

Nurturing Innovations: *Empowering India*

**Biotechnology Industry Research
Assistance Council**
(A Government of India Enterprise)

About BIRAC

BIRAC is a Not-for-Profit Section 8, Schedule B, 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.

Vision

To stimulate, foster and enhance the strategic research and innovation capabilities of the Indian biotech industry, particularly start-ups and SMEs, for creation of affordable products addressing the unmet needs that are globally competitive.

Key Strategies

Foster innovation and entrepreneurship

Contribute through partners for capability enhancement and diffusion of innovation

Promote affordable innovation in key social sectors

Enable commercialization of discovery

Empowerment of start-ups & SMEs

Facilitate global competitiveness of Indian enterprises

BIRAC's aim is to play a transformative and catalytic role in building a US\$100 billion Indian bioeconomy. We believe that the agents of change for building the Indian bioeconomy would be biotech start-ups & SMEs and hence our focus is on raising their capabilities, connecting them to global and local stakeholders such that they achieve global excellence.

BIRAC an Ecosystem Enabler -Funding and Beyond-

Supporting early and late stage innovation research

Ignite new Ideas - **BIG, SITARE**

Support early stage research for proof-of concept validation - **SBIRI**
Promoting Development of PoC for a product/process by
Academia with or without Industry - **AIR**

Partnership with industry for high risk discovery led innovation - **BIPP**

Facilitating technology validation and development - **CRS**

Creation of Incubation facilities - **BioNEST, UIC**

Through National and International Strategic Partnerships
Grand Challenges India, BIRAC-DBT-BMGF
SPARSH, SIIP - Social Innovation
Research Alliance for Product Innovation and Development
(RAPID)
Equity Funds - SEED Fund, LEAP Fund, AcE Fund
Product Commercialization Fund

Product innovation & commer- cialization

Enabling Services for promoting innovation ecosystem

IP Management

Technology Transfer & Acquisition

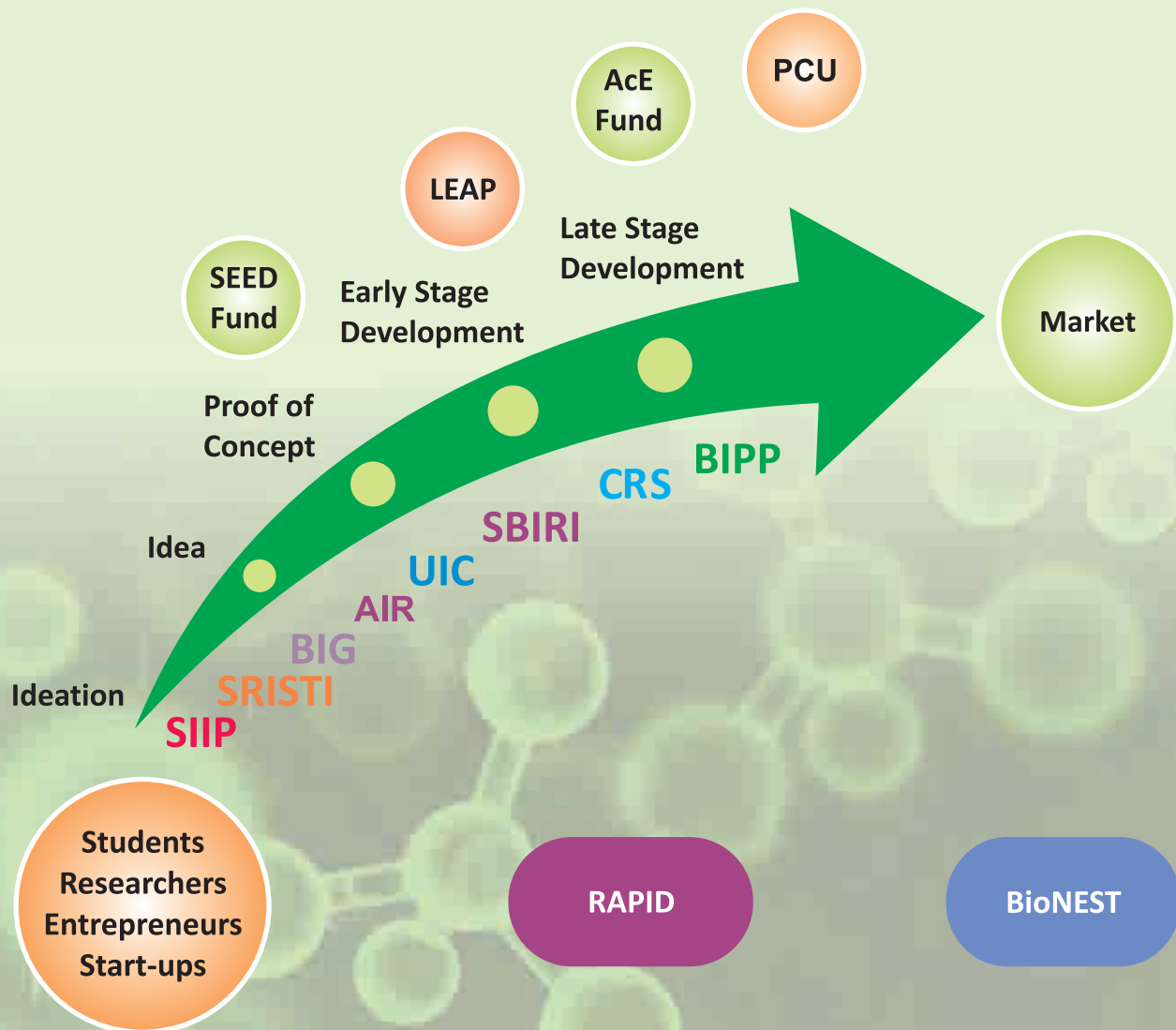
Access to Research Resources

Mentoring and Capacity Building

Access to Investors

Connecting Innovation Ecosystem

Driving Product Development



Empowering the Enterprise



Incubation Space

4,50,000 sq. ft. of incubation space across 40+ Bioincubators providing access to high-end instrumentation

Access to Research Resources

Several facilities have been established such as for protein characterisation and CGMP compliant bioprocessing



IP & Technology Management

Services ranging from IP protection, evaluation, valuation to technology licencing and acquisition

Mentoring

Pan India out reach through workshops and meetings providing one-on-one mentorship & international exposure



Igniting New Ideas -Promoting Entrepreneurship-



BIG is a flagship programme of BIRAC, which provides the right admixture of funding fuel and mentoring support to young start-ups and entrepreneurial individuals. BIG is the largest early stage biotech funding programme in India where innovators are awarded upto INR 50 lakhs as grant-in-aid to progress their innovative ideas to proof-of-concept in 18 months.

BIG HIGHLIGHTS

~400 Entrepreneurs Supported	50 + Products/Technologies developed	110 + New Start-ups created	100 + IPs filed
3 BIG Conclaves organized for networking	750 + Manpower supported for high end skills	29 Grantees attended "IGNITE" at JBS,UK	60 + Women entrepreneurs
Pan India outreach	60 + Start-ups secured Partnered Funding amounting to > 150 crore	Focused interaction with investors	



Device enabling early diagnosis of Pregnancy disorder- Preeclampsia at an affordable cost



Device to convert conventional stethoscope into digital stethoscope



Production of microcrystalline cellulose and Silica from raw rice husk



A Thermo-tolerant and Acid Stable Phytase in a Novel SSF Bioreactor



Transforming Indian Biotech Start-up Ecosystem

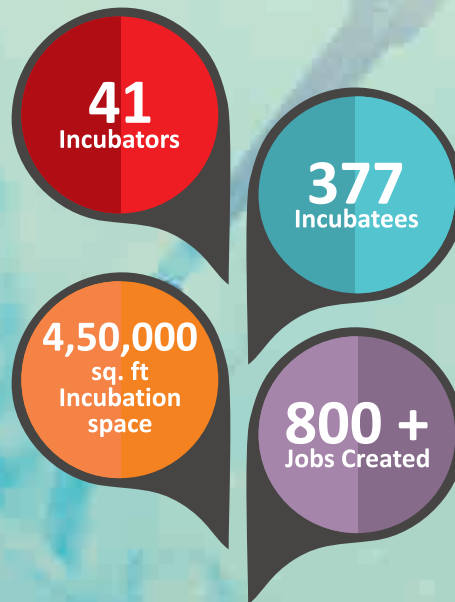


Bioincubators Nurturing Entrepreneurs for Scaling Technologies: Nesting grounds for big take-offs

FOCUS



BioNEST Impact



Germinating Ideas of Innovation

Student Innovations for Advancement of Research Explorations (SITARE)

- An initiative launched by BIRAC in collaboration with Society of Research and Initiatives for Sustainable Technologies and Institutions (SRISTI) aiming to support innovations and creativity at grassroots level among the university students, including individual innovators.
- 2 categories of awards-
 - BIRAC-SRISTI GYTI Awards (Mini-seed funds of INR 15 Lakh)
 - BIRAC-SRISTI Appreciation Awards (INR 1 Lakh each)
- BIIS workshops: 3-4 weeks hand-on-training residential workshops for students.



50+
GYTI
Awardees

130+
Appreciation
Awardees

100+
Students
trained
through BIIS
workshops

Encouraging Youth for Undertaking Innovative Research through Vibrant Acceleration (eYUVA)

University Innovation Clusters (UICs)

- An initiative to create a culture of innovation and entrepreneurship within the universities
- BIRAC innovation fellowships for **Undergraduate, Graduate, Doctoral & Post doctoral** students in addition to innovation grant to conduct R & D
- Industry participation for training, mentoring, sponsored research, networking opportunities and IP & Technology Management



TNAU,
Coimbatore



UAS
Dharwad



University of Rajasthan,
Jaipur



University of Punjab,
Chandigarh



Anna University,
Chennai

Transformation through Social Innovation



Sparsh
Touching a billion lives

**Social Innovation Programme for Products
Affordable & Relevant to Societal Health**



- Launched in 2013, the program aims to promote development of innovative solutions to society's most pressing social problems
- Following calls have been announced on socially significant themes:
 - ❖ Mother and Child Health
 - ❖ New and improved agricultural tools
 - ❖ Combating environmental pollution
 - ❖ Human Health
 - ❖ Soil and Plant Health
 - ❖ Waste to Value
 - ❖ Ageing and Health
 - ❖ Livestock health and improvement
 - ❖ Reducing post-harvest losses

47
projects
supported

18
Projects successfully
completed

51
Beneficiaries

10
Women
Entrepreneurs

13
Products/
Technologies
developed

Some of the Products/Technologies developed under the scheme are:



SAANS developed by **Coeo Labs Pvt Ltd** is a Continuous Positive Airway Pressure (CPAP) device for new born and infants



Rhino Digester is a robust, compact and cost-effective appliance for decentralized waste processing developed by **Flycatcher Technologies LLP**



RightBiotic, developed by **Xcellence in Bio Innovations and Technologies Pvt Ltd** is a point of care device for detection of antibiotic sensitivity of uropathogens



Neurosynaptic Communications Pvt Ltd has developed **ReMeDi-Nova** –A CE Certified affordable Wireless Diagnostic Technology with low energy Bluetooth enabled kit - for 35 different Point of Care Tests

Social Innovation Immersion Program (SIIP)

SIIP is BIRAC's Social Innovation fellowship/award program aimed at creating a pool of Biotech 'Social Innovators' who can identify and then bridge the needs & gaps within communities.

SIIP provides

Unique social
Innovation platform

Opportunity for clinical
and rural immersion

Funding support for
developing prototype through
mini kick start grant

Monthly
fellowship

35 social innovators
supported

"Maternal and Child Health",
"Ageing and Health" and "Waste to Value"
clusters created

11 fellows received follow-on-funding
from BIRAC or other agencies

17 prototypes and technologies
developed

Prototypes developed:



Low cost and
rapid
point-of-care
diagnostic for
detecting
neonatal sepsis



Tools for
reducing post
partum
haemorrhage



A novel
smart blood
bag monitoring
solution for
safe and
reliable blood
transfusion



Belt for
measuring
uterine
contractions



Crop residue
derived straw
panel board
for use in
construction,
furniture and
packaging
industry

Implementing Partners



Knowledge Partner



Small Business Innovation Research Initiative (SBIRI)

- Launched in 2005, Small Business Innovation Research Initiative (SBIRI), India's first PPP funding scheme facilitates companies to take their established proof of concepts (PoC) towards early stage validation, thus fulfilling a major gap in the product development cycle
- The scheme has been instrumental in nurturing not only established companies, but also start-ups in the field of biotechnology who are now availing this grant after completing the PoC studies in the BIG.



A device for secretion and oral hygiene management to reduce risk of acquiring ventilator associated pneumonia



Platform for production of Glucuronides and their deuterium labelled analogs



NoXeno device to help the clinicians in removing foreign bodies from the nasal tract of children safely and quickly



Device for electrodynamic ablation of pathogens from healthcare environment

IMPACT of SBIRI

Number of products and technologies

38

IPs filed

28

Total number of beneficiaries

252

Total number of projects supported (198 sole and 64 collaborative projects)

262

Employment generated in FY 2018-19

223

Biotechnology Industry Partnership Programme (BIPP)

- The Biotechnology Industry Partnership Programme (BIPP), a public-private partnership scheme, promotes innovative research for development of transformational technologies/processes in the Biotech sector
- The scheme serves as a launch pad for scaling and commercializing high risk innovations through equal cost sharing between BIRAC and the industry
- Support has been extended to 196 companies to accelerate high risk discovery right upto late stage validation/pre-commercialization and commercialization of new indigenous technologies.

IMPACT of BIPP

Total number of beneficiaries: 196

196 projects supported. 61 projects supported with academia/industry collaboration

8 facilities developed for research resources

31 IPs filed

47 products and technologies developed

Employment generated in FY 2018-19:364



OncoScan, an automated, affordable and compact whole slide scanner by Optra Systems Pvt Ltd.



Shishunethra, a portable, handheld, lightweight, easy to use, ROP screening device to screen pre-mature babies by Forus Health Pvt. Ltd.



An affordable ambulatory EEG device developed by Axxonet System Technologies in collaboration with NIMHANS, Bangalore



Lysolecithin as Cattle feed supplement developed by A.P. Organics Limited

Promoting Academic Research Conversion to Enterprise (PACE)

Promoting Academic Research Conversion to Enterprise (PACE) encourages and supports academia to develop technology/product (up to PoC stage) of societal/national importance and its subsequent validation by an industrial partner.

Components of Scheme

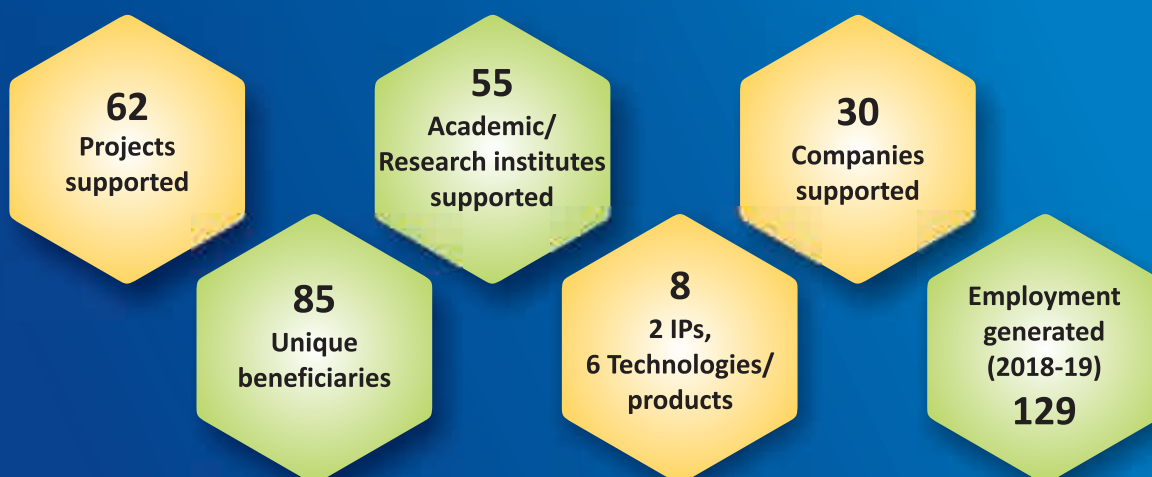
Academic Innovation Research (AIR)

- AIR promotes development of PoC for a process/product by academia with or without involvement of industry
- IP rights may be with academia alone or jointly shared between academia and industry as per the understanding between the partners

Contract Research Scheme (CRS)

- CRS aims at validation of a process or prototype (developed by academia) by an industrial partner.
- IP rights reside with the academia, the industry partner has first right of refusal for commercial exploitation of the New IP

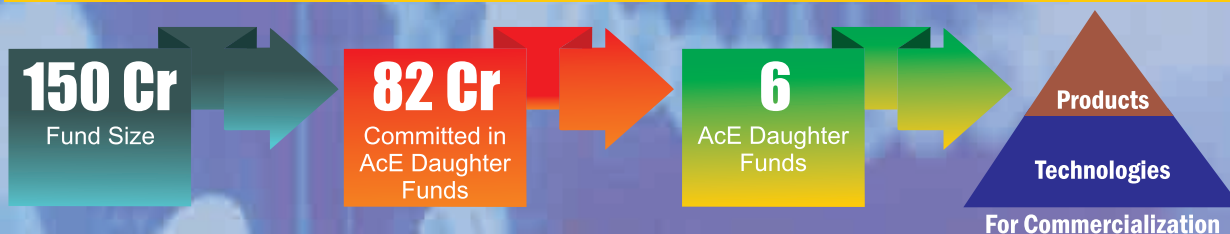
The Impact of PACE Scheme



Equity Funding

FUND OF FUNDS BIOTECHNOLOGY INNOVATION FUND **ACCELERATING ENTREPRENEURS (AcE) FUND**

Biotechnology Innovation Fund (Accelerating Entrepreneurs) is an equity based "Fund of Funds" exclusively for Biotech Start-ups. AcE daughter funds are SEBI registered private funds to invest equity in start-ups for providing the risk capital to undertake innovation, research and product development



Launching Entrepreneurial Driven Affordable Products (LEAP) Fund

INR 1 Cr/start up
against equity and equity linked instruments

The Fund will enable potential biotech startups to pilot/commercialize their products/Technologies.

SEED FUND

SUSTAINABLE ENTREPRENEURSHIP AND
ENTERPRISE DEVELOPMENT FUND

**Capital assistance to startups
through BIRAC supported incubators**

**BIRAC in partnership with BioNEST incubators
provides equity support upto
INR 30 lakhs / Start-up**

Upto
INR 200 Lakhs
to SEED Partner
Incubator
for investment
in Start-ups

14
SEED Fund
Partner
Incubators

26 Cr
SEED Fund
Sanctioned



Ministry of Electronics and
Information Technology
Govt. of India



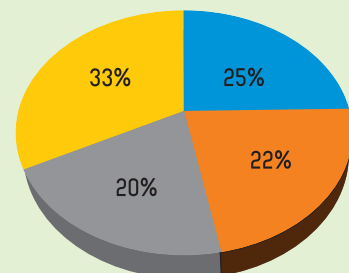
INDUSTRY INNOVATION PROGRAMME ON MEDICAL ELECTRONICS (IIPME)

Aim is to support cutting edge technologies in multi-disciplinary areas of Medical Electronics

FOCUS ON :

- **Imaging and navigation**
 - Improvements in minimally invasive techniques and therapy delivery
- **Technologies for chronic diseases**
 - Cost effective and accurate chronic disease management with focus on disease states, such as obesity and diabetes
- **Convergence of medical device and bioinformatics**
 - Results in early and faster diagnosis, better prognosis, and tailored therapy
- **Increasing the outreach through Medical electronics**
 - Innovative service models, portable home based packaged medical electronics, community health programs

PROJECTS SUPPORTED



- Imaging and navigation
- Technology for chronic diseases
- Convergence of medical device and bioinformatics
- Increasing the outreach through Medical electronics

Highlights

- | | |
|---|--|
| • Number of calls-2 (2015 & 2016) | • Products commercially launched-1 |
| • Number of proposals received-288 | • Validated Technologies/Products-10 |
| • Projects supported-36 | • IP filed on supported technologies-5 |
| • Total Funding Committed- ~ INR 15.83 Cr | • Total Manpower Supported- 140 |

Few Technologies/Products supported :



Neonatal hearing screening device



Hexapod Patient Couch



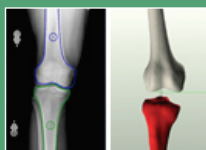
Portable X-ray



Hand-cranked Defibrillator



Smartscope: Trans-vaginal
Digital Colposcope



X-ray to 3D software



Hexapod Patient Couch



Laparoscopy Surgical Training
Simulator

BIRAC Regional Centres



***BIRAC Regional
Innovation Centre***



***BIRAC Regional
Entrepreneurship Centre***



***BIRAC Regional
BioInnovation Centre***



***BIRAC Regional
Techno-Entrepreneurship
Centre (for East & NE)***



BIRAC Regional Innovation Centre (BRIC)



Mandate of BRIC:

- Mapping Regional Innovation Ecosystems to understand the current status of innovation and identify the gaps
- Build IP awareness and provide IP & Technology Management support to start-ups & innovators
- Promote Entrepreneurship development in academia and R&D institutes

BRIC Impact (2013-2019)

- Pan India **22** clusters covered
- **750+** Innovators engaged
- **200+** Key Opinion Leaders (KOLs) connected
- **55+** workshops and networking meetings on IP, funding opportunities, regulatory guidance and capacity building through Incubation in Tier II and III cities



BIRAC Regional Entrepreneurship Centre (BREC)



National Life Science
Entrepreneurship
Awareness Programme

Entrepreneurship
Development
Workshops

Meet the Investors
Series (Dragon's Den)

National
Bio-Entrepreneurship
Boot Camp

National
Bio Entrepreneurship
Competition

BREC Impact (2017-2019)

- 90+ Start-ups mentored for business development strategy, pitching and fund-raising
- 200+ One-on-one meets between start-ups and investors
- 200+ Bio-entrepreneurs and Innovators provided specialised domain knowledge
- 700+ Students participated in awareness programmes about entrepreneurship as career
- 2000+ Innovators registered for National Bio Entrepreneurship Competition (NBEC) and 11 Industry partners supported NBEC as grand prize sponsor, investment partner and mentorship partner



BIRAC Regional BioInnovation Centre (BRBC)



Venture Mentoring Services

Venture Base Camps

Regulatory Information
and Facilitation Center

BioIncubation Practice
School for western regions

BRBC Impact (2018-2019)

- 120+ entrepreneurs connected with mentors
- 50+ one to one follow up meetings
- 50+ participants provided domain knowledge through Venture Base Camps
- 15+ incubation managers trained
- 100+ students/entrepreneurs provided insights into essentials of scientific entrepreneurship
- 50+ start-ups assisted for solving regulatory queries



BIRAC Regional Techno-Entrepreneurship Centre (BRTC) (for East & NE)- New Centre



BRTC shall undertake following activities:

Mining and assessment
of Techno-commercial
resource pool in East
& NE regional

Human Resource Development Programmes

Road
shows

Workshops
/trainings

Design
workshops

NE
Immersion
Program

NE
Showcase
Event

Hands-on
training for
rural women

Incubation
Practice School
for NE



Biotech FIRST HUB

Facilitation of Innovation & Regulation for Start-ups and Innovators



DBT, BIRAC, ICMR, CDSCO representatives will be available for taking queries

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

FIRST HUB will be open every first friday of the month at BIRAC office from 3:00pm-5:00pm

REGULATORY PATHWAYS & REGULATION

FUNDING OPPORTUNITIES

MENTORSHIP

INVESTMENT OPPORTUNITIES

MARKET ACCESS

INDUSTRY ACADEMIA PARTNERSHIPS

INTELLECTUAL PROPERTY

* Prior appointment is essential as only 5-6 innovator slots are available
 * Details such as Company name, Address, Contact, Technology/ Innovation Summary, Stage of Development and Specific Queries can be shared through the online portal at www.birac.nic.in
 * For any further details, please contact Sonia Gandhi, Senior Manager-Investments, BIRAC at sgandhi.birac@nic.in



Promoting Women Entrepreneurship



BIRAC has played a catalytic role in promoting “Women Entrepreneurship” across the country through customized programs and infusing new opportunities for women led enterprises. One such effort is: **WInER (Women In Entrepreneurial Research) Award** to recognize and reward women entrepreneurs in Indian biotech ecosystem.

- 15 early winners are awarded INR 5 lakhs each
- Access to expert mentor network of BIRAC & TiE
- 1 year complimentary membership of TiE Delhi NCR
- Access to TiE Startup Accelerator Programme
- Opportunity to go through a customized intensive Accelerator Programme at Golden Jubilee Biotech Park, Chennai

2 Editions successfully conducted



Three final winners from Accelerator programme are awarded

25 lakhs each

Technology Development and Transfer Program

BIRAC has supported a technology development and transfer program of bio-fortified and disease resistant banana from Queensland University of Technology (QUT), Australia to be translated by five Indian research organizations (NABI, Mohali; NRCB, Tiruchirapalli; IIHR, Bangalore, BARC, Mumbai and TNAU, Coimbatore) working on banana.

Using various gene constructs provided by QUT, the Indian partners are working towards

development of transgenic bio-fortified (Iron and Provitamin A) and disease resistant (Bunchy top virus and Fusarium Wilt) banana plants of two Indian cultivars namely, Grand Naine and Rasthali. Presently, the transgenic plants are at different stages of development and evaluation. Based on the expression of the transgenes, the transgenic events would be further investigated/ evaluated for various agronomic traits and eventual product development.

Trainings and Workshops

Within BIRAC, a specialised service group analyse the intellectual potential of emerging projects in all programmes of BIRAC, hand-hold emerging IP & Technologies to be secured, map the potential technologies in public sector institutions including facilitating technology transfer and create dedicated IP & Technology Transfer awareness through workshops.

BIRAC conducted several 'Hands on Training' and 'Regulatory' workshops for capacity public & organised networking platforms for young entrepreneurs for exchange of knowledge and sharing best practices. Beneficiaries include Students, Researchers, Entrepreneurs, Start-ups, Technology/IP Managers.



BIRAC-ICGEB Hands on Training on "Genome Engineering of Fungal and Yeast Strains for Biomolecule Production"
5th to 7th December 2018



Hands on training for Biosimilars organized jointly by BIRAC and ICT, Mumbai (29th Nov-1st Dec, 2018)



Secondary Agriculture Entrepreneurial Network (SAEN)

Focus

To Support Industry and Promote Start-Ups in Agri-Food Sector in Punjab

PARTNERS :

- Punjab State Council For Science and Technology (PSCST)
- Central of Innovative & Applied Bio Processing (CIAB)
- National Agri-Food Biotechnology Institute (NABI)
- Bio-NEST - Punjab University (Bio-NEST-PU)



OBJECTIVES:

- Technology Mapping & IP Landscaping of Research leads from R&D Institutions/Organizations
- Assessment of unmet needs of Agri / Food industry & Development of Technological Solutions to Address the same.
- Pre-commercial Validation/Scale up / Demonstration / Commercialization of R&D leads through proposed Early Translation Accelerator.
- Creating The Pipeline of Incubatees and Entrepreneurs.
- Capacity Building for Entrepreneurship Development

KEY FEATURES

- Mapping of Potential R&D Leads
- Early Translation Accelerator to Validate Technologies having commercial Potential
- IP Inventory of Innovations from Punjab
- Agri-Food Innovation Fellowships
- Technology Showcasing
- Annual Punjab Start up Fest
- Web Portal & knowledge Bulletin
- Support System For Existing Industrial Units
 - Solutions for Addressing Unmet Technology Needs
 - Networking with Centers of Excellence
 - Capacity Building on :
 - ❖ Protection of Intellectual Property Rights
 - ❖ Funding options available with Govt Agencies
- Support System for Start-ups
 - Incubation Space
 - Mentorship
 - Instrumentation Support
 - Access to Funding by BIRAC under Focused Secondary Agriculture Call for State of Punjab

Implemented by



Punjab State Council for
Science & Technology



National Agri-Food
Biotechnology Institute



Centre of Innovative &
Applied Bioprocessing



Bio-NEST
Punjab University

Specialized Services: Intellectual Property (IP) & Technology Management

To promote the innovation ecosystem in India and also to enable the commercialization of the technology, BIRAC offers a wide range of IP and Technology Management services to SME's, Start ups, Academia and also to Indian Biotech Industry

BIRAC in-house IP & Technology Management Cell conducts an IP evaluation for grant proposals received under various funding schemes such as BIPP, SBIRI, PACE, BIG, SPARSH, BMGF, Wellcome Trust, National Bio-Pharma Mission etc. In addition to this, the Cell also provides clarity on many of the IP and licensing issues in collaborative research projects including international projects.

BIRAC operates BIRAC-PATH (Patenting & Technology Transfer for Harnessing Innovations) scheme to offer support for Patenting & Technology Transfer to support BIRAC funded Biotech Start-ups and SMEs. The cell also organizes several IP & Technology Management awareness and capacity building workshops for Start-ups, SMEs and academicians.

Patent Searches

- a. Patentability Search
- b. Freedom-To-Operate Search/Clearance Search
- c. Validity/Invalidity search
- d. State of the Art search/Prior Art Search

Patent Drafting, Filing and Prosecution

Patent Analytics

- a. Patent/Technology Landscaping
- b. IP (Patent/Technology) Mapping

IP Policy Development and Process Set-up

Patent Portfolio Management

Technology Management offerings

- a. Technology Evaluation
- b. Technology Marketing
- c. License Negotiation

IP and Technology Management awareness and capacity building programs



Grand Challenges India



Grand Challenges India (GCI) is the flagship program of the partnership of the Department of Biotechnology, Government of India, BIRAC, and the Bill & Melinda Gates Foundation, managed by the Program Management Unit at BIRAC. In 2016, the PMU-BIRAC was joined by the Wellcome Trust.

GCI was launched with the aim of directing funding and research, and encouraging innovation to address some of the greatest public health and development challenges that India faces today. Programs under GCI and the PMU-BIRAC fall under a diverse set of themes, all of which ultimately lead to the overall goal of improving public health. These include maternal and child health, infectious diseases, vaccines, agricultural development, food and nutrition, sanitation and hygiene among others.



Program Management Unit at BIRAC (PMU-BIRAC)

The PMU-BIRAC is the implementing agency of the Grand Challenges India partnership of the Department of Biotechnology, BIRAC, the Bill & Melinda Gates Foundation and the Wellcome Trust.

PMU-BIRAC is responsible for executing, managing, and providing technical and financial oversight of collaboratively funded projects and initiatives under the Grand Challenges India program, as well as other individually funded programs. In 2016, Wellcome Trust UK joined this partnership and PMU-BIRAC provides technical and management support to the Innovator Awards of the Trust.



NATIONAL BIOPHARMA MISSION



Industry-Academia Collaborative Mission for Accelerating Discovery Research to Early Development For Biopharmaceuticals-

"Innovate in India (i3) Empowering biotech entrepreneurs & accelerating inclusive innovation"

VISION: To enable and nurture an ecosystem for preparing India's technological and product development capabilities in biopharmaceuticals to a level that will be globally competitive over the next decade, and transform the health standards of India's population.

Biotechnology Industry Research Assistance Council (BIRAC) is the implementing agency for Department of Biotechnology (DBT), Ministry of Science & Technology Biopharma Mission programme entitled: "Industry-Academia Collaborative Mission for Accelerating Discovery Research to Early Development for Biopharmaceuticals - "Innovate in India (i3) Empowering biotech entrepreneurs & accelerating inclusive innovation". The National Biopharma Mission (NBMM) was approved by the Cabinet in May 2017 at a total cost of ₹25250 Crores for five years with 50% funding through World Bank loan agreement with flexible financing arrangement.

Aim: • Boost the growth of domestic biopharma industry by accelerating the translation of research concepts into viable products and supporting clinical validation • enable sustainable networks for collaborations between industry and academia and support entrepreneurial ecosystem • Strengthen translational capability of academic institutions • Empower bio-entrepreneurs and SMEs • Elevate the innovation quotient of the industry.



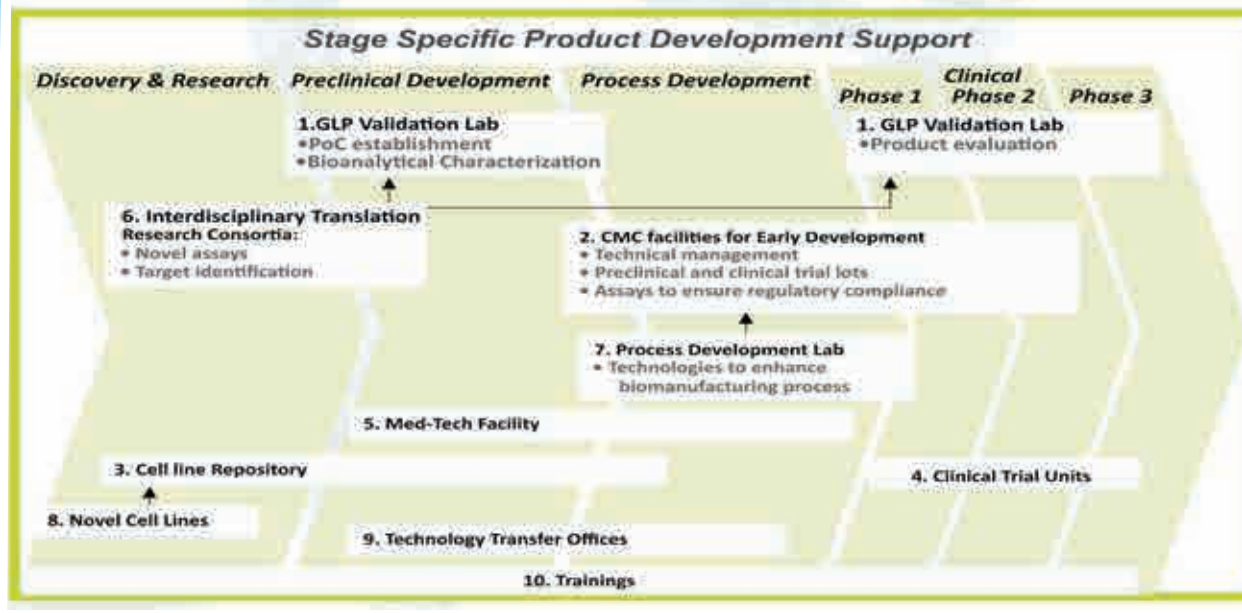
MISSION: Making India a hub for design and development of novel, affordable and effective biopharmaceutical products and solutions. The focus of the mission is:

Development of product leads that are relevant to the public health need in **vaccines, biosimilars and medical devices & diagnostics**.

Establishing and strengthening shared infrastructure facilities for product development and validation.



- Developing human capital by providing specific trainings to address the critical skills gap across the product development value chain.
- Creating and enhancing technology transfer and intellectual property management capacities and capabilities.



Make in India BIOTECHNOLOGY

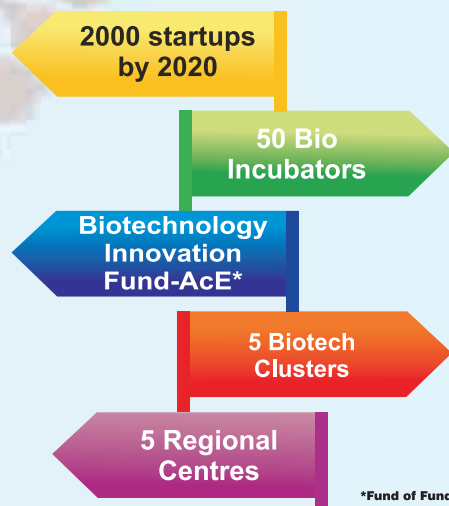
Make in India Initiative was launched in 2014 by Hon'ble Prime Minister of India, Sh. Narendra Modi



Biotechnology Industry Facilitation Cell for Make in India at BIRAC established by DBT

Action Plan for Biotechnology 2016-2020

STARTUP INDIA



*Fund of Funds

	 birac <i>Ignite Innovate Incubate</i> Impact			
1000+ Beneficiaries supported		41 Bio-Incubators supported		4 Regional & Entrepreneurship Development Centres
	Funding support by BIRAC - INR 978 Cr.		Industry Commitment - INR 937 Cr.	
150+ Academic institutes Supported	Ignite Innovate Incubate			150 Cr+ Partnered funding raised by Start-ups
10,000+ Manpower supported for high end skills		4,50,000 sq. ft. of Incubation space created		200 Cr+ Committed through Equity fund
	558 Companies supported		14 Bio-incubators supported under Equity based SEED Fund	
175+ IPs filed		130 Products & Technologies developed	 <i>Inside the box</i>	500+ Start-ups and Entrepreneurs supported





Biotechnology Industry Research Assistance Council

(A Govt. of India Enterprise)

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