



BITS BIRAC BioNEST incubator, an initiative of Birla Institute of Technology and Science, Pilani, K K Birla Goa Campus promotes innovation and entrepreneurship in Health & Environment. BioNEST Goa is supported by BIRAC (Biotechnology Industry Research Assistance Council), a Non-profit organization under Department of Biotechnology (DBT), Government of India. BioNEST aims to help entrepreneurs to ideate, incubate and accelerate their innovative early stage startups into successful ventures through infrastructural support, mentoring, networking and business advisory.

BITS BIRAC BioNEST Goa ranked at 11th position in Top Bio-incubators 2020 and ranked 4th position among top Bio-incubators (Private) in a survey by BioSpectrum 2021.

<https://drive.google.com/file/d/1vUGof11G2YTioyr1Zr9Tb0uY1yteFn3Q/view?usp=sharing>

Due to COVID-19 the Innovation Lab was not functional for a period from March 2020 to August 2020. The Incubator was reopened later to the incubatees, after proper sanitation and adoption of COVID-19 protocols.

ADVISORS/MENTORS ADDED TO BITS BIRAC BioNEST

We are thankful to the following experts for joining our network of advisors and mentors.

- Mr. Vikram Gupta (Founder & Managing Partner IvyCap Ventures Advisors Pvt. Ltd.)
- Dr. Jagdish Chaturvedi (Founder and CEO of HiiiH Innovations Pvt Ltd, ENT surgeon , Visiting Consultant ENT, Fortis Hospital)
- Dr. Jyoti Bajpai Dikshit (Sr. Manager- Genomics CARINGdx, Mahajan Imaging, New Delhi)
- Prof. Padmanabhan Seshaiyer (Mathematics- George Mason University, Director- STEM Accelerator Program, College of Science)
- Mr. Ashutosh Kharangate (MD-MARC Pvt Ltd)
- Mr. D. S. Prashant (CEO FiiRE (Don Bosco College of Engineering), Goa)
- Mr. Lalit Saraswat (CEO Sancoale Technologies, Goa)
- Mr. Prashant Goyal (General Partner and Chief Operating Officer, Forum Synergies (India) PE Fund Managers Pvt. Ltd., Bangalore)
- Mr. Vishal Gandhi (Managing Director BIORx Venture Advisors Pvt. Ltd., New Delhi)



High end equipment at BITS BIRAC BioNEST Innovation Lab.

Global Bio-India Road Show 2021

A roadshow was organized to support the Global Bio-India (GBI) 2021 on February 19, 2021. GBI is an annual flagship event by Department of Biotechnology (DBT), and Biotechnology Industry Research Assistance Council (BIRAC). The virtual event was held from March 01 to March 03, 2021.

An online Panel discussion was held on the 'Role of funding in the success of a startup'. The panelists comprised of Mr. Bryan Lee (CEO/Director Krishi Star), Mr. Anand Parikh (Founder Shira MedTech and BIG Grantee), Ms. Rashmika Singh (Technology Transfer & Commercialization Officer, BIRAC) and Mr. Rajneesh Kumar (Technology Transfer Officer (Institute wide) BITS, Pilani). The session was moderated by Prof. Mridula Goel (In-charge; BITS BIRAC BioNEST, Goa).



Ms. Rashmika Singh talked about the Global BioIndia 2021 and expounded the funding opportunities at BIRAC. Mr. Bryan Lee and Mr. Anand Parikh as young entrepreneurs shared their journey of struggles and experiences to obtain funding for the startups. A very thorough

discussion on the strategies to be adopted for obtaining funding from various fundraising platforms and on steering the startup towards success after obtaining funds by the panel members enlightened the attendees of the roadshow.

Virtual Bio-entrepreneurship Programme 2021 (February 04 to March 04, 2021)

A 4 week Bio-entrepreneurship Programme was conducted by BITS BIRAC BioNEST, Goa for college students & faculty from across the country. The programme aimed to support and guide the participants to take their ideas to market.

34 participants from institutes like Goa University, Parvatibai Chowgule College of Arts & Science, Margao; Dhempe College of Arts & Science, Miramar; PES R.S.N College of Arts and Science, Ponda, Government College of Arts Science and Commerce Khandola and BITS Pilani participated in the programme.

Three sessions per week were conducted on various topics like Creativity & Idea generation, Idea Evaluation, Intellectual Property Rights, Understanding Customers & Market analysis, Business model, Basics of Starting a Business, Entrepreneurial finance, Funding opportunities and Regulatory compliances by experts from across India. Some of the experts included Prof. Mridula Goel (Incharge- BITS BIRAC BioNEST), Dr. Anirban Roy (Founder-CEO at Epione Swajal Solutions India), Mr. Rajneesh Kumar (Technology Transfer Officer (Institute wide) BITS Pilani), Dr. Abhiram Dukkipati (CEO & Co-Founder, Magellan Life Sciences Pvt. Ltd.), Dr. Kaustubh Dhargalkar (Founder- Potentials & Possibilities), Mr. Sameer Gupta (Founder, Haldivita and Corporate CA) and Mr. Satish Chintamani (Executive Director-Institute for Agriculture Technology and Finance Management).

On successful completion of the month long certified program, innovators were offered access to the Innovation Lab, BITS BIRAC BioNEST, Goa for experimental work.

HACKATHON 2021

A virtual HACKATHON was organized jointly with Centre for Innovation Incubation and Entrepreneurship (CIIE) BITS, Pilani K. K. Birla Goa Campus, on January 26 - 28, 2021. The HACKATHON was in collaboration with Stademy, Australia. Stademy (Startup Academy) is an accelerator, having a network of mentors and start-up partners that helps to create and scale startups. **BITS BIRAC BioNEST, Goa signed a MoU with Stademy, Australia.**

Applications were invited on the themes: Health, Genetics, Water and Waste. Innovations could be based on technologies like Artificial Intelligence (AI), Machine Learning, Biotechnology, Bioinformatics, etc.

Teams from BITS, Pilani K. K. Birla Goa Campus & several other Institutes in and around Goa such as Smt. Parvatibai Chowgule College of Arts and Science Goa, MS Ramaiah Institute of technology, Bangalore, St. Joseph's College of Engineering, Chennai, Bannari Amman institute of technology, Sathyamangalam etc. registered their ideas for the Hackathon.

Out of the total 34 ideas received, 12 teams were shortlisted to present their technical and Business Plan in the Hackathon.

Students and faculty from BITS, Pilani Goa and Ms. Jyothi Iyer, Stademy, Australia guided the teams as technical & business mentors. Success criterion was based on MVP/ Prototype and Value it provides to the society/ market

Mr. Ravi Jangir, Leading the Industrial Design and branding for Cambium Networks gave a talk on 'Design'.

A jury of 5 members; Prof. Sunil Bhand (Technical evaluation); Mr. Ashutosh Kharangate, MARC, Prof. Mridula Goel, Ms. Jyothi Iyer and Mr. Rajneesh Kumar (Business evaluation); judged the ideas presented by the teams.

The first place was awarded to the team with the idea 'Visio- Smart device enabling navigation for visually impaired'. Second place to the team with idea 'Removal of emerging contaminants from waste water using sustainable Bio-material' and the third place to the team with idea 'Ointment formulation for Acne & Anti Scarring using Trash Fish'.

Selected ideas were offered prize money of Rs 20,000/-, 10,000/- and 5,000/- as First, Second and Third prize respectively. Further the ideas having incubation potential were offered incubation at BITS BIRAC BioNEST.

ACHIEVEMENTS OF INCUBATEES

BacTreat Environmental Solutions LLP received the following DBT BIRAC projects

- SPARSH grant - Resource Recovery from Septage
- SPARSH grant - Pilot scale Terra preta production in terms of Resource Recovery from Septage
- Innovation Clean Technologies scheme for project titled "Scale up & Demonstration of Resource Recovery from septage project – fecal sludge management plant for 30,000 people".

Epione Swajal Solutions India LLP

- Winner- BRIC Idea Exposition 2020 Goa on Healthcare & Environment
- Received grant of Rs. 6.75 lakhs under DST-NIDHI Prayas Scheme for project titled "Surface water purification for hand wash and other application for Rural India.

INCUBATEES ADDED TO BITS BIRAC BIONEST

- Prof. D. M. Kulkarni, Dr. Iniyan Thiruselvam N., Dr. Kiran D Mali (Realization of Biomimetic Dental Implants in Digital Dentistry)
- Prof. Anasuya Ganguly (Evaluation of Tissue Engineered Vascularized Bone using 3D PLA biocomposite scaffolds for Restoration of Maxillo Facial (Jaw) Bone Defects)
- Dr. Arnab Banerjee (Investigating novel Bio-markers and Sirtuin based management for obesity associated endometrial cancer)
- Mr. Aviral Kumar Goel and Mr. Vaibhav Ganatra (Smart device to help the visually impaired navigate independently).
- Mr. Hemant Kumar Bankhede and Mr. Ryan Vaz (Develop a hand held device (Biopen) which will

- be able to deliver Bioink containing patient specific cells to treat burn or wound)
- Ms. Monika P. Joshi and Dr. Ganesh M. Bapat (Synthesize antimicrobial polymers that can be used in additive manufacturing i.e. 3D printing)
 - Ms. D. Pavithra Sree (Formulating an ointment to enhance the wound healing for diabetic patients using fish)
 - Mr. Pranav Mahajan (Early detection of Alzheimer's dementia through spontaneous speech)

Sensitization workshop for Biotechnology Ignition Grant (BIG) Call

18th BIG Call: A Sensitization workshop for 18th BIG (Biotechnology Ignition Grant) Call was organized by BITS BIRAC BioNEST, Goa. The workshop was conducted on January 11, 2021 via Google meet. BIG call is the flagship scheme of Biotech Industry Research Assistance Council (BIRAC), a Govt. of India Enterprise under Department of Biotechnology. This scheme aims to support aspiring innovators & entrepreneurs in Biotech & Healthcare.

The workshop sessions provided guidelines about the BIG scheme and details on writing proposals for the BIG grant.

Prof. Mridula Goel shared details about the BITS BIRAC BioNEST and the importance of the BIG Scheme.

Ms. Aditi Kumar - Program Manager, SIIC IIT Kanpur guided regarding BIG application and insight into various aspects of grant writing. She also indicated that SIIC as one of the BIG partners shall provide technical guidance and technical mentoring to the registered applicants.

Dr. Wills, Zelton Biotech Pvt. Ltd. a BIG Grantee shared his experience of the journey from being an academician with a novel idea for diagnosis of mystery fever to being a BIG grantee. The participants got a chance to clear their doubts about the application process and an overview about requirements for the technical feasibility and competency of the ideas to be presented.

A similar session was conducted in partnership with SINE IIT Bombay, for the 18th BIG Call guided by Dr. Pranita Phatak- Program Associate, SINE IIT

Bombay. Being one of the BIG partners, SINE would provide mentoring and technical support for BIG applicants.

17th BIG Call: In collaboration with SINE, IIT Bombay Incubator, a virtual sensitization session to the BIG Scheme was conducted on August 13, 2020.

The session was held to discuss guidelines and expectations from innovators interested in applying for the BIG grant.

A 3-lecture Web series delivered by eminent inventors.

A web series was organized by BITS BIRAC BioNEST, Goa. The invited speakers were inventors whose contributions are enriching the Indian Biotech-Healthcare space.

Prof. Suman Chakraborty, Professor of Mechanical Engineering, IIT-KGP and pioneer of paper-based microfluidics in India. His recent invention of "Covitrap", a simplified RT-PCR test for Covid-19 has obtained nod from ICMR and he enlightened the attendees about the same. The webinar was conducted on November 06, 2020

Adarsh Natarajan, CEO, Aindra Systems. He has developed image-analysis based products for early detection of cancer and Covid-19. A winner of many entrepreneurship competitions and IUSSTF grant, he was also featured in Harvard Business Review. The title of his talk was "AI in Healthcare. Hype or reality?" The webinar was conducted on November 09, 2020

Dr. Milind Choudhari, CEO, WeInnovate Biosolutions Pvt. Ltd.; an infection prevention and control startup, who recently raised seed funding from Chiratae Ventures. Those who are in mainstream bio-entrepreneurship know why raising seed funding from a private VC should be considered as a big achievement. The title of his talk was "Nuts and Bolts of Bio-entrepreneurship". The webinar was conducted on November 12, 2020.

Webinar: "Enhancing Research and Teaching through Design Thinking for Sustainable Development"

A Webinar by Prof. Padmanabhan Seshaiyer, Tenured Professor- Mathematical Sciences, George Mason University, Virginia and Director- STEM Accelerator Program, GMU College of Science. The session was useful for the faculty and research scholars with respect to design systems and thinking.

The webinar was conducted on October 01, 2020 via Google meet.

Webinar: "Devising Effective Lab to Land Strategies for Scientific Discoveries in Biotech"

The webinar was conducted virtually on August 26, 2020 via Webex platform with Dr. Taslimarif Saiyed, Director & CEO; C-CAMP (Centre for Cellular and Molecular Platforms), Bangalore. The participants included faculty, researchers and students.

This session was of great help to the participants with the focus on converting their scientific discoveries into successful businesses.

Webinar: "Building Vibrancy in Entrepreneurship in Goa"

The virtual webinar was held on July 15, 2020 with Prof. Mrutyunjay Suar, CEO, KIIT-TBI. The participants included Institutional & incubator heads, aspiring entrepreneurs and students.

The session provided an insight to the business & entrepreneurship aspect.

Sessions / talks by BITS BIRAC BioNEST Team

Prof. Mridula Goel

- "Promotion of Startups and Innovation in the New Education Policy 2020 in a National Webinar on start-ups, innovations & entrepreneurship: enhancing a paradigm shift in India's Development" organized by department of economics, Govt. College of Commerce & Economics, Borda-Margoa, Goa, & Govt. of Arts, Science & Commerce, Khandola- Marcela, Goa in association with Rotary Club of Panaji Riviera on March 30, 2021.
- "Creativity & Idea Generation" on Feb 04, 2021 for Virtual Bioentrepreneurship Programme organized by BITS BIRAC BioNEST.
- "Entrepreneurship, Start-ups & Start-up Ecosystem" on December 21, 2020 to Students of PES SRSN College of Arts and Science, Ponda- Goa
- "Business development in Healthcare: Challenges faced in creating a Biotech startup", October 31, 2020.

Prof. Sunil Bhand

- Delivered an invite talk at BIRAC SRISTI Biotech Innovation Ignition School-7 (BIIS) webinar on sensor Technology: Potential Applications, Scope, Challenges and Opportunities" on Thursday December 17, 2020 held during December 01-21, 2020
- Delivered an invited talk at BIRAC-SRISTI organized Biotech Innovation Ignition School-6 (BIIS) webinar on Biosensors (types and application)" on Monday September 28, 2020 held during Sept 22 to Oct 12. 2020