-UDSC, organised the Azadi Ka Amrit Mahotsav event virtually on 20th Nov. 2021 to celebrate the 75th Anniversary of India's Independence. The event was aimed at encouraging the young minds by highlighting the importance of young Biotech. Innovators contribution to the nation development.

The event was moderated by Vijay Kantharia, CEO:BioNEST-UDSC and there were two young Biotech. Innovators Invited to share their story and Innovation Journey with the audience. The Invited Speakers were, 1. Dr. Sandeep Patil, Founder of NanoSpin technologies and Dr. Ruby Gupta. The event was highly spread among the college network of Delhi University students. A good response was received and more than 75 participants were present. The event was also attended by many faculties as well, in addition to students of the different colleges.

Dr. Sandip Patil and Dr. Ruby Gupta presented their work and shared their Innovation journey and plan for the future and how they are receiving support from BIRAC in pursuing their entrepreneurship journey. At the end students asked several questions and also showed their Interest in learning more about their work by pursuing an Internship with them. Overall the event was highly successful with students appreciating the event.



संस्कृत भारत    

Department of Biotechnology

आजादी का अमृत महोत्सव || 75th Anniversary of Indian Independence

Vigyan se Vikas

Appreciating Young Biotechnology Innovators. Highlighting their journey, Innovation and contribution to the society.

Organised By:
BioNEST-University of Delhi South Campus (UDSC)

Date: 20th Nov. 2021 **Time:** 11:30 - 13:00

Registration link: <https://forms.gle/P3wmnF1HhwtdPXCf6>

Talk Joining link: Once registered joining link will be shared

The event has been organised to highlight the importance of biotechnology innovations and recognise the contribution of young biotech. innovators. The event aims to motivate and ignite the young minds.

Speakers & Moderator for the session



Dr. Sandip Patil
Founder & CEO
E-Spin Nanotech



Dr. Ruby Gupta
Founder and CEO
Duosis Bio-Innovations



Vijay Kantharia
Moderator
CEO: BioNEST-UDSC

www.bionest.du.ac.in/wp bionest@south.du.ac.in 011-24157371



Action @ 75- Showcasing Potential, Journey and Impact of Biotechnology on Society

Organised By: TRON Council, VCR Park

Date: 29th November, 2021

In honor of the 75th year of attaining freedom from the British regime, under the government's initiative to celebrate Azadi Ka Amrit Mahotsav, the Translational Oncology Council (TRON Council) funded by the BioNEST program of BIRAC conducted an online event. The central theme of the program was Action @75 and the primary objective of the program was to showcase how specific actions taken by a premier BioNEST center supported and accelerated the progress of its startups. The TRON Council is a part of the broader Vyas Cancer Research Park (VCR Park) ecosystem, which operates the core labs on a 24/7 basis, provides access to several partner organizations, and a network of professionals to accomplish comprehensive development of R&D programs.

In support of Enveda Biosciences, the first startup established at VCR Park and supported by TRON Council, the incorporation effort was streamlined through introductions to company registration and compliances. When the stringent nationwide lockdown forced a majority of organizations to shut down, VCR Park arranged for essential

staff to operate and obtained permissions to do so. This resulted in direct savings related to precious age-matched small animal experiments, which would otherwise lead to a loss of over 6-8 month of loss in productivity. On other occasions, specific expertise not available at VCR Park were arranged through the strategic partnerships, e.g. access to high quality animals through Hylasco, immunohistochemistry at NRI-Hospital, and GLP experiments at Anthem Biosciences. These actions led to efficient fundraising through private equity placement at Enveda. Within a short span of two years, two funding rounds of \$4.9M and \$51M have successfully been raised.

The TRON council and VCR Park ecosystem continues to support the expansion of Enveda and looks forward to supporting the other established startups. It has also built a more robust core lab through the BioNEST program and has a significant pipeline of startups waiting in the wings to leverage the vibrant space to contribute towards nation-building based on strong science and deep biotech.



75 Azadi Ka Amrit Mahotsav

Translational Oncology Council BioNest in collaboration with VCR Park presents

Vigyan se Vikas

Showcasing Potential, journey and impact of Biotechnology on the society

SPEAKERS

- BIRAC's strategy of BioNEST and other startup funding
- Enveda trajectory from inception to current stage and the path forward

DATE & TIME

29th November 2021
4.00 pm - 5.00 pm

ZOOM DETAILS

<https://us06web.zoom.us/j/8130803997?pwd=KzB2eDkxMTZlOjNlZkVhQWVhbnR1>

Zoom meeting id: Meeting ID: 891 3080 3997, Password: 078682

CONTACT US

www.troncouncil.com www.vcrpark.com



Challenges for Translational Research

FDA Cancer Drug Approvals by Year

Increased pace of discovery and development due to higher throughput, improved technology, novel approaches, and significant investment in internal and external programs

More connected global population yet cultural and regulatory environments remain complex and establishing trust in foreign locations is difficult

Increased diversity of stakeholders requiring more interaction and collaboration

video1801230094

Vigyan se Vikas- Showcasing Potential, Journey and Impact of Biotechnology on the society with a focus on Agriculture domain

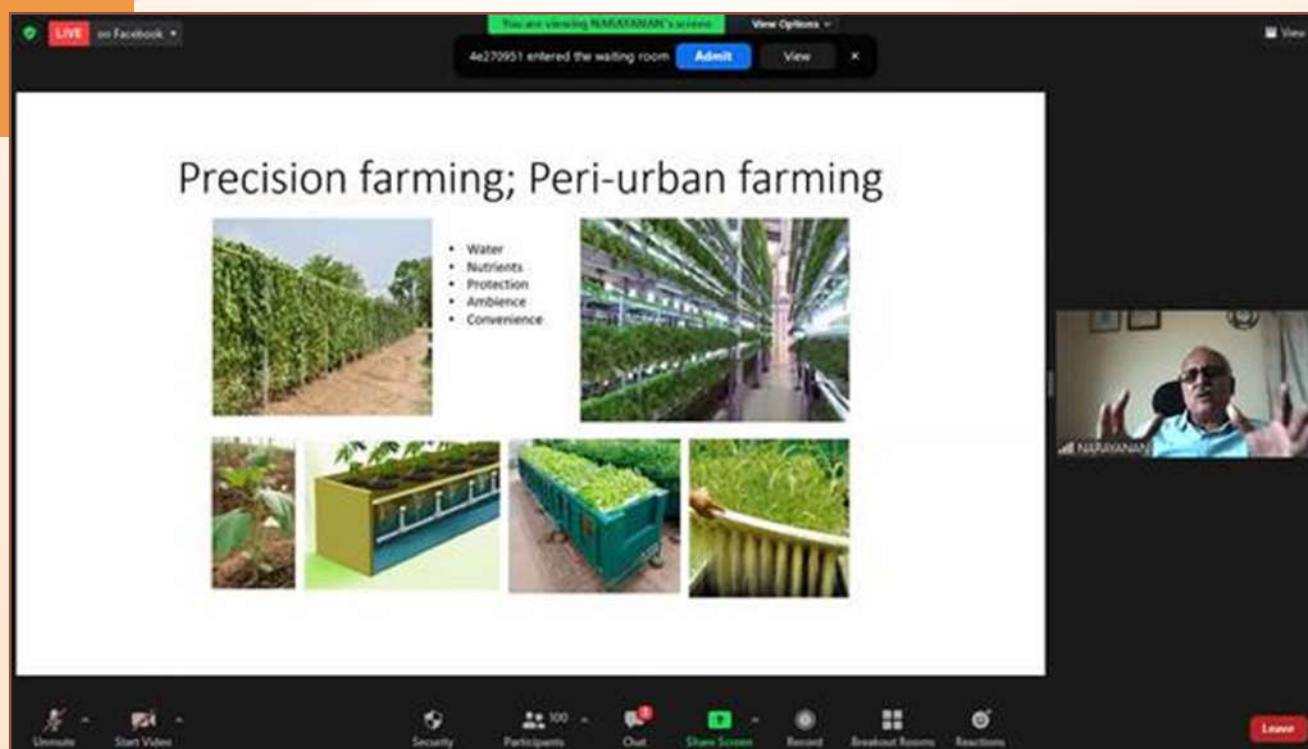
Organised By: VITTBI, VIT, Vellore

Date: 15th December, 2021

A webinar on "Vigyan se Vikas- Showcasing Potential, Journey and Impact of Biotechnology on the society with a focus on Agriculture domain "under 'Azadi Ka Amrit Mahotsav' program of Gol was organized on 15th December'21. Dr. K K Narayanan, an eminent Scientist turned entrepreneur (Founder of Metahelix and Kottaram Agro Foods) delivered this session and around 100 participants attended this program.

Dr. Narayanan in his address explained the role of Biotechnology in addressing the challenges in agriculture such as genetic interventions, bio pesticides and bio fertilisers for maintaining a balance between productivity and environmental foot prints. He also dwelt on the past as to how India overcame famine and food shortage through focused interventions such as green revolution. The future belongs to scientific management and approaches in Agriculture in order to handle the challenges of subsistence farming, unviable economic returns, loss of produce (post-harvest, storage and value addition).

The audience predominantly students, researchers, start-ups and faculty members interacted with the expert and learnt from his expertise.

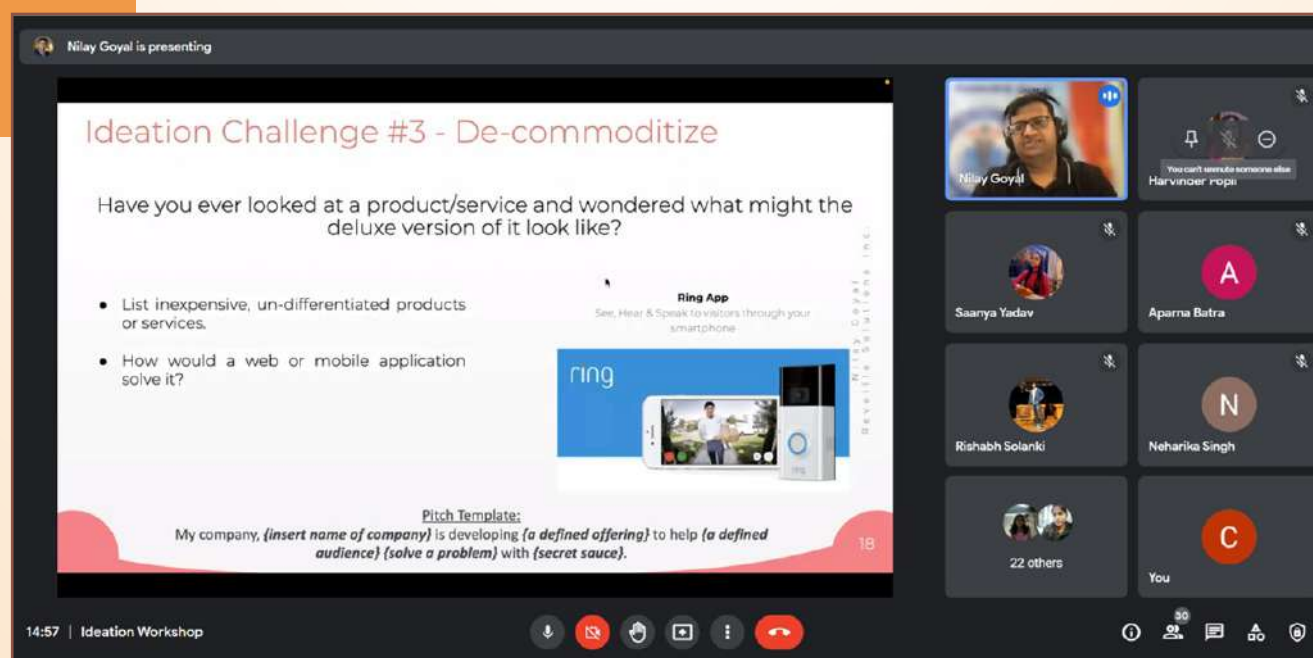


Ideation Workshop for Aspiring Entrepreneurs

Organised By: DIFF, DPSRU

Date: 20th December, 2021

DPSRU Innovation and Incubation Foundation, in collaboration with Reveille Solutions Inc, Canada, organized a 2-hour Ideation Workshop to commemorate 75 years of Independence under the aegis of Azadi Ka Amrit Mahotsav. The theme of the event was Ideas@75. The target audience of the workshop were aspiring entrepreneurs including students/researchers/innovators and the objective was to enlighten them about the art of cultivating business ideas and nurturing them into a business enterprise. This workshop was a preparative activity for the third edition of annual hackathon of DIIF; HealthHack 3.0. Given the pandemic situation, the workshop was organized in a virtual manner and 94 individuals from diverse backgrounds registered for it. After the introduction of the theme of AKAM by Prof. H Popli, Director, DIIF; the interactive session started where the Mentor and Speaker, Mr. Nilay Goyal asked the audience to generate novel business ideas on various themes and then provided them crucial inputs. During the 2-hour session more than 45 new business ideas were discussed and Mr. Nilay Goyal assessed each idea for its viability, and gave brief suggestions to scale up the idea into a business venture. The workshop ended with a note of thanks to participants, Mr. Nilay Goyal, BIRAC and Prof. Harvinder Popli by Mr. Navin Kumar Gaur, Nodal Officer, DIIF.



The screenshot shows a virtual meeting interface. On the left, a presentation slide titled "Ideation Challenge #3 - De-commoditize" is displayed. The slide content includes:

- Have you ever looked at a product/service and wondered what might the deluxe version of it look like?
- List inexpensive, un-differentiated products or services.
- How would a web or mobile application solve it?

An example of a "Ring App" is shown, with the text "See, Hear & Speak to visitors through your smartphone". Below the slide, a "Pitch Template" is provided: "My company, {insert name of company} is developing {a defined offering} to help {a defined audience} {solve a problem} with {secret sauce}." The slide number "18" is visible in the bottom right corner.

On the right side of the interface, a grid of participants is shown. The participants listed are:

- Nilay Goyal (Speaker)
- Saanya Yadav
- Aparna Batra
- Rishabh Solanki
- Neharika Singh
- 22 others
- You

The bottom of the interface shows a status bar with the time "14:57" and the title "Ideation Workshop".

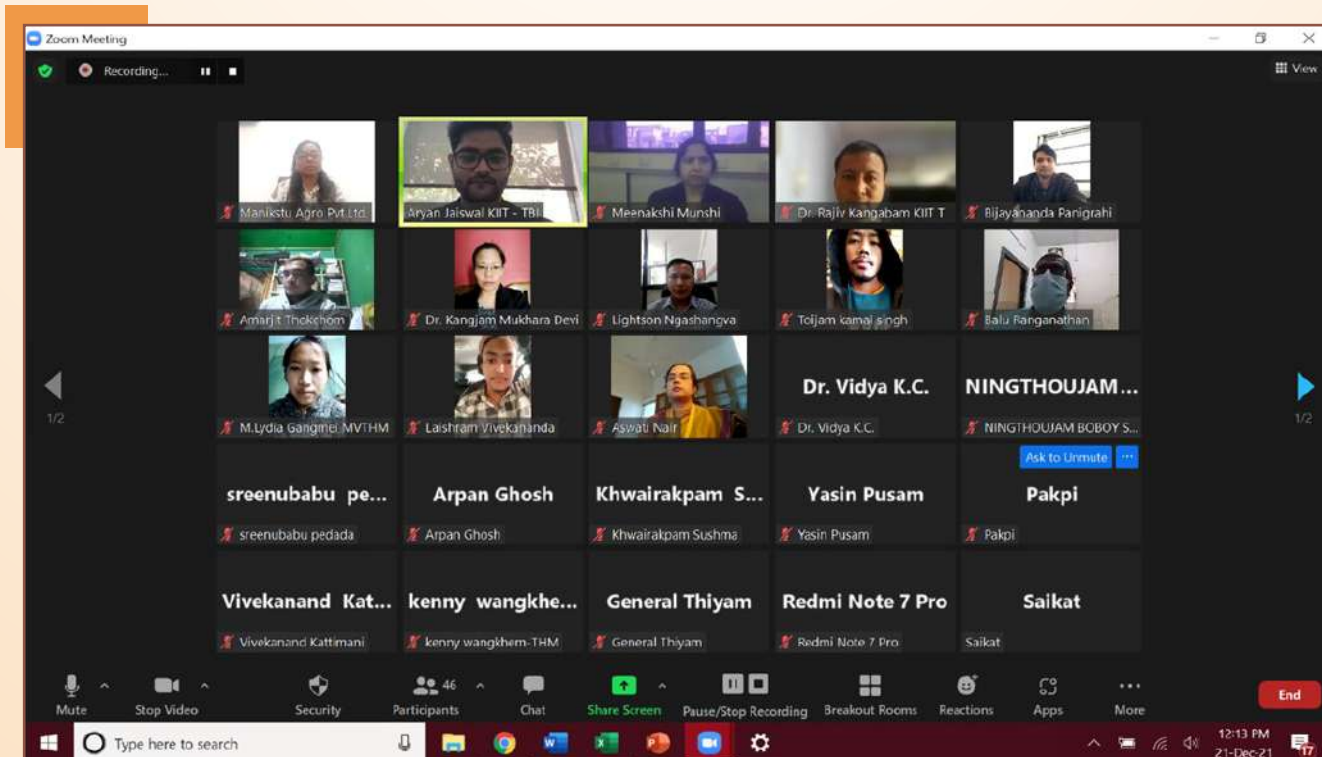
Women Achieving Milestones of Success @75

Organised By: KIIT-Technology Business Incubator

Date: 21st December, 2021

To commemorate the 75 years of India's Independence celebrations - "Azadi Ka Amrit Mahotsav", KIIT-Technology Business Incubator has conducted an event under the theme of "Sashakt Bharat" with a tagline of "Vigyan se Vikas – Showcasing Potential, Journey & Impact of Biotechnology on the Society", on 21st December, 2021. In this event, the milestones and success of our women leaders and Innovators were showcased under the category of Achievements@75. The speakers of this event aggregated the achievements and showcased the impact of biotechnology on the society by the valuable contributions & dedicated efforts of our women leaders/scientists and how far they have come since the independence.

The event started with the welcome address by Dr. Mrutyunjay Suar, CEO @ KIIT-TBI where he highlighted the valuable contributions of government towards the upliftment of women leaders and entrepreneurs and how they are revolutionizing the entrepreneurial ecosystem of the country. The next speaker, Dr. Namrata Misra, Head Incubation @ KIIT -TBI, then spoke about the stage that is been set for the women entrepreneurs and what are the opportunities that are lying ahead for their involvement and development. The contributions of women leaders and scientists in the field of biotechnology were then explained by our next speaker, Dr. Meenakshi Munshi, Former Advisor, DBT Govt. of India. The differences in opportunities for the women since the independence and the upliftment journey was shown by our next speaker, Dr. Shikha Dhawan, Director Programs @ SHARE India. The remarkable upscaling in the opportunities for our women leaders and their valuable contributions in the field of science and technology was well addressed by Dr. Bhawna Gupta, Academic Entrepreneur @ KIIT University.



Vigilance Awareness Week

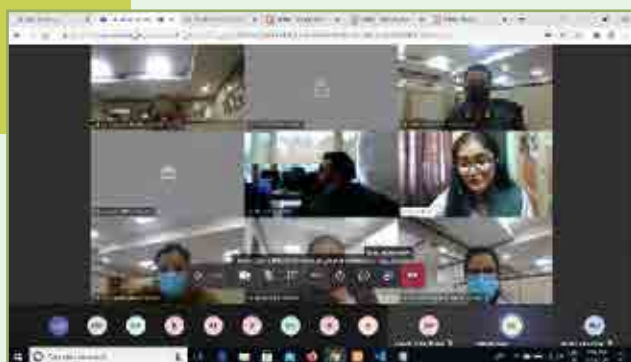
BIRAC observed Vigilance Awareness Week from 26th October 2021 to 01st November 2021. On account of Vigilance Awareness Week 2021, "Integrity Pledge" was administered by the workforce of BIRAC in the presence of Managing Director, BIRAC at BIRAC Office. BIRAC also disseminated the information by displaying e-banners at prominent locations in office.

Few glimpses of the activities is given below:



Training on Resilience and Stress Management

BIRAC understands the importance of keeping everyone in the organization engaged in continuous improvement, cross learning as well as innovative and motivating activities. In order to help employees, build collaborative communication at work through empathy and executive presence with etiquette and right attitude, in-house training on 'Personal Re-engineering' has been organised for BIRAC employees on 03rd December 2021. The training helped employees build positive attitude and motivate self and others during all phases of life. It also helped employees Identify the importance of being emotionally intelligence using self-awareness.





Grand Challenges India (GCI)

GCI is the Indian arm of the Global Grand Challenges, launched in 2012 with the aim of fostering Indian innovation and research to develop affordable and sustainable solutions to improve health, in India and across the globe, and is the flagship program managed by PMU at BIRAC and is collaboratively funded by Department of Biotechnology (DBT), Bill & Melinda Gates Foundation (BMGF), and the Wellcome Trust.

The main aim was to address some of the daunting challenges that we face today and tackle them by encouraging Indian Innovation and research to develop affordable and sustainable solutions in order to improve health and wellbeing in India and then across the globe.

Over the years, GCI has grown both as an idea and as a partnership covering varied themes from maternal and child health to agriculture, nutrition, infectious diseases etc. in order to respond to the ever-changing needs of research in public health in India.

Presently, GCI supports a range of research and development activities. We have supported basic research, translation research, intervention trials, clinical trials, data integration and analysis, product and technology development. GCI also funds projects at various stages in their lifecycle; from basic science research in laboratories, to proof-of-concept projects and potentially to scale-up to innovation projects. GCI is currently working to expand the funding arenas and mechanisms.

Grand Challenge India works across 4 major themes:

**Maternal and
Child Health**

**Agriculture and
Nutrition**

**Immunization and
Infectious Diseases**

**Medtech Development
and Entrepreneurship
support**



National Biopharma Mission

Skill Development

Lecture series on bioethics for clinical trials network (CTN)

To strengthen the clinical trial capacity five (05) training programs on Bioethics for five networks staff were conducted through the virtual platform for all the hospital sites that are a part of the CTNs. This program is organized under National Biopharma Mission Skill development program by the Clinical Development Services Agency (CDSA), an extramural centre of Translational Health Science & Technology Institute (THSTI), an autonomous institute under DBT.

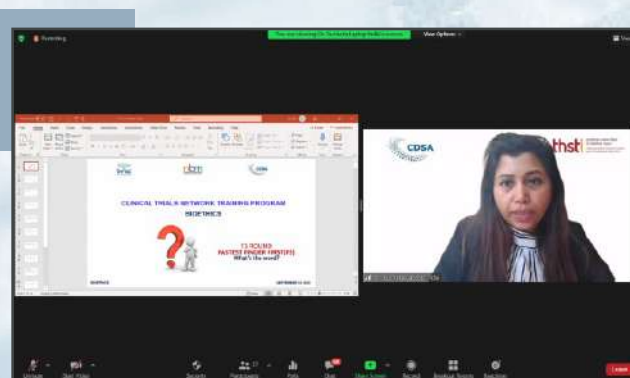
Each training program was held online and had three (03) webinars each of four (04) hours with session breaks, interactive quizzes, group exercises/case studies and an exit assessment (online auto-proctored, single log-in).

The Bioethics program comprises of the following three modules.

Module 1: Regulations and guidelines specific to ethics, ethics committee composition, roles & Responsibilities, functioning, review process

Module 2: Decision making, EC communication, etc. informed consent process, conflict of Interest

Module 3: SUGAM, CTRI, SAE causality & assessment, accreditation of EC



Glimpses of Lecture series on bioethics for clinical trials network (CTN)



For CTN (Ophthalmology), following participants registered with participations of 38 attendees for Module 1(27-07-2021), Module2(06-08-2021) and Module 3(13-08-2021) respectively;

- 1) Amrita Institute of Medical Sciences, Cochin, Kerala (P)
- 2) Regional Institute of Ophthalmology, IGIMS, Patna, Bihar (G)
- 3) Regional Institute of Ophthalmology, Trivandrum (G)
- 4) Sankara Deva Nethralaya Guwahati, Assam (P)
- 5) Adityajyot Eye Hospital, Mumbai (P)
- 6) Sadguru Netra Chikitsalaya Chitrakoot, Madhya Pradesh (P)

For CTN (Diabetology), following participants registered with participations of 61 attendees for Module 1 (27-08-2021), Module2 (03-09-2021) and Module 3(17-09-2021) respectively;

- 1) Gokula Education Foundation / M S Ramaiah Medical College & Hospitals
- 2) Victoria Hospital, Bangalore Medical College and Research Institute, Karnataka (G)
- 3) North Eastern Indira Gandhi Regional Institute of Health and Medical Sciences, Shillong, Meghalaya (G)
- 4) Institute of Post Graduate Medical Education and Research (SSKM hospital) (G)
- 5) Sri Guru Ram Das University of Health Sciences, Amritsar, Punjab (P)
- 6) NIMS Medicity, Kerala (P)
- 7) SRM Institutes for Medical Science, Chennai, Tamil Nadu (P)

For CTN (Oncology), following participants registered with participations of 61 attendees for Module 1 (01-10-2021), Module2 (08-10-2021) and Module 3(22-10-2021) respectively;

- 1) Jawaharlal Institute of Postgraduate Medical Education and Research JIPMER (G)
- 2) Institute of Medical Sciences and Sum Hospital, Bhubaneswar (P)
- 3) All India Institute of Medical Sciences, Rishikesh, Uttarakhand (G)
- 4) Christian Medical College, Ludhiana, Punjab (P)
- 5) Meenakshi Mission Hospital and Research Center, Madurai, Tamilnadu (P)
- 6) Amala Cancer Research Centre (P)

For CTN (Rheumatology), following participants registered with participations of 43 attendees for Module 1(12-11-2021), Module2(26-11-2021) and Module 3(03-12-2021) respectively;

- 1) Medanta Institute of Education and Research (P)
- 2) Mahatma Gandhi Institute of Medical Sciences, Sevagram, Maharashtra (G)
- 3) Centre For Arthritis & Rheumatism Excellence, Kerala- India (P)
- 4) St Johns National Academy of Health Sciences Bangalore (P)
- 5) Kusum Dhirajlal Hospital Ahmedabad, Gujarat (P)
- 6) Post Graduate Institute of Medical Education & Research, Chandigarh (G)

For CTN (Oncology), following participants registered with participations of 93 attendees for Module 1(10-12-2021), Module2(17-12-2021) and Module 3(24-12-2021) respectively;

- 1) Tata Memorial Centre, Mumbai
- 2) ACTREC, Navi Mumbai
- 3) Dr. Bhubaneswar Borooah Cancer Institute Guwahati, Assam
- 4) Homi Bhabha Cancer Hospital, Varanasi, Uttar Pradesh
- 5) Cancer Institute WIA, Chennai



- 6) Malabar cancer Centre, Kerala
- 7) Max Super Specialty Hospital, New Delhi
- 8) NEIGRIHMS, Shillong
- 9) Regional Cancer Centre, Medical College, Thiruvananthapuram,
- 10) Christian Medical College, Vellore, Tamil Nadu, India
- 11) Cachar Cancer Hospital, N. S. Avenue, Meherpur, Silchar, Assam, India

Online Good Clinical Laboratory Practice programme

It is conducted on 09, 16, 23, and 30 November 2021 (4 modules). This programme is organized by CDSA, THSTI with sponsorship from BIRAC-National Biopharma Mission in association with Biotech Consortium India Limited. About 200 participants across the country from different industry/start-ups, researcher, academia has participated for each module.

Each training program was held online and had three (04) webinars each of four (04) hours with session breaks, interactive quizzes, group exercises/case studies and an exit assessment.

The Good Clinical Laboratory Practice program comprise of the following topics.

- L1 Demystifying GCLP, GCLP principles, Implementation of GCLP
- L2 National GCLP Guidelines - ICMR Guidelines for GCLP 2021: An Overview
- L3 International GCLP Guidelines – DAIDSGCLP Guidelines 2021 & WHO GCLP Guidelines 2009: An overview
- L4 Infrastructure, organization, and personnel
- L5 Equipment, reagents, and materials
- L6 Pre-examination process
- L7 Examination process
- L8 Post-examination process
- L9 Method validation and verification
- L10 Safety in laboratories
- L11 Quality management
- L12 Risk management
- L13 Quality indicators
- L14 Internal Quality Control
- L15 External Quality Assessment/Proficiency Testing
- L16 Ethical considerations – laboratories
- L17 Data management
- L18 Laboratory information systems
- L19 Internal audit
- L20 GCLP: Do's and don't

Hands on Training Program on "Bio-signal Acquisition and analysis"

One week course on "Bio-signal Acquisition and analysis" has been organised in CSIR-CSIO during November 29, 2021 to December 03, 2021. About 21 participants around the country from different industry/start-ups, researcher, academia has participated in the workshop. Each day of the training programme is scheduled with an introductory lecture of the day and practical oriented hands-on implementation covering instrumentation conducted by CSIR-CSIO Scientists and domain experts from Industry.



Glimpses of workshop Hands on Training Program on "Bio-signal Acquisition and analysis"

Environment due Diligence for NBM Grantees

To fulfil the Environment, Occupational Health and Safety Management Framework (EMF) requirement i.e. understand about grantee project and associated environmental, health and safety risk mitigation & management measures being taken/planned to take during their course of project activity by review & evaluation of EHRMP and other supporting documents submitted by grantee as per EMF requirement and provide inspection report with suggestions, Provide training on Environment legislation's, acts & rules applicable to grantee basically by NBM Environment consultant, Overall guiding them to fulfil the EMF requirement of DBT – World Bank.

| S.No. | Organisation | Date | Proposal title |
|-------|--|----------|--|
| 1 | KIIT University | 5/11/21 | Setting up of Technology Transfer Office TTO at KIIT Technology Business Incubator |
| 2 | Center for Cellular and Molecular Platforms (C-CAMP) | 5/11/21 | Establishment of Technology Transfer Office at C-CAMP |
| 3 | SCTIMST- TiMed | 8/11/21 | Setting up of Technology Transfer Office TTO at SCTIMST-TiMed |
| 4 | Biotech Consortium of India Limited (BCIL) | 9/11/21 | Setting up of Technology Transfer Office TTO at BCIL |
| 5 | FITT (Foundation for Innovation and Technology Transfer) | 15/11/21 | Setting up of Technology Transfer Offices at Foundation for Innovation and Technology Transfer FITT |
| 6 | Entrepreneurship Development Center EDC | 11/11/21 | Setting up of Technology Transfer Office TTOs at Entrepreneurship Development Center EDC |
| 7 | IKP Knowledge Park | 12/11/21 | Setting up of Technology Transfer Office TTO at IKP Knowledge Park |
| 8 | Tata Memorial Centre, Mumbai | 19/11/21 | To establish a ready network of clinical trial units across the National Cancer Grid to promote multi-centric collaborative research in the field of drug and device development |
| | ACTREC, Navi Mumbai | | |
| | Dr. Bhubaneswar Borooah Cancer Institute Guwahati, Assam | | |
| | Homi Bhabha Cancer Hospital, Varanasi, Uttar Pradesh | | |
| | Cancer Institute WIA, Chennai | | |
| | Malabar cancer Centre, Kerala | | |
| | Max Super Specialty Hospital, New Delhi | | |
| | NEIGRIHMS, Shillong | | |
| | Regional Cancer Centre, Medical College, Thiruvananthapuram, Christian Medical College, Vellore, Tamil Nadu, India | | |
| | Cachar Cancer Hospital, N. S. Avenue, Meherpur, Silchar, Assam, India | | |



Training on E-waste management & rules during Environment due diligence for IKP Technology Transfer Office TTO



For further information please contact:
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