



Promoting Partnerships

Innovation Research to Product Development



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

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Innovation Research to Product Development

BIRAC

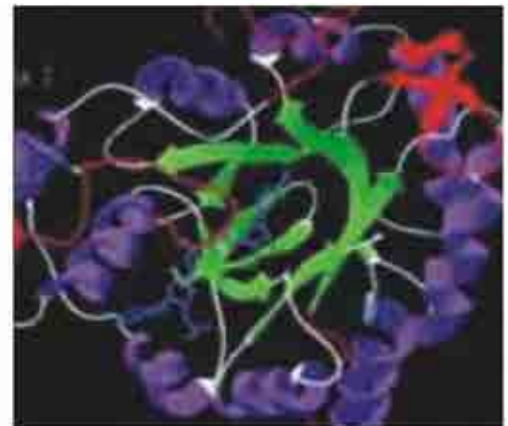
A Public Section Undertaking, 'Not for Profit Company' set up by Department of Biotechnology (DBT), Government of India as an Interface Agency to strengthen and empower the emerging Biotech enterprise to undertake strategic research and innovation, addressing nationally relevant product development needs.

Focus

Empowering and Enabling the Biotech Innovation Ecosystem for affordable product development.

Vision

Stimulate, foster and enhance the strategic research and innovation capabilities of the Indian biotech industry, particularly SME's, for creation of affordable products addressing the needs of the largest section of society.



Key Strategies



- Foster innovation and entrepreneurship in all places of research
- Promote affordable innovation in key social sectors
- Higher focus on start-ups & small and medium enterprises
- Contribute through partners for capability enhancement
- Encourage diffusion of innovation through partners
- Enable commercialization of discovery
- Ensure global competitiveness of Indian enterprises

BIRAC's Core Values



Creating the Innovation Ecosystem

The Indian Biotech Sector has acquired global visibility and is today seen as a major investment opportunity. Our strength today is using the latest tools of biotechnology to drive a Bio-based Economy.

The Department of Biotechnology's (DBT) Vision released in 2001 stated "Attaining new heights in biotechnology research, shaping biotechnology into a premier precision tool of the future for creation of wealth and ensuring social justice - specially for the welfare of the poor". The National Biotechnology Development Strategy (NBDS) announced by the Department of Biotechnology, Govt. of India in 2007 stated its vision as "To use powerful tools of biotechnology to help convert the country's diverse biological resources to useful products and processes that are accessible to its masses for economic development and employment generation".

India's Science & Technology Policy over the years has laid strong emphasis on promotion and cultivation of scientific research and innovation:

- The 1st Scientific Policy Resolution (SPR) of 1985 resolved to "Foster, promote and sustain the cultivation of scientific research in all its science.
- The Technology Policy Statement (TPS), 1983 emphasized on the need to attain technology competence and self reliance.
- The Science & Technology Policy (STP) 2003 brought Science & Technology together and emphasized on the need for investments in R&D.
- The Science & Technology Innovation Policy (STIP) 2013 reemphasized the need to promote science and technology, enhance investments in research & development - both private and public and create an ecosystem for science and technology and innovation.

The policy states that "the guiding vision of aspiring Indian STI enterprise is to accelerate the pace of discovery and delivery of science-led solutions for faster, sustainable and inclusive growth".

BIRAC's
strategies are
closely aligned
to these goals

During its two years of existence, BIRAC has made a special effort to reach out to all its stakeholders and launch special initiatives which cater to the needs of the growing enterprise and build and strengthen the Innovation Research Ecosystem.

2010 to 2020 was the announced as Decade of Innovation. In fulfillment of this important intention, the Government of India in 2011 took a landmark decision and announced the setting up of a new Public Sector Undertaking of the Department of Biotechnology, Ministry of Science & Technology, Government of India - Biotechnology Industry Research Assistance Council (BIRAC). Registered on 20th March, 2012 under the Indian Companies Act, 1956 as a Section 25, Not for Profit Company, BIRAC is an organization committed to work towards fulfillment of the vision and goals of nurturing and promoting the growth of the Indian Biotech Sector. The Indian Biotech Enterprise has been growing steadily over the last decade. The ambitious target set is US\$ 100 billion by 2025. Nurturing the sustained growth potential requires creation and support

of an innovation ecosystem and institutional framework to create, mentor, nurture and maintain such an ecosystem. Global experiences provide sufficient confidence that an Innovation and Development agency plays a crucial and critical role in supporting the creation of small enterprises and helping them to overcome the "Valley of Death" which has high chances of failure due to high risk factors.

During its two years of existence, BIRAC has made a special effort to reach out to all its stakeholders and launch special initiatives which cater to the needs of the growing enterprise and build and strengthen the Innovation Research Ecosystem. BIRAC's key strategies are aligned in a manner that the attention stays focused on "Innovation Research for Affordable Product Development". This includes inculcating and strengthening the Innovation Research Culture in young entrepreneurs, start ups and SME's. For this to happen effectively, the academia - industry interface has been strengthened and systems put in place to encourage academic research leads to move out of laboratories, through the translational phase to product development. "Partnerships" are the key to success - partnerships between academia and industry, between industry consortia, between national and international research groups and industries and also between Innovation-funding and development agencies - national, global, government philanthropic and corporate houses.



BIRAC's main mission is to bring together the like minded organisation, create these network and provide the necessary synergies which are needed for product development partnership. While the attention stays focused on affordable and social innovation, the efforts continue to create capacity and strengths to build a globally competitive Indian 'Biotech Enterprise'.



How does BIRAC accomplish this?

BIRAC as a core 'development agency' focuses on the entire product development chain from idea to proof of concept, to early stage - late stage, validation scale up, right up to commercialization. The emphasis is not only on providing the funding but complete handholding to help the entrepreneurs to grow and take their ideas forward to product development. BIRAC operates in 3 clear verticals: It is important to build a framework to nurture entrepreneurs and support entrepreneurship development. BIRAC has been constantly working in this direction.



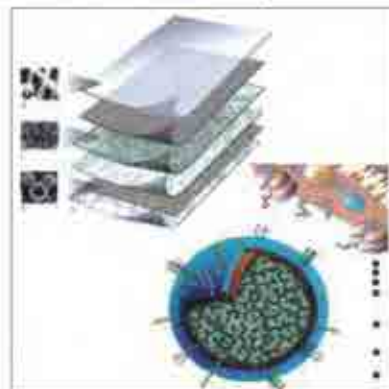
BIRAC works towards fulfilling this goal by starting at the bottom of the pyramid, where the base has to be the strongest - that is our student and young entrepreneurs, supporting novel ideas and taking them to proof of concept and then providing the essential support for early and late stage right upto scale up and pre-commercialization.





While funding is a critical component, it cannot be the only support mechanism. BIRAC is working towards strengthening the

entire ecosystem, to encourage entrepreneurs to take up innovation research. BIRAC helps them to - 'Ignite, Innovate and Incubate'.



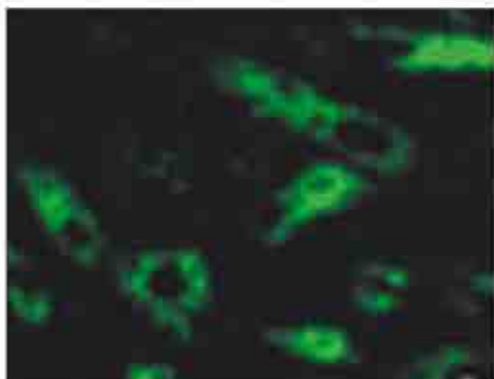
Igniting new ideas – Biotech Ignition Grant Schemes (BIG)

Biotechnology Ignition Grant (BIG) which was announced in June, 2012 is an effort to encourage young entrepreneurs to take the risk of thinking out of the box, making new discoveries and translating their ideas and discoveries through innovative research to affordable and innovative products and process.

- Scheme announced in June 2012 initially in partnership with 3 organisations which was later extended to 'BIG Partners' which are IKP Knowledge Park, Hyderabad; Centre for Cellular and Molecular Platforms (C-CAMP), Bangalore; Foundation for Innovation

and Technology Transfer (FITT), New Delhi; Venture Centre, NCL, Pune; KIIT-TBI, Bhubaneswar.

- Provides support of INR 50.00 lakhs (approx. US\$100,000) for high risk innovation discovery and proof of concept by first generation entrepreneurs and early start ups.
- 4 calls have been announced, 643 application received, 36 BIG Innovators awarded



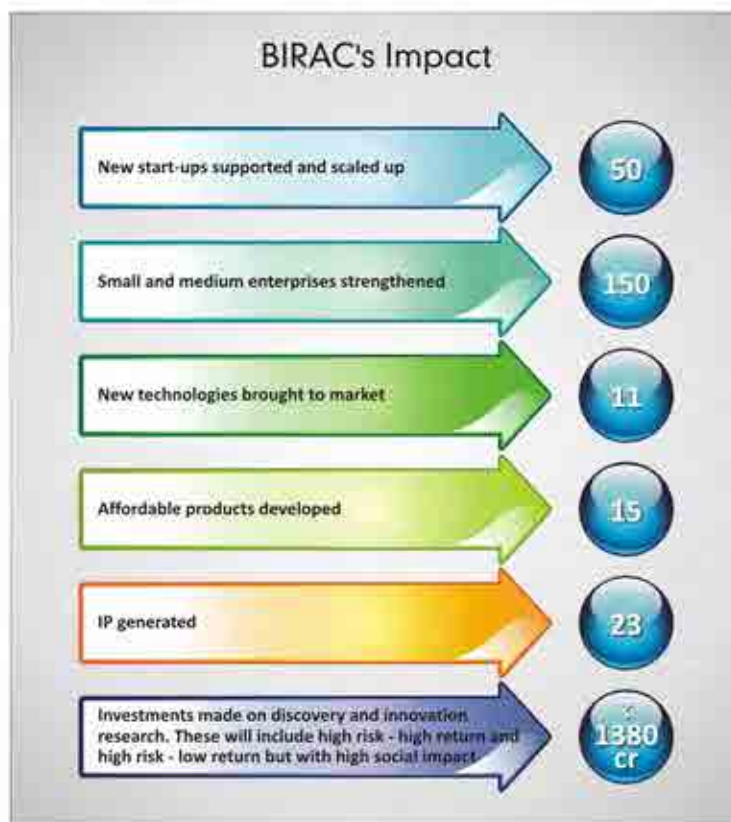
Funding and Mentoring Support to 210 companies

Funding support of ~ USD 230 Mn (110 Mn. GOI, 120 Mn. Company)
Mentoring for ~ 315 innovative projects.



Supporting Early Stage Research Development for Proof of Concept – Small Business Innovation Research Initiative (SBIRI)

As the first public Private Partnership (PPP) flagship scheme launched by Department of Biotechnology (DBT) in 2005, SBIRI has made a tremendous impact in changing the face of innovation research and nurturing Start up's and SMEs in the biotech sector. It



SBIRI and BIPP have made a combined committed contribution of INR. 1200 crores of which INR. 500 crores as Government contribution and nearly INR. 700 crores coming forward as private sector contribution.

has facilitated innovative, encouraged risk taking by small and medium companies and fostered bringing together of the private industry, public institutions and the government under one umbrella to promote the research and innovation in the Indian biotech sector. As a unique institutional mechanism, SBIRI has consistently prioritized early stage funding for high risk innovative research. Apart from this, SBIRI has filled a gap in that knowledge and leads developed through long years of research in public institutions can now be supported towards product development and commercialization with active participation of private

industry. Modeled on SBIR of the US, BIRAC's SBIRI has been adopted to the Indian ecosystem. Today the scheme has reached out to biotech companies across the country and it has also encouraged a number of public sector academic research to come forward and collaborate with the private sector.

Partnership with industry for high risk, discovery led Innovation research - Biotechnology Industry Partnership Programme (BIPP)

Moving across the product development chain it is important to not only support early discovery and innovation research but also look at providing the necessary assistance which is critical across the product development pathway – from idea to discovery, right up to scale up and pre – commercialization. Taking on from the success of SBIRI, Biotechnology Industry Partnership Programme (BIPP) was launched by the Government in 2009, today is one of the best received initiatives which provides support across the product development chain.

BIPP an advanced technology scheme and it supports high risk, high innovation accelerated technology development especially for futuristic areas of biotechnology. The uniqueness is that it



provides viability group funding and support for 'Breakthrough Research'. A cost sharing scheme with industry, BIPP encourages collaborations and partnerships, between industry and academia and industry – industry.

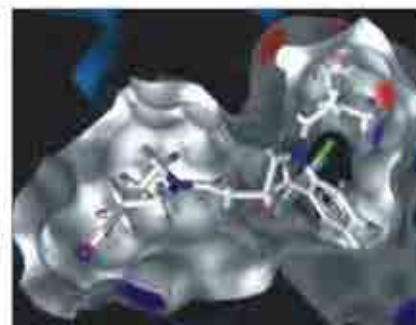
Both BIPP and SBIRI schemes have made a tremendous impact and today nearly 310 projects have been supported, involving more than 215 companies. With mix of grant and loan contribution shared by the private sector in some cases, over the last 7 years. SBIRI and BIPP have made a combined committed contribution of INR. 1380 crores of which INR. 660 crores as Government contribution and nearly INR. 720 crores coming forward as private sector contribution.

It clearly shows that India today has moved into the "Innovation Club" and as we move on we see a steady growth in the number of

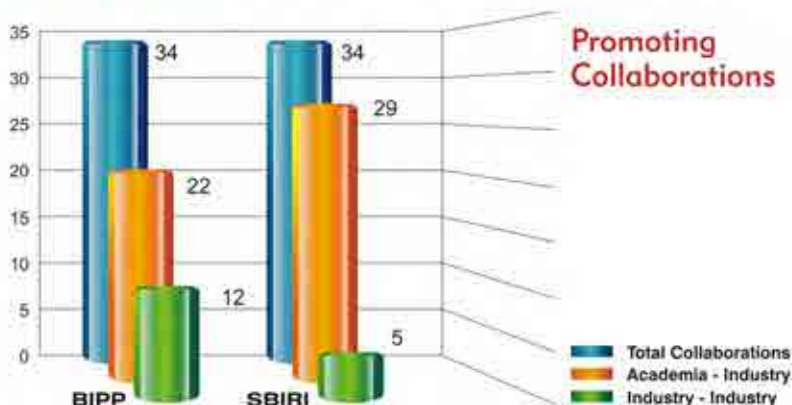
young scientists and entrepreneurs moving into biotech sector. The de-risking of the innovation path way by the Government through its various schemes has encouraged the private sector to come forward and invest in small and start ups enterprises. Another significant achievement of SBIRI and BIPP has been the impetus it has provided for initiating several modes of partnerships between industries as well as between industry and academia.

It has been encouraging to note that today a large number of leads and technologies from academic research institutes are being transferred to industry or being validated and developed into process and products through joint industry - academia partnerships.

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Academia-Industry Partnership Models



Promoting Collaborations

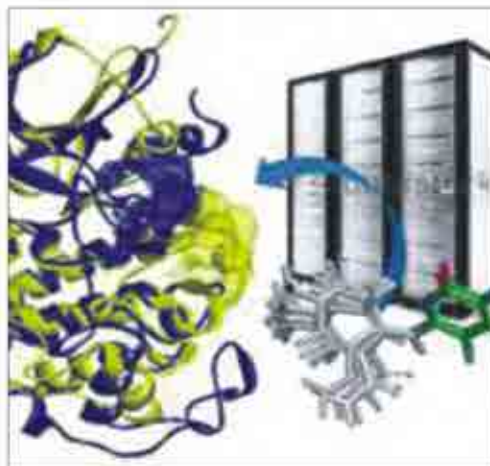
Contract Research Scheme (CRS): "Bridging the Industry-Academia Gap"

One of BIRAC's major focus is enabling public funded research to be commercialized and creating effective linkages between academia and industry. Through the CRS funding, BIRAC extends support to academic institutes across the country to take forward their research leads through validation and translation by industry. Funding is in the form of grant which is given to both the academic as well as the industrial partner. In CRS, the industry performs its role as a 'validation partner' and engages on a contractual basis, the IP rights reside solely with the academic partner.



The main concern of academic researchers to take their leads forward or work with industry was the need for a proper and sound contracting and technology license agreement. Under CRS, the BIRAC – IP & Legal Cell work with the academia and this engagement provides the confidence to work on contract research model.

Besides the funding for CRS, BIRAC helps academic scientists on several fronts such as extending help for FTO search, IP management, preparation of Material Transfer Agreement (MTA), Non-Disclosure and IP protection contracts and licensing agreements as well as technology transfer.



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Empowering the Ecosystem

Empowering for Achieving Excellence: Creating Bio-Incubator Space

In order to foster techno entrepreneurship in biotechnology, BIRAC has initiated a scheme for strengthening and up-gradation of the existing bio-incubators and also to establish new world class bio-incubators in certain strategic locations. These bio-incubators provide incubation space and other required services to the start-up companies for their initial growth.

A total of 12 Bio-incubators in different locations providing an incubation space of 70,000 sq. ft. has been set up.

The bio-incubators for SMEs and start-ups have been set up as a stand-alone facility or as a part of an existing University/ Institute or science park. The BIRAC bio-incubator have proven experience and competence to run successful incubators, have an existing network for mentoring and handholding of incubatees, and also can provide the enabling services to promote innovation research. There is a well-structured governance model which allows for such activities to be conducted within the host institute, providing the required autonomy and flexibility for operation.

The world class bio-incubation facilities leverage the proximity to academic centres

and provide the incubatees to partner with academic centres for translation research and further the proximity also allows for knowledge flow between academia and startups.

BIRAC funded Bio-incubators

- Entrepreneurship Development Centre (trademark: Venture Centre), NCL, Pune.
- IKP Knowledge Park, Hyderabad
- Centre for Cellular and Molecular Platforms (C-CAMP), Bangalore.
- Zonal Technology Management - Business Planning and Development Unitⁱⁱ - ZTM-BPD, IARI, New Delhi.



- Indian Institute of Technology, Madras,
- Indian Institute of Technology, Delhi
- Society for Biotechnology Incubation Centre, SBTIC, Genome Valley Hyderabad
- Kalinga Institute of Technology, University-TBI Business Incubator, Bhubaneswer
- Foundation of Innovation and Technology Transfer, Indian Institute of Technology, Delhi
- Gujarat State Biotechnology Mission, GSBTM, Baroda
- Regional Centre for Biotechnology, NCR Biotech Cluster, Faridabad.
- Kerala State Industrial Development Corporation (KSIDC), Life Science Park, Thiruvananthapuram

University Innovation Cluster



In order to nurture a culture of applied research and need-oriented (societal or industry) innovation among researchers and to catch them young, provide professional mentoring and support needed, it is imperative that there be a focus on fostering local ecosystems. In the Biotechnology sector for successful innovation, this ecosystem will need to include stakeholders in the entire value chain from idea → discovery → proof-of-concept → validation → prototype development → and commercialization, to ensure the innovation is accessible and affordable to the intended customer.

BIRAC has developed a focused strategic action plan to foster the culture of innovation and techno-entrepreneurship in Indian

Universities, leveraging the Cluster Innovation Centre (CIC) model recommended by the National Innovation Council (NInC). Post consultations with prominent institutions in the biotech sector, the University Innovation Cluster (UIC) initiative was launched by BIRAC National Innovation Council (NInC), as a support program for universities to proactively create vibrant ecosystems that can seed, foster and nurture bio-innovations.

Under the initiative, a Cluster Innovation Centre in Biotechnology (CIC-B), hosted in the University, will be the nerve centre to manage the University Innovation Cluster activities. Along with facilitating the creation of networks, partnerships between

stakeholders to strengthen the innovation ecosystem, the CIC-B is envisaged to provide pre-incubation support to innovative ideas, innovators for effective translation into products thereof. Such support will include technical trainings, IP management, technology business management, access to risk finance among others. Innovation Fellowships and Grants for student entrepreneurs to work on their ideas and take to proof of concept is the key attractor. The industry mentorship along with access to high level of technical expertise from the university faculty would help in nurturing the entrepreneurial talent in universities.

In the first phase of UIC, five universities spread across India have been chosen:

- Anna University, Chennai
- Punjab University, Chandigarh
- Tamil Nadu Agricultural University, Coimbatore
- University of Rajasthan, Jaipur
- University of Agricultural Sciences, Dharwad

Translational Accelerator

Early Translational Accelerator is also proposed by BIRAC. In the Indian setting, this sort of translational accelerator does not exist currently and hence even though many exciting discoveries are made in the lab, very few see the light of day in terms of being commercialized. This accelerator aims at identifying early academic discoveries and processing them to industry ready technologies.

BIRAC Regional Innovation Centre (BRIC) at IKP Knowledge Park

BIRAC's reach is pan-India and to further strengthen its linkages with regional ecosystems, BIRAC has launched its first Regional Innovation Centre called BRIC at IKP-Knowledge Park, Hyderabad. BRIC is also mandated to help startups and SMEs in the region through services such as IP and technology transfer. The initial mandate of BRIC is also to conduct an extensive regional innovation system (RIS) mapping in South India where more than 70% of biotechnology firms are located. The RIS mapping would be conducted in Andhra Pradesh, Karnataka, Tamilnadu and Kerala. The special emphasis on providing the necessary networking opportunity to the start ups / young entrepreneurs is an important component and this helps young researchers who are setting up their own enterprise to connect with academia and large companies.



The in house IP cell in BIRAC provides support to start ups and SMEs on various aspects of IP (landscaping, patent filing, freedom to operate).

Technology Transfer and Acquisition

One of the major policy interventions by BIRAC is to provide access to academic research leads, ensure osmosis of knowledge between academia and industries and provide access to cutting edge technologies that help industry to overcome bottlenecks. BIRAC engages with the academic institutions and the biotech industry and critically looks at the R&D being conducted. Part of this process involves mapping of both knowledge and technologies in organizations involved in innovation research and BIRAC has initiated technology mapping exercises of national institutions especially those that receive major funds from BIRAC and DBT. BIRAC envisages to establish a scheme for effective technology transfer of publicly funded technology to industry to be commercialized.

In order to acquire new important technologies either nationally or globally BIRAC has a Technology Acquisition Fund. This is for technologies of importance for development of novel and affordable product for the public good. For a technology to be transferred (either nationally or internationally) or acquired from overseas, BIRAC conducts a thorough due diligence of the technology and its relevance to India as well as the benefits that would be accrued if a technology is acquired into India. Different models of transfer and acquisition are considered.

BIRAC has facilitated discussions on technology transfer of cardiovascular drugs, infant care systems and formalized technology acquisition from Queensland University Australia for bio-fortification of banana.



IP Support: Safeguarding the Indian biotech innovation

The in house IP cell in BIRAC provides support to start ups and SMEs on various aspects of IP Management (landscaping, patent filing, freedom to operate). BIRAC undertakes an extensive IP evaluation of proposals that it receives for its flagship funding programmes such as BIPP, CRS, SBIR and BIG as well as providing clarity on many of the IP issues in collaborative projects including international projects. BIRAC IP Cell facilitate the IP Management between Academia and Industry in the collaborative projects.

BIRAC has set up a IP Management and Technology Commercialisation (IPM-TC) unit at DBT- ICT Centre for Energy Bio-Sciences at Mumbai and intends to set up a similar centres in different institute which can provide competent IP services to the local ecosystem.

The IP cell also organises several capacity building workshops on various aspects of IP.

Legal Advisory Support

BIRAC's Legal and Contracts Cell provides a complete due diligence required for all legal activities of the organisation and its programmes including formulation and execution of various research funding schemes, technology transfer, licensing

agreements, contract research, MoUs, agreements between BIRAC and its partnering organisations. The Cell also extends its support to the industry as per their needs on a case to case basis.

The Legal and Contracts Cell opines on related issues and has standardized the templates for different PPP models of support to Company, Consortium, Technology Transfer, Collaborative Programmes between Industry and Academia etc.



Policy and Analysis Cell: Evidence based strategic policy formulation

BIRAC's in-house Policy and Analysis Cell gathers and analyses various information related to biotechnology industry and informs the strategic decision making process within the organisation as well as forms the basis of advising stakeholders. The latest market and industry reports are reviewed and the information is then provided to relevant experts. The cell is involved in preparing techno-economic reports on numerous proposals that BIRAC receives for its flagship programmes.

As part of evidence based policy formulation, BIRAC organises several discussion series and roundtables to brainstorm about policy imperatives. Some of the discussions organized are:

The in house IP cell in BIRAC provides support to start ups and SMEs on various aspects of IP (landscaping, patent filing, freedom to operate).

- Strategic and policy meetings and discussions regarding Nano toxicity guidelines.
- FDI in pharma sector,
- Infrastructure needs for agri biotechnology sector,
- Industrial enzymes, medical devices and implants
- Bio-manufacturing.
- Future Strategies to Accelerate Discovery Research to Early Development.
- Human Papilloma Virus; Strategies for New Therapeutic Interventions
- Employing Bio-chemical tools for conversion of solid and liquid waste to energy

Based on this extensive consultation process BIRAC identifies gaps and challenges and then formulates its schemes that aim to provide solutions to the challenges identified. A 'Secondary Agricultural Innovation Cell' has been established within BIRAC. The cell provides the missing link to facilitate development of secondary agriculture industry especially SMEs. It provides independent secondary producers and processors with critical information to build successful value-added agricultural enterprises.

Affordable Product Development

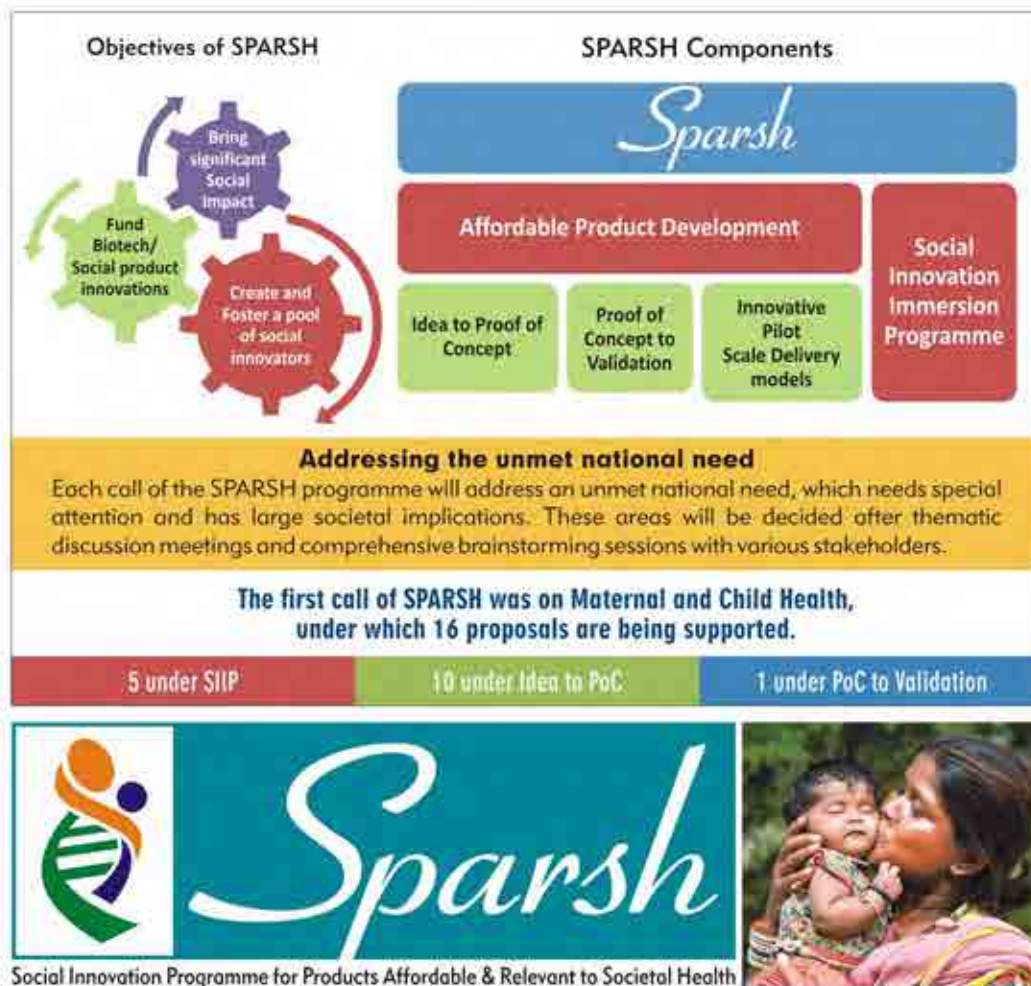
Social Innovation programme for Products: Affordable & Relevant to Societal Health (SPARSH): Touching a Billion Lives

BIRAC's mandate especially its vision of "addressing the needs of the largest section of society" aligns with the social goals of biotechnology product development. Maternal and Child health (MCH) pose several challenges that need affordable products and processes which can create immediate impact in India and geographies that show similar healthcare landscape. MCH remains one of the key determinants of

health of a society. In this regard, BIRAC launched "SPARSH: Touching a Billion Lives" combining social innovation and biotechnology for the well-being of the society with Maternal and Child Health as its first theme.

The objectives of SPARSH's are:

- Identify and provide support to cutting edge innovations towards affordable



Touching a billion lives

- product development that can bring significant social impact and address challenges of inclusive growth.
- Provide support in form of impact funding of biotech product innovations (with social goals) that can be scaled.
- Create and foster a pool of social innovators in biotech and provide a platform to share best practices, understand intricacies of business models in social innovation and network.

BIRAC Translation Facilities

Extrapolation of animals to patients through healthy volunteers plays a significant part in the drug discovery process and thus pre-clinical toxicology and Phase I clinical studies play an important role. Access to Research Resources by Young Entrepreneurs, Start ups, SME's and Academic Researcher is an imperative need for preclinical toxicology and Phase- I clinical studies in India. This is further pronounced in the research activities of start-ups and SMEs. In light of the above, BIRAC proposes to support national level facilities that could be accessible to this important group of stake holders. This would help improve the capacitive for innovation research for product development.



Discovery Research Accelerator

Research on biologicals and biopharmaceuticals has emerged as the focus area of Science and Technology investment in the last few decades. As an emerging economic power with a large and affordable product development in the vibrant research community, it is pertinent that India develops its strategy to be a major player in the biological and biopharmaceutical space. The key drivers of this strategy are innovation and effective translational research. BIRAC aims to provide the cutting edge skills of scientific leadership through industry-academia collaboration in this important research space with a national mission focusing on innovation and translational research for accelerating discovery research to early development. BIRAC presents itself as the foundational building block in the national mission on biologicals and biopharmaceuticals.

BIRAC organized a few multi stakeholder meetings to help preparing a blue print for this mission and the meetings reiterated the need for this mission. Analysis of the current 'art of the possible in India' is being done as it is an important step towards defining the blue print and implementing the mission.

Enhancing Capacities

Ignite

BIRAC and Centre of Entrepreneurial Learning (CfEL) of Judge Business School, University of Cambridge have initiated a partnership that enables five BIRAC supported applicants to take part in CfEL's flagship intensive entrepreneurial boot-camp programme called "Ignite", which is aimed at providing scientists and early startups to



explore entrepreneurial opportunities of their innovative ideas and transform them into a business project. In 2013, BIRAC selected 5 young entrepreneurs from its pool of BIG grantees as well as from Stanford India Biodesign (a DBT programme) who were provided complete support by BIRAC to attend Ignite programme as University of Cambridge and further received mentoring



support over an extended week by CfEL's networks of mentors. The participants were exposed to multitudes of business mentors who helped them refine their business models, they connected and networked with the business and technology community at the Cambridge ecosystem and forged linkages which would hopefully strengthen their enterprises.

Workshops

- Creating capacity in various fields for successful bio-enterprise development.
 - i. 6 sensitization workshops hold on "Intellectual Property, Technology Management and Entrepreneurship" organized at Jaipur, Jammu and Dibrugarh. 332 participants, 249 academia and 83 start-ups, SME's and industries.
 - ii. 4 workshops on class technology validation, licensing and transfer organized by Prof. Ashely Stevens, President Associate of Technology at

- Bangalore and New Delhi: 149 participated, 72 academia and 77 industries.
- iii. 2 Regulatory workshops on "Demystifying Indian Drug Regulations for New Product Approvals" and "Regulatory Requirements for Vaccines and Biopharmaceuticals – From Science to Commercialization" organized at New Delhi. 180 Participants, 80 Academia and 100 Start ups / SMEs.
 - iv. 6 consultative workshops on m-health in partnership with Cybermedia (CMR) group. These workshops were held at Bangalore, Mumbai, Hyderabad, Kolkata, Guwahati and New Delhi. Each workshop had 50-60 participants drawn from the government, established industry & SMEs, start ups, clinicians, not for profit organizations and other healthcare and technology provider's delivery organizations.
 - v. Roadshow of BIRAC at Mohali-Chandigarh for promoting biotechnology in the state of Punjab in association with Punjab State Science & Technology Council (PSSTC), Mohali Biotech Park and Indian School of Business, Mohali. The roadshow also included an IP Workshop and extensive engagement with participants on the various programmes of BIRAC especially BIG & CRS. Participants included doctoral, a post doctoral students, academicians, Start ups and SMEs as well as senior representative from PSSTC & Punjab University.

Strategic Partnerships

BIRAC's strategy is to partner with aligned organisations to provide further impetus to its mandate of fostering the biotechnology landscape of the country. BIRAC has established several partnerships and currently exploring other collaborations to facilitate affordable biotech product development

BIRAC – DBT – Bill & Melinda Gates Foundation (BMGF) Partnership

The DBT and the BMGF signed a MoU on July 18th, 2012 to collaborate in scientific and technological research to alleviate some of the world's most critical global health and development issues for a defined period for the benefit of people in India and developing countries worldwide. In this partnership, BIRAC plays the critical role of being the 'implementing partner'. As an implementing partner, BIRAC is the primary fiduciary and management unit for executing the Strategic Partnership of DBT and the foundation. As part of the partnership the following priority areas were identified:

1. Reduction of maternal and child mortality and morbidity
2. Scientific and technical solutions for infectious diseases



3. Strengthening India's scientific translation capacity
4. Scientific and technical advances related to agriculture
5. Scientific advancement in food and nutrition
6. Other joint interests that may arise.

The partnership has already launched two Grand Challenges calls in 2013 viz. "Achieving healthy growth through Agriculture and Nutrition" to fund a portfolio of Indian-led pilot projects that seek to target the relationship between agriculture, nutrition, and health to reduce the high incidence of low birth weight and early stunting and wasting among Indian infants and through interventions and "Reinvent the Toilet Challenge – India" a program directed at addressing the problems in sanitation and specifically targeted towards Indian innovation and creativity. The goal is to fund a portfolio of Indian led pilot projects that seek to contribute innovations that can be incorporated into a generation toilet that will reduce the burden of excreta related diseases and improve the lives of poor

Collaboration with CEFIPRA

BIRAC and CEFIPRA (Indo-French Centre for the Promotion of Advanced Research) have signed a MoU to support Indian and French biotech start-ups and SMEs for promoting the innovation ecosystem in both the countries. The partnership aims to improve the competitiveness of both Indian and French biotech industries. In this collaboration, BIRAC will support Indian industries, whereas CEFIPRA will mobilise support for French industries. The initial focus of the collaboration will be on interventions in red and green biotechnology.

Partnership with TEKES

BIRAC partnered with TEKES, the Finnish Funding Agency for Technology and Innovation, to promote joint cross border resource mobility, which is aimed to explore and enhance partnerships in the field of medical and healthcare technologies and innovations.

Collaboration with Wellcome Trust, UK

BIRAC has collaborated with Wellcome Trust to announce a joint Call on “Translational Medicine” with a budget of upto £ 1 million to be contributed by each side. Discussions are ongoing for the details of the focus areas and modalities to operationalize the mechanisms of partnerships. The MoU signing is in process for the first Joint Call.

Our Partners



Future Outlook

BIRAC aims to become a dynamic organization, applying unique methodologies for nurturing the high risk projects which hold potential for commercialization. BIRAC would like to position itself as an organisation nurturing and promoting innovation led research and will play an important role as a facilitator and not merely a service provider.

The Indian biotechnology sector is growing despite the global economic downturn. The sector however needs continued support especially the start ups and SMEs and given the right support the sector is predicted to grow and possibly touch \$100 billion in revenues by 2025 and majorly contribute to the Indian economy thus establishing a true Indian bio-economy. BIRAC in its short history has managed to secure the trust of the stakeholders. This trust is immensely valuable to the organisation and it spurs the organisation to redouble its efforts to play a greater role in catalysing the bio-economy.

BIRAC envisages greater connect with the stakeholders to initiate, implement and deliver several programmes that fill the gaps and help in turbo-charging the Indian biotechnology sector.

BIRAC continues to work towards empowerment and growth of the biotech enterprises especially start-ups and SMEs by:

- Creating "Translational Facilities" to move research leads forward
- Setting up "Service Facilities", which are accessible to the start-ups and early stage entrepreneurs.
- Setting up a "Biotech Accelerator" to nurture the early stage innovation and facilitate their translation to affordable products.
- Create "Product Development"

As we move on, BIRAC is committed to encourage Entrepreneur Development, create an Innovation Research Ecosystem and deliver with impact, Affordable and Accessible product of National and Societal relevance. In this journey BIRAC values important partnerships which are crucial for achieving the larger goal and mission of an innovation driven Indian Biotech Enterprise which is a key global player.

Together we seek to work towards

Promoting Partnerships

Innovation Research to Product Development



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