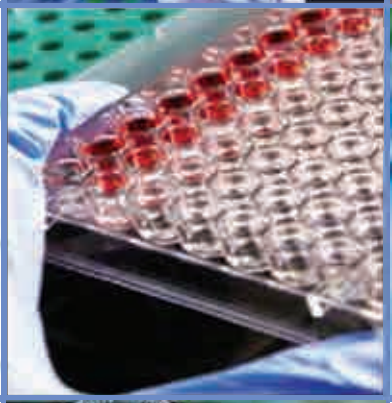
3rd Annual Report 2014-15



birac
Ignite Innovate Incubate

Biotechnology Industry Research Assistance Council

(A Govt. of India Enterprise)

Hon'ble Prime Minister Shri Narendra Modi and Prof. James Dale during his visit to QUT, Australia discussing the QUT-BIRAC Banana Biofortification project

3rd ANNUAL REPORT
2014-2015

Biotechnology Industry Research Assistance Council

(A Government of India Enterprise)

About BIRAC

Vision

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

Mission

Facilitate and mentor the generation and translation of innovative ideas into biotech products and services by the industry, promote academia – industry collaboration, forge international linkages, encourage techno entrepreneurship and enable creation and sustainability of viable bio enterprises.

Focus

Empowering and Enabling the Biotech Innovation Ecosystem for affordable product development

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

Core Values

- Integrity
- Transparency
- Team work
- Excellence
- Commitment

BIRAC is a Section 8 "Not-for-profit Company" under the Companies Act, 2013 set up by Department of Biotechnology, Ministry of Science & Technology, Government of India as its interface agency to promote industry-academia interface. The mandate was to nurture and empower the biotech innovation ecosystem and transform all elements of the nascent biotechnology industry systems. A Schedule 'B' Public Sector Undertaking, BIRAC is guided by an independent Board of Directors comprising of Senior Scientists, Academicians, Policy makers and Industrialists. To serve various dimensions of its mandate, BIRAC operates mainly in 3 verticals : *Investment schemes* provide funding support to entrepreneurs, start-ups, SMEs and Biotech Companies for all stages of the product development value chain from discovery to proof of concept to early and late stage development to validation and scale up, right up to pre-commercialization. There are also special product development missions. The second vertical is *Entrepreneurship Development* which focuses not only on the funding support, but also on making available the right infrastructure, mentoring and other networks for technology transfer and licensing, IP and business mentoring including regulatory guidance. Lastly BIRAC's *Strategic Partnership group* works closely with all partners – national and international which includes Government departments and Ministries both Central and State, industry organisations, international bilateral agencies, philanthropic organisations and corporate sector, to leverage the strength and expertise and mobilize resources and extend the outreach of its activities.

BIRAC was set up in 2012 as a Not-for-profit Section 8 company and a Public Sector undertaking under the Department of Biotechnology (DBT), Ministry of Science & Technology, Government of India. BIRAC has worked on the critical components of the ecosystem to give shape and implement its mandate and more importantly show tangible outcomes that reflect the positive results catalysed by BIRAC.

Over the 3 year period BIRAC has amplified its activities in the following strategic way :

A. Igniting new ideas through spurring a biotech innovation culture.

B. Funding programmes that bridge the Research & Development (R&D) gaps, stimulate high-risk R&D in SMEs and bring industry-academia together.

C. Collaborating with aligned organisations such that there is a multiplier effect on the Indian biotech ecosystem.

Igniting new ideas through spurring a biotech innovation culture

Over the 3 years, BIRAC has expanded its entrepreneurship activities exponentially. Identifying the gap for early stage seed funding, the Biotechnology Ignition Grant (BIG) Scheme was launched in July 2012 and BIG has grown to become a sought after early stage biotech seed funding programme in the nation. Further BIG has injected a new atmosphere in the biotech start-up culture of India that was previously missing. Early stage angel funders, accelerators and other seed funders have taken cognisance of BIG and many BIG graduates are receiving follow-on funding. In synchrony with BIG, is BIRAC's Bioincubation programme, which was initiated in 2012 that is helping to establish cutting edge Bioincubation space at 15 locations across India. Complementing BIG and Bioincubation support are three newer programmes that BIRAC has launched over 2014-15 viz. University Innovation Cluster (UIC) at 5 State Universities, Social Innovation Programme SPARSH, which has a fellowship component, called SIIP, to kick start entrepreneurial ideas and BIRAC-SRISTI GYTI Awards, in partnership, with SRISTI that aim to ignite novel ideas and provide nurturing support at early stages.

Funding programmes that bridge the R&D gaps, stimulate high-risk R&D in SMEs and bring industry-academia together

BIRAC over the last 3 years has expanded its portfolio of funding programmes for early to late stage product development. This has been built upon and further refined through existing programmes such as SBIRI, BIPP and CRS. BIRAC has supported 230 companies through its programmes such as SBIRI, BIPP and CRS. The total amount of funding is **INR 1452 crores** wherein BIRAC's contribution is **INR 640 crores** while industry has committed **INR 812 crores.** This figure is of significance as it alludes to the fact that despite the overall industry being nascent in India, given the right funding tools such as BIRAC's SBIRI & BIPP, the appetite of the emerging industry for R&D is increasing. As of 2014, BIRAC's programmes (especially SBIRI & BIPP) had **fostered 89 collaborations** between industry & academia.

Further BIRAC has established new programmes such as SPARSH, special calls for solving challenges in Human Papillomavirus (HPV), initiated mission on biopharma to name a few. The impact of these funding can be gauged from the fact that through its various funding mechanism, BIRAC has created **18 affordable products and 15 new technologies**- developed in India thus highlighting its impetus in Make in India programme. These products and technologies are from biopharma, industrial biotech and agribiotechnology. Some of the products are **Rotavac** (Rotavirus vaccine) that will immunise children against rotaviral diseases and others such as **Maxio** help in tumour ablation (Maxio has also received a **US FDA clearance**), Fluorescence reader to detect multiple infections, AINA device (to measure blood Glucose, HbA1c, lipids, creatinine & haemoglobin), PDT laser system for cancer treatment and PoC diagnostic for malaria, dengue and typhoid. With BIRAC funding, small start-ups like Tergene Biotech Private Limited have successfully completed the initial studies on an important 13-Valent Pneumococcal vaccine. Based on this success, the start-up has now entered into a joint venture with a large pharma to take this indigenous vaccine to Phase II trials.

Collaborating with aligned organisations such that there is a multiplier effect on the Indian biotech ecosystem

BIRAC's sphere of activities has grown and the number of aligned organisations that BIRAC has partnered with in the last 3 years has increased such that the impact of BIRAC's endeavours have had a multiplier effect. Starting with BIRAC's role as a partner for the Project Management Unit of the collaboration between DBT, Bill & Melinda Gates Foundation and BIRAC for delivering the Grand Challenges projects in India, BIRAC has now been able to partner with new partners both national and international. There are now new partnerships with international organisations such as Wellcome Trust, USAID, CEFIPRA, Bpi France, CfEL-University of Cambridge. Nationally also there are new partners such as DeitY, CDSA, ABLE, CII, FICCI, SRISTI and IKP Knowledge Park. Through these partnerships BIRAC is able to substantially increase its impact, exchange information and best practices that ultimately benefit the biotech ecosystem of the country.

A reflection of the last three years of BIRAC's journey shows that it has been able to build upon the early learnings and increase its footprint nationally and even globally. The impact has been positive and BIRAC quickly needs to deepen, refine and expand its impact through focused strategies.

Contents

THE BOARD OF DIRECTORS

(L to R) : Dr. Dinakar Masanu Salunke, Prof. Ashok Jhunjhunwala, Dr. Gagandeep Kang, Prof. K. VijayRaghavan, Dr. Renu Swarup , Prof. Deepak Pental, Dr. Mohd. Aslam

Biotechnology Industry Research Assistance Council
CIN: U73100DL2012NPL233152
Regd office: 1st Floor, MTNL Building, 9, CGO Complex, Lodhi Road, New Delhi-110003
Website: www.birac.nic.in Email: birac.dbt@nic.in Tel: 011-24389600 Fax: 011-24389611

Notice

Notice is hereby given that the Third Annual General Meeting of the Company will be held on:

Day and Date: Wednesday, 9th September 2015 **Time:** 4.30 p.m.

Venue: 1st floor, MTNL Building, 9, CGO Complex, Lodhi Road, New Delhi – 110 003

for transacting the following business:

Ordinary Business:

1. To receive, consider and adopt the Audited Financial Statement of the Company as on March 31, 2015 together with the Reports of the Directors and Auditor thereon and comments of the Comptroller & Auditor General of India in terms of Section 143(6)(b) of the Companies Act, 2013.
2. To fix the remuneration of the Statutory Auditor for the financial year 2015-16, in terms of provisions of Section 139(5) read with Section 142 of the Companies Act, 2013.

NOTES:

1. MEMBERS ENTITLED TO ATTEND AND VOTE MAY APPOINT ONE OR MORE PROXIES TO ATTEND AND VOTE INSTEAD OF THEMSELVES. PROXIES TO BE VALID MUST BE RECEIVED AT THE REGISTERED OFFICE OF THE COMPANY NOT LESS THAN FORTY-EIGHT HOURS BEFORE THE APPOINTED TIME OF THE MEETING.
2. Only bonafide members of the Company whose names appear in the Register of Members in possession of valid attendance slips duly filed and signed will be permitted to attend the meeting. The Company reserves its right to take all steps as may be deemed necessary to restrict non-members from attending the meeting.
3. It will be appreciated that queries, if any, on accounts and operations of the Company are sent to the Registered office of the Company ten days in advance of the meeting so that the information may be made readily available.

By Order of the Board
Kavita Anandani
Company Secretary

Registered Office:
1st floor, MTNL Building, 9, CGO Complex,
Lodhi Road, New Delhi – 110 003

Date: 19th August, 2015

AWARDS

CSI Nihilent e-Governance Award 2013-14

BIRAC was conferred the CSI Nihilent e-Governance Award 2013-14 for its 3i Portal. The 3i – "Investment for Industry Innovation Research" – Portal has been developed for sustainable, accountable, transparent governance and management of the Investment Schemes of national importance, run and managed by BIRAC.

The Pride of India Public Sector Excellence Special Award for Best New Public Sector for 2014-15

BIRAC was conferred with the Pride of India Public Sector Excellence Special Award for Best New Public Sector for 2014-15. The Award was given by Shri Arun Jaitley, Hon'ble Union Cabinet Minister of Finance, Corporate Affairs and Information and Broadcasting during an Award function organized by Dainik Bhaskar on June 4, 2015 in New Delhi.

Chairman's Message

It gives me immense pleasure to present before you the Third Annual Report of BIRAC.

It has been a remarkable journey for BIRAC as an organisation especially its evolution in terms of internal structures and processes and to witness its impact at the national level through design and implementation of its flagship programmes. This has led to its higher credibility amongst all stakeholders that we intend to sustain into the future.

In the next three years it is important for BIRAC to scale its operations and create a much greater impact. To achieve the intended scale, BIRAC is focussing on programmes that are translational in their approach and that promote biotech applications to society in nutrition, sanitation, healthcare including maternal –child health & public health. The focus of our activities is on promoting entrepreneurship which attempts to solve the aforementioned challenges. From this year onwards, BIRAC would work to develop partnerships with the State Governments in addition to further strengthening our partnerships with other National & International agencies.

'The Make in India' programme announced by the Hon'ble Prime Minister is designed to facilitate investment , foster innovation , enhance skill development , protect intellectual property and build best-in-class manufacturing infrastructure. The Biotech industry, holds immense potential for the present and future to contribute and provide leadership to this nationwide flagship programme.

There are several components that need to correctly align together to establish India as a major destination of bio-manufacturing. These components include optimal funding at each stage of innovation, a clear regulatory landscape, quality R&D infrastructure to scale and skilled human resources. There are, in addition, several other baseline factors such as ease of doing businesses, access to power and basic infrastructure which will influence the outcome of the programme.

It is important to note that Make in India is a continuum – from ideation to scalable manufacturing which meets demand. We need to feed into the innovation pipeline such that it remains full of bright novel ideas – a subset of which would eventually progress to manufacturing. It is therefore important to simultaneously foster discovery on one end as well as validation and scale on the other end. BIRAC's flagship programmes such as Biotechnology Ignition Grant, its bioincubation programme and its partnership with Society for Research and Initiatives for Sustainable Technologies and Institutions (SRISTI) are all strategies to populate the innovation funnel such that product ideas are able to move from ideation to next stage.

In the biomanufacturing arena, the challenge before us is to bridge the gap between dual requirements of product excellence and extreme affordability. India provides an experimental laboratory where we could attempt to cross this bridge, and in doing so create impact not just nationally but globally. The recent success of the Rotavirus vaccine "Rotavac" is a pointer to exciting possibilities in this approach. Similarly, we have supported several product development projects that have resulted in affordable products and technologies.

Excellence in biomanufacturing also calls for greater linkages between industry and academia and exploring diverse modes of partnerships amongst organisations. In addition, the creation of multitudes of platforms and networks will provide a fillip to cutting edge biomanufacturing in India. This has been BIRAC's top priority and would continue to remain so.I would like to use this opportunity to congratulate all of BIRAC's staff & stakeholders for their extraordinary drive and enthusiasm and reiterate BIRAC's commitment to make India a 'Biotech start up nation' by providing the necessary nurturing and mentoring to start-ups and empowering partnerships in every facet of biotechnology to expedite the product discovery to translation pipeline and to play a catalytic role in the process of acceleration and amplification of bio-innovations.

Date: August 19, 2015
Place: New Delhi

Prof. K. VijayRaghavan
Chairman, BIRAC

Managing Director's Message

BIRAC successfully completed 3 years of its operation on 20th March, 2014. It gives immense satisfaction to present before you the 3rd Annual Report. BIRAC has completed 3 years of its journey towards empowering and enabling the Biotech Innovation Ecosystem to foster and nurture innovation research in Start-ups and SMEs. BIRAC's key activities are focussed on the three verticals – financing of high risk innovation research, providing enabling services for the growth of ecosystem and building partnerships to leverage and connect with the global best. Over the last 3 years, the Entrepreneurship activity has expanded exponentially starting from BIG which has injected new enthusiasm in the BIRAC Entrepreneurs. BIG is today one of the most well received programme and it has successfully helped in nurturing nearly 150 entrepreneurial ideas and creating more than 50 new start-up companies. Funding opportunities by BIRAC across the value chain have had a significant impact on the Biotech Innovation Ecosystem. BIRAC has made a special effort towards strengthening of the essential components of the ecosystem right from the incubation space, Technology and IP Management technology and business mentoring, networking and providing the appropriate strategic partnerships.

One of the Key initiatives of BIRAC during the year was building the pipeline of Innovators and this has been done through the University Innovation Council (UIC) and the BIRAC partnership with SRISTI for the Gandhi Young India Innovation Award. The UIC have been positioned as pre-incubation centres in Universities and the main purpose is to provide young students a clear path for taking their idea to PoC.

As BIRAC moves forward in its journey of creating a vibrant Innovation Ecosystem, one of the major announcements made during the year was the launch of BIRAC AcE Fund – an equity based funding scheme to support young innovators. As we move on in our journey, BIRAC's focus is not only to scale up its operations but to engage with key stakeholders both national and international, to build deep knowledge centres which can contribute to Affordable Product Development, thereby ensuring that India is well positioned to be a Global Biotech Innovation Hub.

Date: August 19, 2015
Place: New Delhi

Dr. Renu Swarup
Managing Director, BIRAC

Board of Directors

Prof. K. VijayRaghavan	:	Chairman
Dr. Renu Swarup	:	Managing Director

Non-Executive Independent Directors

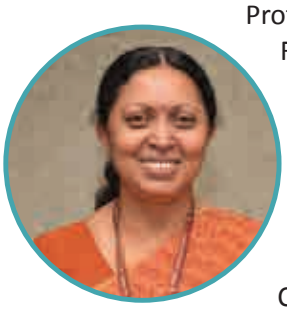
Prof. Ashok Jhunjhunwala	:	Director
Dr. Gagandeep Kang	:	Director
Prof. Deepak Pental	:	Director
Dr. Dinakar M Salunke	:	Director

Government Nominee

Dr. Mohd. Aslam	:	Director

Profile of Prof. K. VijayRaghavan

Professor K. VijayRaghavan is the Secretary, Department of Biotechnology, Government of India since January 28, 2013. Before that, he was the Director of the National Centre for Biological Sciences (NCBS) of the Tata Institute of Fundamental Research (TIFR) and the interim head of The Institute of Stem Cell Biology and Regenerative Medicine *(inStem)* a new autonomous institute of the Department of Biotechnology (DBT). Prof. VijayRaghavan's contributions in science, as a developmental biologist, have been recognized widely. He was conferred an honorary Doctor of Science degree by the University of Edinburgh in 2011. He is a J. C. Bose Fellow of the Department of Science and Technology. He gave the J.C. Bose Memorial Lecture at the Royal Society in 2010, was awarded the inaugural Infosys Prize in Life Sciences 2009. He is a recipient of Shanti Swarup Bhatnagar Prize, India's most prestigious science award, in 1998. He is a fellow of The Indian National Science Academy and The Indian Academy of Sciences and served on the Council of the latter. Prof. VijayRaghavan is an Associate Member of the European Molecular Biology Organization. In 2012, Prof. K. VijayRaghavan was elected a Fellow of the Royal Society and in 2014 a Foreign Associate of the U. S. National Academy of Sciences.



Profile of Dr. Renu Swarup

Dr. Renu Swarup is presently Senior Adviser to the Department of Biotechnology (DBT). A PhD in Genetics and Plant Breeding, Dr. Renu Swarup completed her Post-Doctoral at The John Innes Centre, Norwich UK, under Commonwealth Scholarship and returned to India to take up the assignment of a Science Manager in the Department of Biotechnology, Ministry of Science and Technology, GoI, in 1989. At DBT, she heads the National Bioresource Development Board and is involved in developing, funding and monitoring programmes in the area of Energy Biosciences, Bio resource Development and Utilization and Plant Biotechnology - Bio prospecting, Tissue Culture and other Biomass associated programmes. As a Science Manager, issues related to policy planning and implementation are also a part of her assignment. She was actively engaged in formulation of the Biotechnology Vision in 2001 and National Biotechnology Development Strategy in 2007 as the Member Secretary of the Expert Committee. She was also a member of the Task Force on Women in Science constituted by the Scientific Advisory Committee to the Prime Minister. She is a Member of the National Academy of Sciences India and was awarded the "Bio Spectrum Person of the Year Award" in 2012.

Dr. Ashok Jhunjhunwala

Dr. Ashok Jhunjhunwala is Professor in the Department of Electrical Engineering, Indian Institute of Technology, Madras at Chennai, India. After his BTech, he got his MS and PhD from the University of Maine. From 1979 to 1981, he was with Washington State University as Assistant Professor. Since 1981, he has been teaching at IIT Madras.

Dr. Jhunjhunwala is considered the pioneer in nurturing Industry-Academia interaction in India towards R&D, Innovation and Product Development. He conceived and built the first Research Park (IIT Madras Research Park) in India which houses over 100 R&D companies in its 1.2 million square feet built-up area. TiE conferred him the title of Dronacharya for his contributions to the cause of entrepreneurship, as he incubated and nurtured over 100 companies at IIT Madras. He heads the IITM Incubation Cell and Rural Technology and Business Incubator (RTBI). He leads the Telecommunications and Computer Networks group (TeNeT), which has worked closely with industry in the development of a number of products for Indian telecom, banking and power industries.

One of his key focus over the last two decades has been to drive telecom R&D. As a developer of the first Wireless in Local Loop (CorDECT WLL) product in India, he recognises that in the absence of adequate wire-line infrastructure, India would need to deliver higher bit rate per Hz of available spectrum with lower power per bit. He has been working on using telecom and ICT to drive health-care, education, agriculture, livelihood and financial inclusion. He was the founder Chairman of Mobile Payment Forum of India, which enabled mobile payments in India.

Having made a mark in telecom, over the last couple of years he has focused on power and using his solar-DC innovation, he is focused on decentralised solar power to ensure that all homes in India get 24 x 7 power even in situation of extreme power-shortage. He is Chairman of Technology Advisory Group for Electric Mobility.

He is a member of Kakodkar Committee on IITs and NITs. As a chairman of a MHRD committee on "Quality Enhancement in Engineering Education," and a member of review committee of AICTE, he is targeting both public and private engineering colleges to significantly improve the quality of their education.

As a Chairman of a Committee of SAC-PM on water, he has come up with a comprehensive report on different ways that water-shortage, quality and pollution is affecting India and has come up with R&D, Implementation and Policy tasks that India has to undertake to overcome the problems.

Dr. Jhunjhunwala has been Chairman and member of various government committees and has been on boards of several education institutions in the country. At the same time, he has been on the boards of a number of public and private companies and has driven comprehensive changes, especially in the area of technology, in the companies. He was a Director on the board of State Bank of India, Bharat Electronics, HTL, NRDC, IDRBT, VSNL and BSNL. Currently he is a board member Tata Communications, Mahindra Rewa, Polaris, Sasken, Tejas Networks, TTML, Intellect and Exicom. He is currently the Chairman of Technology Advisory Group of SEBI also.

Dr. Jhunjhunwala was conferred Padma Shri, Shanti-Swarup Bhatnagar Award, Vikram Sarabhai Research Award, H. K. Firodia Award, Silicon India Leadership Award, Millenium Medal at Indian Science Congress, UGC Hari Om Ashram Award, IETE's Ram Lala Wadhwa Gold Medal, JC Bose fellowship, Bernard Low Humanitarian Award and many others. He is fellow of IEEE, INSA, NAS, IAS, INAE and WWRF. He has also been conferred honorary doctorate by University of Maine and Blekinge Institute of Technology, Sweden.

Dr. Gagandeep Kang

Dr. Gagandeep Kang is a Professor in the Division of Gastrointestinal Sciences at the Christian Medical College (CMC) in Vellore, India. She is the head of the Wellcome Trust Research Laboratory and the Division of Gastrointestinal Sciences at CMC.

Dr. Kang's research on enteric infections focuses on epidemiology, prevention and vaccine development. She has worked with the Indian Council of Medical Research and the National Institute of Epidemiology and developed a network of Indian rotavirus clinical surveillance sites and laboratories. She heads the WHO Rotavirus Reference Laboratory for the South East Asian Region, coordinating efforts to ensure high quality investigations to support estimation of disease burden and prepare for monitoring the impact of vaccines. In addition, her group at CMC carries out clinical research on rotavirus and polio vaccines, conducting both complex field studies and laboratory assays for evaluation of vaccine performance. Complementary studies on gut function investigate the sequelae of enteric infections and effects on long term growth and development.

Dr. Kang's work has been supported by direct competitively obtained funding from the US National Institutes of Health, the Wellcome Trust, the Bill and Melinda Gates Foundation, the European Union and other international and national funding. Her work has resulted in over 200 publications, in national and international journals of high standing, and her academic contributions have been recognized, as the first woman and the first Indian to be invited to edit the prestigious Manson's Textbook of Tropical Medicine. The large body of research conducted by her group has led to practical interventions to prevent diarrhoeal disease, and continues to lay the groundwork for further interventions in the form of treatment techniques and vaccines.

She holds MBBS, MD and PhD degrees from CMC and a Fellowship of the Royal College of Pathologists, London. She is an elected Fellow of the Indian Academy of Sciences, National Academy of Sciences and the American Academy of Microbiology. She chairs the Immunization Technical Advisory Group for the WHO's South East Asian Region. She serves on several Scientific Advisory Groups nationally and internationally and is a member of the WHO's Global Advisory Committee on Vaccine Safety and the Immunization and Vaccine Implementation Research Advisory Committee.

Prof. Deepak Pental

Professor Deepak Pental is former Vice-chancellor of University of Delhi and currently professor in the Department of Genetics at South Campus of the University. He did his undergraduate and postgraduate degrees from the Department of Botany, Panjab University and subsequently Ph.D. from Rutgers University, USA. He was a Postdoctoral and University Research Fellow at the University of Nottingham from 1978-84. Prof. Pental's research interests are in breeding of mustard and cotton. He has published more than seventy research papers in national and international peer reviewed journals and his work has led to significant breakthroughs in hybrid seed production technologies. He is an elected member of the National Academy of Agricultural Sciences, the National Academy of Sciences, the Indian Academy of Sciences and the Indian National Science Academy. Prof. Pental is recipient of many awards which include – Jawaharlal Nehru Fellowship in 2004; 'Officer Des Palmes Academiques' by the Government of Republic of France in 2007; Om Prakash Bhasin Award in 2008; J. C. Bose Fellowship from DST in 2010; FICCI award in 2010 for innovative R&D in Life Sciences and a D.Sc (hc) from the University of Nottingham in 2012.

Dr. Dinakar Masanu Salunke

Dr. Salunke is currently the Executive Director of the Regional Centre for Biotechnology, Faridabad.

After obtaining Ph. D. (1983) from Indian Institute of Science Bangalore, he carried out post-doctoral research at the Brandeis University in USA before returning to the National Institute of Immunology, New Delhi in 1988 from where he is currently on lien. Dr. Salunke's Research Interests are Structural Biology of Immune Recognition, Molecular Mimicry and Allergy. He is a Fellow of the Indian National Science Academy (2004), Indian Academy of Sciences (2001), and the National Academy of Sciences (India) (1995), The World Academy of Sciences (2014).

Dr. Salunke is recipient of many awards viz. GN Ramachandran Gold Medal for Excellence in Biological Sciences and Technology (2010), JC Bose National Fellowship Award (2007), Ranbaxy Research Award for Basic Research in Medical Sciences (2002), Shanti Swarup Bhatnagar Prize for Biological Sciences (2000), National Bioscience Award (1999) among others.

Government Nominee

Dr. Mohd. Aslam

Dr. Mohd. Aslam is currently Advisor (Scientist 'G') in the Department of Biotechnology (DBT). He is involved in planning, coordination and monitoring of various R&D programmes in plant biotechnology and allied areas. Currently, he is handling major programmes of DBT such as Centres of Excellence in Biotechnology, Translational Research in Products and Processed from Medicinal & Aromatic Plants and Technology Development in Silk. Dr. Aslam is the Member Secretary of the Technical Advisory Committee of Centres of Excellence in Biotechnology and DBT's Expert Groups on Translational Research in Products and Processed from Medicinal & Aromatic Plants and Technology Development in Silk. He is also working as the nodal officer in DBT for three autonomous institutions – National Institute of Immunology (NII), New Delhi; Institute of Bioresources and Sustainable Development (IBSD), Imphal, Manipur; and International Centre for Genetic Engineering and Biotechnology (ICGEB), New Delhi and also for Biotechnology Industry Research Assistance Council (BIRAC), New Delhi.

Corporate Information

Registered Office

1st floor, MTNL Building, 9, CGO Complex,

Lodhi Road, New Delhi – 110 003

CIN: U73100DL2012NPL233152

Website: www.birac.nic.in

Email: birac.dbt@nic.in Tel: +91-11-24389600

Fax: +91-11-24389611

Statutory Auditors

M/S SAMPRK & ASSOCIATES

Chartered Accountants

102-03/106/302, 3rd Floor, Neelkanth House

S-524, School Block

Shakarpur, Delhi – 110092

Phone No: +91-11-22481918, 22482446

Bankers

Corporation Bank

Block 11, CGO Complex

Lodhi Road, New Delhi -110003.

State Bank of Hyderabad

Core 6, SCOPE Complex,

Lodhi Road, New Delhi -110003.

Company Secretary

Ms. Kavita Anandani

Directors' Report

DIRECTORS' REPORT

To the Members,

1. ABOUT BIRAC

Biotechnology Industry Research Assistance Council (BIRAC) is a not-for-profit Section 8 company incorporated under the Companies Act, 2013 and a Schedule B, Public Sector Enterprise, set up by Department of Biotechnology (DBT), Ministry of Science & Technology, Government of India as an Interface Agency to strengthen and empower the emerging Biotech enterprise to undertake strategic research and innovation, addressing nationally relevant product development needs.

BIRAC is a new industry-academia interface and implements its mandate through a wide range of **impact initiatives**, be it providing access to risk capital through targeted funding, technology transfer, IP management and handholding schemes that help bring **innovation excellence** to the biotech firms and make them globally competitive. In its three years of existence, BIRAC has initiated several schemes, networks and platforms that help to **bridge the existing gaps** in the industry-academia Innovation research and facilitate novel, high quality affordable products development through cutting edge technologies. BIRAC has initiated partnerships with several national and global partners to collaborate and deliver the salient features of its mandate.

2. OUR PHILOSOPHY & ACHIEVEMENTS

BIRAC's philosophy is rooted in its mission to *"trigger, transform and tend biotech start-ups to convert innovative research in public & private sector into viable and competitive products and enterprises"*. BIRAC aims to achieve the Vision and Mission, which have been enshrined in its charter, through various mechanisms that call for strategy involving multitudes of aligned partnerships such that bio-innovation takes root in start-ups, SMEs as well as in research institutes and academia.

Over the last three years and especially in 2014-15, BIRAC has taken extraordinary steps in stirring bioinnovation across the country. The strategy for BIRAC has been to focus on each stage of the bioinnovation development funnel viz. at the ideation, proof-of-concept, validation and scale. In addition, BIRAC has identified salient gaps in the ecosystem and taken steps in areas concerning novel biotherapeutics, medical electronics and anti-microbial resistance. In the year 2014-15, BIRAC has supported **361 start-ups, SMEs and entrepreneurs.**

Seed Funding & Entrepreneurship Development

BIRAC understands that the pipeline of new innovations would emerge from start-ups and has proactively focused on "Entrepreneurship Development"(ED) through early stage pre-seed and seed grants, fellowships, entrepreneurship awareness workshops to name a few. BIRAC's BIG has become the flagship programme in the country for spurring biotech start-ups. In six BIG calls, BIRAC has supported 154 entrepreneurs that intend to take an innovative idea and show a proof-of-concept. In house data shows that 22 start-ups were established from projects supported from the first until fourth call of BIG indicating how in no small measure BIRAC has been building the foundation of a bioinnovation nation. BIRAC also has started to witness several of the BIG grantees graduate into follow on funding either from BIRAC or through other agencies.

BIRAC has partnered with SRISTI at IIM Ahmedabad to foster innovative ideas at academia through BIRAC-SRISTI GYTI Awards wherein 15 innovative ideas at universities would receive a pre-seed award of INR 15 lakhs and further another 100 ideas would receive INR 1 lakh award. In line with the entrepreneurship development strategy, BIRAC has focused on building social entrepreneurs through Social Innovation Immersion Fellowship programme (SIIP) and 16 social entrepreneurs have been selected to undergo training at 4 implementing partners. Similarly, BIRAC, through its University

Innovation Cluster (UIC), has focused on building industry focused market oriented R&D through postdoctoral and postmasters fellowships at 5 state universities.

The BIRAC SRISTI partnerships, SIIP, UIC all aim to feed the pipeline of the entrepreneurship development and it is hoped that many of these ideas would then graduate into maturity and excellence such that they can then be further supported via BIG or other follow-on funding.

BIRAC has been active in understanding the regional innovation environment and through BIRAC's Regional Innovation Centre (BRIC), in partnership with IKP, has mapped the Hyderabad cluster while mapping of Bangalore, Chennai and Thiruvananthapuram are being planned. Through this mapping BIRAC has identified emerging entrepreneurial talent and technologies that are being developed in the research and academic institutions.

In line with this strategy is BIRAC Bioincubation support programme which currently supports 15 bioincubation facilities covering 1,20,000 square feet of bioincubation space that cater to start-ups needs & provide a growth space for emerging biotech & medtech start-ups in the country through focused services, access to high end common instrumentation, mentoring and access to networks. Currently, these provide incubation facility to over 100 entrepreneurs. In 2014-15 BIRAC has supported a medtech focused incubator at HTIC (in IIT Madras Research Park), bioincubation facility at IIT Madras (in IIT Madras Research Park) and a focused support to women entrepreneurs at Golden Jubilee Biotech Park for Women (at Chennai), thus adding valuable space and networks for growth of biotech in the country.

BIRAC continuously strives to impart value to the emerging start-ups and SMEs through workshops. In the year 2014-15, **171 entrepreneurs and potential entrepreneurs** have been provided entrepreneurship development training either through its own workshops or in partnership with Association of Biotech Led Enterprises, the nodal biotech industry organisation in India. BIRAC continued with its excellent partnership with Centre for Entrepreneurial Learning (CfEL), the Judge Business School at University of Cambridge wherein 5 of BIG grantees immersed themselves in CfEL's leading Ignite Programme that draws entrepreneurs from all across the globe.

Early & Late Stage Funding for Product Development

BIRAC's focus is to propel innovative product development and it provides layers of follow-on, funding to biotech enterprises especially to SMEs that are appropriate for the stage of the product development. This is implemented through flagship programmes of BIRAC such as Small Business Innovation Research Initiative (SBIRI), Biotechnology Industry Partnership Programme (BIPP) and Contract Research Scheme (CRS). SBIRI takes start-ups and SMEs to the next level of funding support wherein projects upto INR 1 crore are supported while BIPP aims to catapult high risk innovations through early to late stage and validation in a co-funding model. Through CRS, BIRAC aims to promote the industry-academia collaborative R&D. BIRAC's commitment to address social challenges through biotechnology tools is implemented via its Social innovation programme for Products: Affordable & Relevant to Societal Health (SPARSH).

As mentioned previously, through these flagship programmes 361 enterprises were supported in 2014-15 that dealt with multitudes of innovation from green energy, agri-biotech to new technologies for drug delivery. The impact of this funding support can be gauged from the fact that in 2014-15, through BIRAC's support, **5 new technologies** were developed and products brought to the market and **5 proof-of-concept** of early stage technology were generated.

Through SBIRI, support has been extended to 148 companies in diverse fields of biotechnology while in BIPP, 110

companies have received support for their high risk innovative R&D projects (a total of 326 projects have been funded). In SPARSH, 10 projects in the focus areas of maternal & child health have been supported and as mentioned before 16 SIIP fellows are now active.

The need for boosting the biopharma/ pharma sector was felt and series of activities were initiated in 2014-15 starting with consultative meeting on Anti-Microbial Resistance (AMR) and launching of a 'Mission for Accelerating Discovery Research to Early Development of Biopharmaceuticals'. Further, BIRAC also conceptualised and initiated an 'Early Translation Accelerator' at C-CAMP, Bangalore which would identify and foster early translational discoveries in academia.

BIRAC continuously also strives to provide all enabling services to the start-ups and SMEs to help take their innovation to move through the Product Development Chain. IP and Technology Management and Legal guidance for Contracts and Technology Transfer licenses have been a major support to the ecosystem.

Leveraging Partnerships

In line with the mandate of finding solutions to societal problems through innovative product development, BIRAC initiated **5 International and National partnerships**. With Bill & Melinda Gates Foundation (BMGF), a Grand Challenges India Initiative was launched in Agriculture and Nutrition, Sanitation and Maternal & Child Health. In total 11 projects have been supported through this partnership. Similarly, joint calls were launched with Wellcome Trust, UK (for diagnostics for infectious diseases), the French agency CEFIPRA (in molecular diagnostics for chronic conditions such as cardiac diseases, Alzheimer, Cerebral Palsy etc). BIRAC also partnered with the Department of Electronics & Information Technology (DeitY), Government of India, in the field of medical electronics (the partnership is being currently rolled out) and further a tripartite partnership was forged with USAID & IKP Knowledge Park in promotion of innovation in 'Rapid diagnostics for TB'.

Networks & Business Platforms

BIRAC endeavoured to create networks and platforms through either its own network platforms (Innovator Meet, Roadshows, IP & Regulatory workshops) or through extending support to BioAsia (Hyderabad), Bangalore India BIO (Bangalore), BioJapan and BIO USA. BIRAC participated in Festival of Innovations at the Rashtrapati Bhavan during March 9th -13th.

BIRAC continued its efforts in engaging the community of stakeholders through its 3rd Innovator Meet on 22nd & 23rd September, 2014 and the 3rd Foundation Day was organised on 19th & 20th March, 2015. These two events drew both national & international participants and emerging issues in bio-innovation were extensively discussed and strategies for new solutions were charted. The Hon. Minister of State, Shri. YS Chowdhury announced the launch of BIRAC's ACE Fund- a new equity based funding that BIRAC aims to implement in the near future.

BIRAC in its short span has impacted the national innovation landscape. BIRAC was felicitated in 2014-15 with the CSI Nihilent e-Governance Award (2013-14) for BIRAC's 3i portal which has provided a transparent and effective interface with BIRAC beneficiaries. BIRAC also received the *Pride of India Public Sector Excellence Award for Best New Public Sector for 2014-15.* The award was given by Shri. Arun Jaitley, Hon'ble Union Cabinet Minister of Finance, Corporate Affairs & Information & Broadcasting.

BIRAC will deepen and broaden its activities on the foundation of multitudes of programmes that it has initiated either previously or during 2014-15.

3i Portal

The various funding schemes of BIRAC are being effectively managed with the help of BIRAC 3i portal. The portal is highly dynamic and flexible and provides end to end solution for most of the schemes. Features offered

by the portal include online proposal submission, reviews, meeting management, issuance of sanction and release orders, monitoring, auto-emails, reminders, reports etc. Early this year, agenda for meetings was also brought to digital mode and is made available to experts in a non-printable format through the portal. Through this we have achieved to save approximately 10,000 pages per month. The features offered by portal are being upgraded and expanded regularly and we hope to bring all schemes to a completely online mode soon.

3. AUDIT COMMITTEE

BIRAC is registered under Section 8 of the Companies Act, 2013 as a not for profit company. It is a private limited company which is not listed on any stock exchange. The constitution of audit committee is not applicable to the company as it is not a public listed company. However, constitution of an Audit Committee is a requirement under the DPE Guidelines on Corporate Governance. Accordingly, an Audit committee of the Board was constituted with 3 directors, two of whom were independent.

4. FINANCIAL STATEMENT

The financial statement is made on accrual method of accounting under the historical cost convention, in accordance with the accounting standards issued by Institute of Chartered Accountants of India.

5. EXTRACT OF THE ANNUAL RETURN

In accordance with Section 134(3)(a) of the Companies Act, 2013, an extract of the Annual Return in the prescribed format is appended as *Annexure* 1 to the Directors' Report

6. NUMBER OF MEETINGS OF THE BOARD

The Board met five times during the financial year, the details of which are given in the Corporate Governance Report, which forms a part of the Annual Report. The intervening gap between any two meetings was as prescribed under the Companies Act, 2013 and the guidelines issued by the Department of Public Enterprises.

7. DECLARATION BY INDEPENDENT DIRECTORS

The Company has received the necessary declaration from each independent director under Section 149(7) of the Companies Act, 2013 that he/she meets the criteria of independence laid down under Section 149(6) of the Companies Act, 2013.

8. PARTICULARS OF CONTRACTS OR ARRANGEMENTS MADE WITH RELATED PARTIES

BIRAC has not entered into any contracts or arrangements with related parties as per the provisions of Section 188(1) of the Companies Act, 2013.

9. RTI

BIRAC follows all necessary procedures and processes in accordance with the Right to Information Act 2005 as amended from time to time & Government Guidelines; it has appointed a CPIO and Appellate Authority. The details are available on its website (www.birac.nic.in).

10. RISK MANAGEMENT POLICY

BIRAC has in place a suitable Risk Management Policy

11. DISCLOSURE UNDER THE SEXUAL HARASSMENT OF WOMEN AT WORKPLACE (PREVENTION, PROHIBITION AND REDRESSAL) ACT, 2013

The Company has formed a Grievance Redressal Mechanism and constituted a Complaints committee with terms of reference as required under the CCS (Conduct) Rules and the Guidelines laid down by the Hon'ble Supreme Court in Vishaka and others Vs. The State of Rajasthan which will also serve as the Internal Complaints Committee (ICC) to redress complaints received regarding sexual harassment under the Sexual Harassment of Women at Workplace (Prevention, Prohibition and Redressal) Act, 2013.

All employees (permanent, contractual, temporary, trainees) are covered under this policy. The Company has not received any grievances during the financial year 2014-15.

12. MEMORANDUM OF UNDERSTANDING (MoU)

BIRAC had entered into the first Memorandum of Understanding (MoU) for the year 2014-15 with the Administrative Ministry, the Department of Biotechnology (DBT), Ministry of Science & Technology on March 24, 2014, as per the Guidelines issued by the Department of Public Enterprises (DPE).

13. DIRECTOR'S RESPONSIBILITY STATEMENT

In accordance with the provisions of Section 134(5) of the Companies Act, 2013, the Directors state that :

- in the preparation of the annual accounts, the applicable accounting standards had been followed along with proper explanation relating to material departures;
- the directors had selected such accounting policies and applied them consistently and made judgments and estimates that are reasonable and prudent so as to give a true and fair view of the state of affairs of the company at the end of the financial year and of the profit and loss of the company for that period;
- the directors had taken proper and sufficient care for the maintenance of adequate accounting records in accordance with the provisions of this Act for safeguarding the assets of the company and for preventing and detecting fraud and other irregularities;
- the directors had prepared the annual accounts on a going concern basis; and
- the directors had devised proper systems to ensure compliance with the provisions of all applicable laws and that such systems were adequate and operating effectively.

14. CORPORATE GOVERNANCE

A separate report on Corporate Governance is annexed with this report.

15. AUDITORS' REPORT

M/s. SAMPRK & Associates, Chartered Accountants are the Statutory Auditors of the Company appointed by the Comptroller and Auditor General of India for the period under review (Financial Year 2014-15). Auditors Report/CAG Report are appended to the Financial Statements and are self-explanatory and suitably explained in various Notes on the accounts

16. BANKERS

Bankers are

- Corporation Bank, Block 11, CGO Complex, Lodhi Road, New Delhi -110003.
- State Bank of Hyderabad, Core 6, SCOPE Complex, Lodhi Road, New Delhi-110003

17. ABOUT DIRECTORS

BIRAC is guided by a board comprising of senior professionals, academicians, policy makers and eminent professionals from the industry. Prof. K. VijayRaghavan, Secretary, Department of Biotechnology is the Chairman of the Board and Dr. Renu Swarup, Senior Adviser, Department of Biotechnology is the Managing Director.

The Board comprises of 4 Independent Directors viz. Prof. Ashok Jhunjhunwala, Professor, IIT Chennai, Dr. Gagandeep Kang, Professor & Head, Department of Gastrointestinal Sciences, Christian Medical College, Vellore, Prof. Deepak Pental, Department of Genetics, University of Delhi, Dr. Dinakar Masanu Salunke, Executive Director, Regional Centre for Biotechnology. Dr. Mohd. Aslam, Scientist 'G', Department of Biotechnology is the Government nominee director

18. CONSERVATION OF ENERGY, TECHNOLOGY ABSORPTION AND FOREIGN EXCHANGE EARNINGS AND OUTGO

The information pertaining to conservation of energy, technology absorption, Foreign exchange Earnings and outgo as required under Section 134 (3)(m) of the Companies Act, 2013 read with Rule 8(3) of the Companies (Accounts) Rules, 2014 is as follows:

A. Conservation of Energy

Disclosure regarding conservation of energy is not applicable to our Company.

B. Technology Absorption, Adoption and Innovation

Particulars required under Rule 8(3)(B) of the Companies (Accounts) Rules, 2014 has not been given since the company has no direct research and development activity. However, the main function of BIRAC is to facilitate and provide financial support for generation and translation of innovative ideas into biotech products/technologies, foster innovation in all places of research and to encourage diffusion of innovation through partners. The details are provided in the Management Discussion and Analysis Report, Annexures 1 and 2

C. Foreign Exchange Earnings & Outgo

The foreign exchange earnings & outgo during the year are given below:-

Foreign Exchange Inflow in the form of Donations	Nil
Foreign Exchange outflow A. Books, Journal and Database Subscription B. Foreign travel by employees C. Entrepreneurial Development	 USD 178,383 & GBP 7,500 USD 1,450 & AUD 5,800 AUD 50,312
CIF value of import	Nil

ACKNOWLEDGMENT

The Directors wish to place on record their appreciation for the valuable guidance and cooperation extended by the Auditors, Banks and various governmental agencies. The Directors also wish to place on record their appreciation for the sincere efforts put in by the executives and staff of the Company.

For and on behalf of Board
Prof. K. VijayRaghavan
Chairman

Date: August 19, 2015
Place: New Delhi

Annexure I

EXTRACT OF ANNUAL RETURN
as on the financial year ended on March 31, 2015
[Pursuant to Section 92(3) of the Companies Act, 2013 and Rule 12(1) of the Companies (Management and Administration) Rules, 2014]

I. REGISTRATION AND OTHER DETAILS:

i) CIN: **U73100DL2012NPL233152**

ii) Registration Date: **March 20, 2012**

iii) Name of the Company: **Biotechnology Industry Research Assistance Council**

iv) Category / Sub-Category of the Company: **Section 8 Private Limited Company limited by shares (Government Company)**

v) Address of the Registered office and contact details: **1st floor, MTNL Building, 9, CGO Complex, Lodhi Road, New Delhi – 110 003. Website: www.birac.nic.in Email: birac.dbt@nic.in Tel: +91-11-24389600**

vi) Whether listed company Yes / No : **No**

vii) Name, Address and Contact details of Registrar and Transfer Agent, if any:

Skykine Financial Services Pvt. Ltd., D-153 A, 1st Floor, Okhla Industrial Area, Phase - I , New Delhi – 110 020
Contact Person: Shri Virender Rana

II. PRINCIPAL BUSINESS ACTIVITIES OF THE COMPANY

All the business activities contributing 10% or more of the total turnover of the company shall be stated:-

Sl. No.	Name and Description of main products/services	NIC Code of the Product/service	% to total turnover of the company
1	Research and experimental development on natural sciences and engineering (NSE)	73100	100%

III. PARTICULARS OF HOLDING, SUBSIDIARY AND ASSOCIATE COMPANIES -

S. No.	Name and address of the company	CIN/ GLN	Holding/ Subsidiary/Associate	% of shares held	Applicable Section
1	N.A.	N.A.	N. A	N. A	N.A

IV. SHARE HOLDING PATTERN (Equity Share Capital Breakup as percentage of Total Equity)

i) Category-wise Share Holding

Category of Shareholders	No. of Shares held at the beginning of the year				No. of Shares held at the end of the year				% Change during the year
	Demat	Physical	Total	% of Total Shares	Demat	Physical	Total	% of Total Shares	
A. Promoters									
(1) Indian									
i) Individual/ HUF	-	-	-	-	-	-	-	-	-
ii) Central Govt	N.A.	10000	10000	100	N.A.	10000	10000	100	NIL

Category of Share-holders	No. of Shares held at the beginning of the year				No. of Shares held at the end of the year				% Change during the year
	Demat	Physical	Total	% of Total Shares	Demat	Physical	Total	% of Total Shares	
iii) State Govt (s)	-	-	-	-	-	-	-	-	-
iv) Bodies Corp.	-	-	-	-	-	-	-	-	-
v) Banks/FI	-	-	-	-	-	-	-	-	-
vi) Any Other	-	-	-	-	-	-	-	-	-
Sub-total (A) (1):-	**N.A.**	**10000**	**10000**	**100**	**N.A**	**10000**	**10000**	**100**	**NIL**
(2) Foreign									
a) NRIs - Individuals	-	-	-	-	-	-	-	-	-
b) Other - Individuals	-	-	-	-	-	-	-	-	-
c) Bodies Corp.	-	-	-	-	-	-	-	-	-
d) Banks / FI	-	-	-	-	-	-	-	-	-
e) Any Other....	-	-	-	-	-	-	-	-	-
Sub-total (A) (2):-	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
Total shareholding of Promoter (A) = (A)(1)+(A)(2)	**N.A.**	**10000**	**10000**	**100**	**N.A.**	**10000**	**10000**	**100**	**NIL**
B. Public Shareholding									
1. Institutions	-	-	-	-	-	-	-	-	-
a) Mutual Funds	-	-	-	-	-	-	-	-	-
b) Banks/FI	-	-	-	-	-	-	-	-	-
c) Central Govt	-	-	-	-	-	-	-	-	-
d) State Govt(s)	-	-	-	-	-	-	-	-	-
e) Venture Capital Funds	-	-	-	-	-	-	-	-	-
f) Insurance Companies	-	-	-	-	-	-	-	-	-
g) FIIs	-	-	-	-	-	-	-	-	-
h) Foreign Venture Capital Funds	-	-	-	-	-	-	-	-	-
i) Others (specify)	-	-	-	-	-	-	-	-	-
Sub-total (B)(1):-	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
2. Non-Institutions									
a) Bodies Corp.									
i) Indian	-	-	-	-	-	-	-	-	-
ii) Overseas	-	-	-	-	-	-	-	-	-

Category of Share-holders	No. of Shares held at the beginning of the year				No. of Shares held at the end of the year				% Change during the year
	Demat	Physical	Total	% of Total Shares	Demat	Physical	Total	% of Total Shares	
b) Individuals									
i) Individual shareholders holding nominal share capital upto ₹ 1 lakh	-	-	-	-	-	-	-	-	-
ii) Individual shareholders holding nominal share capital in excess of ₹ 1 lakh	-	-	-	-	-	-	-	-	-
c) Others (specify)	-	-	-	-	-	-	-	-	-
Sub-total (B)(2):-	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
Total Public Shareholding (B) = (B)(1) + (B)(2)	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
C. Shares held by Custodian for GDRs & ADRs	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
Grand Total (A+B+C)	**N.A.**	**10000**	**10000**	**100**	**NA**	**10000**	**10000**	**100**	**NIL**

(ii) Shareholding of Promoters

Sl. No.	Shareholder's Name	Shareholding at the beginning of the year			Shareholding at the end of the year			% change in Share-holding during the year
		No. of Shares	% of total Shares of the company	% of shares Pledged/ encum-bered to total shares	No. of Shares	% of total shares of the company	% of shares Pledged/ encum-bered to total shares	
1	President of India	9000	90%	Nil	9000	90%	Nil	Nil
2	Prof. VijayRaghavan, Secretary, DBT and Chairman, BIRAC (on behalf of the President of India)	900	10%	Nil	900	10%	Nil	Nil
3	Dr. Renu Swarup, MD, BIRAC (on behalf of the President of India)	100	1%	Nil	100	1%	Nil	Nil
	Total	**10000**	**100%**	**Nil**	**10000**	**100%**	**Nil**	**Nil**

(iii) Change in Promoters' Shareholding (please specify, if there is no change)

	Shareholding at the beginning of the year		Cumulative Shareholding during the year	
	No. of shares	% of total shares of the company	No. of shares	% of total shares of the company
At the beginning of the year	NIL	NIL	NIL	NIL
Date wise Increase/ Decrease in Promoters Shareholding during the year specifying the reasons for increase/decrease (e.g. allotment/transfer/bonus/ sweat equity etc)	NIL	NIL	NIL	NIL
At the End of the year	NIL	NIL	NIL	NIL

(iv) Shareholding Pattern of top ten Shareholders (other than Directors, Promoters and Holders of GDRs and ADRs):

For each of the top 10 Shareholders	Shareholding at the beginning of the year		Cumulative Shareholding during the year	
	No. of shares	% of total shares of the company	No. of shares	% of total shares of the company
At the beginning of the year	NIL	NIL	NIL	NIL
Date wise Increase/Decrease in Shareholding during the year specifying the reasons for increase/decrease (e.g. allotment/ transfer/ bonus/sweat equity etc)	NIL	NIL	NIL	NIL
At the End of the year (or on the date of separation, if separated during the year)	NIL	NIL	NIL	NIL

(v) Shareholding of Directors and Key Managerial Personnel

(A) Prof. VijayRaghavan, Chairman

	Shareholding at the beginning of the year		Cumulative Shareholding during the year	
For Each of the Directors and KMP	No. of shares	% of total shares of the company	No. of shares	% of total shares of the company
At the beginning of the year	900	9	900	9
Date wise Increase / Decrease in Shareholding during the year specifying the reasons for increase/ decrease (e.g. allotment/ transfer / bonus/ sweat equity etc.)	NIL	NIL	NIL	NIL
At the end of the year	900	9	900	9

(B) Dr. Renu Swarup, Managing Director

For each of the Directors and KMP	Shareholding at the beginning of the year		Cumulative Shareholding during the year	
	No. of shares	% of total shares of the company	No. of shares	% of total shares of the company
At the beginning of the year	100	1	100	1
Date wise Increase / Decrease in Shareholding during the year specifying the reasons for increase/ decrease (e.g. allotment/ transfer / bonus/ sweat equity etc.):	NIL	NIL	NIL	NIL
At the end of the year	100	1	100	1

V. INDEBTEDNESS:

Indebtedness of the Company including interest outstanding/accrued but not due for payment

	Secured Loans excluding deposits	Unsecured Loans	Deposits	Total Indebtedness
Indebtedness at the beginning of the financial year i) Principal Amount ii) Interest due but not paid iii) Interest accrued but not due	Nil	Nil	Nil	Nil
Total (i+ii+iii)	**Nil**	**Nil**	**Nil**	**Nil**
Change in Indebtedness during the financial year • Addition • Reduction	NA	NA	NA	NA
Net Change	Nil	Nil	Nil	Nil
Indebtedness at the end of the financial year i) Principal Amount ii) Interest due but not paid iii) Interest accrued but not due	Nil	Nil	Nil	Nil
Total (i+ii+iii)	**Nil**	**Nil**	**Nil**	**Nil**

VI. REMUNERATION OF DIRECTORS AND KEY MANAGERIAL PERSONNEL

A. Remuneration to Managing Director, Whole-time Directors and/or Manager:

Sl. no.	Particulars of Remuneration	Name of MD/WTD/ Manager				Total Amount
		Dr. Renu Swarup , Managing Director	.....	.....	.....	
1.	Gross salary (a) Salary as per provisions contained in Section 17(1) of the Income-tax Act, 1961 (b) Value of perquisites u/s 17(2) of the Income-tax Act, 1961 (c) Profits in lieu of salary under Section 17(3) of the Income- tax Act, 1961	N.A as she is holding Additional Charge as Managing Director of BIRAC	-	-	-	-
2.	Stock Option	-	-	-	-	-
3.	Sweat Equity	-	-	-	-	-

4.	Commission - as % of profit - others, specify...	-	-	-	-	-
5.	Others, please specify	-	-	-	-	-
	Total (A)	**-**	**-**	**-**	**-**	**-**
	Ceiling as per the Act	-	-	-	-	-

B. Remuneration to other directors:

Sl. no.	Particulars of Remuneration	Name of Directors				Total Amount
		Prof. Ashok Jhunjhunwala	Prof. Deepak Pental	Dr. Gagandeep Kang	Dr. Dinakar M. Salunke	
1.	Independent Directors • Fee for attending Board committee meetings (5 Meetings) • Commission • Others, please specify • Audit Committee (4 Meetings) • Independent Directors' Meeting (1 Meeting)	 35000 - - 28000 7000	 35000 - - 28000 7000	 35000 - - 28000 7000	 35000 - - 28000 7000	 140000 - - 112000 28000
	Total (1)	**70000**	**70000**	**70000**	**70000**	**280000**
2.	Other Non-Executive Directors	**Dr. Mohd. Aslam (Government Nominee)**	-	-	-	
	• Fee for attending board committee meetings • Commission • Others, please specify	Nil - -	- - -	- - -	- - -	- - -
	Total (2)	**Nil**	**-**	**-**	**-**	**-**
	Total (B) = (1 + 2)	**70000**	**70000**	**70000**	**70000**	**280000**
	Total Managerial Remuneration	**70000**	**70000**	**70000**	**70000**	**280000**
	Overall Ceiling as per the Act	N.A.	N.A.	N.A.	N.A.	N.A.

C. REMUNERATION TO KEY MANAGERIAL PERSONNEL OTHER THAN MD/MANAGER/WTD
Exempted from disclosure as BIRAC is a Government Company

Sl. no.	Particulars of Remuneration	Key Managerial Personnel			
		CEO	Company Secretary	CFO	Total
1.	Gross salary (a) Salary as per provisions contained in Section 17(1) of the Income-tax Act, 1961 (b) Value of perquisites u/s 17(2) Income-tax Act, 1961 (c) Profits in lieu of salary under Section 17(3) Income-tax Act, 1961	 - - -	 - - -	 - - -	 - - -
2.	Stock Option	-	-	-	-

3.	Sweat Equity	-	-	-	-
4.	Commission - as % of profit - others, specify...	-	-	-	-
5.	Others, please specify	-	-	-	-
	Total	**-**	**-**	**-**	**-**

VII. PENALTIES/PUNISHMENT/COMPOUNDING OF OFFENCES:

Type	Brief Description	Details of Penalty/Punishment/Compounding fees imposed	Authority [RD/NCLT/COURT]	Appeal made, if any (give Details)
A. Company				
Penalty	Nil	Nil	Nil	Nil
Punishment	Nil	Nil	Nil	Nil
Compounding	Nil	Nil	Nil	Nil
B. Directors				
Penalty	Nil	Nil	Nil	Nil
Punishment	Nil	Nil	Nil	Nil
Compounding	Nil	Nil	Nil	Nil
C. Other officers in default				
Penalty	Nil	Nil	Nil	Nil
Punishment	Nil	Nil	Nil	Nil
Compounding	Nil	Nil	Nil	Nil

Management Discussion and Analysis Report

(Forming Part of the Directors' Report for 2014-15)

MANAGEMENT DISCUSSION AND ANALYSIS REPORT

(Forming Part of the Directors' Report for 2014-15)

1. INDUSTRIAL STRUCTURE AND DEVELOPMENT

The global biotech industry is concentrated in the developed nations of the world especially in the East and West Coast of the USA (Massachusetts & California), the UK (the Cambridge, Oxford & London clusters), Germany (especially the Munich cluster), Switzerland, Nordic Europe (Finland, Denmark, Sweden), Japan and Israel. The biotech industry faces unique challenges especially in terms of product development cycles- the gestation period being anywhere between 7-12 years and the inherent risks that exist during product development especially the failure rates in clinical and field trials. This long gestation period reduces interests of the private venture capitalists to invest in biotech innovation.

In 2014, the global data shows that the total revenues generated by biotech firms touched US$124 billion and 94 US and European biotech companies had IPOs in 2014.

In the Indian context the biotech industry is small but growing rapidly. The total revenues from the Indian biotech companies in 2013 is around US$5 billion with biopharma (including biosimilars & vaccines) contributing 60% of the revenues while bioservices with 18% share and agri-biotech with 13% share are other important segments of the industry. The industrial biotech segment contributes 3% and the bioinformatics segment holds close to 1% of the revenue. This is about 25% of the share of the Asia Pacific region and less than 2 % of the global market. However the potential for growth in the industry exists- the Indian biotech industry has grown on an average 20% year on year since 2003, it was USD$500 million in 2003 which increased to USD$6-7 billion by 2014 (dependent on the exchange rate of US dollar vis a vis Indian rupees). If the underlying factors (such as regulation, ease of doing business and access to capital) are alleviated, then the industry could grow close to 30% year on year and India has an opportunity to be one of the world's leading bioeconomy.

Over the last 3 years, BIRAC has contributed to significant changes in the biotech ecosystem that can fuel future growth. The access to early stage capital especially through early seed money is now available and this has kickstarted a biotech startup culture in the country. BIRAC's BIG programme has been instrumental in spurring the biotech startup growth. Further several bioincubators have become operational in the aforementioned period and BIRAC's Bioincubation programme has been key to the growth of 15 bioincubation facilities across the country. Follow on funding especially via BIRAC (through its flagship SBIRI and BIPP) have been instrumental in validation, scale-up and commercialisation of products. Over the last 3 years several venture capital, biotech/healthcare accelerators and early stage funders have become active in India, contributing to the growth story of the biotech industry.

Several bioclusters are taking shape in India especially Bangalore which remains the biggest Indian biocluster followed by Hyderabad, however NCR-Delhi, Chennai, Pune are fast developing into bioclusters and even Bhubaneswar and Kalyani are emerging areas of bioclusters.

The Indian biotech industry is poised to grow even further if the right elements are brought together and connected. For this to happen greater funding, mentorship and new networks need to be created and BIRAC would need to play the role of funder, catalyser and connector.

2. STRENGTH AND WEAKNESSES

BIRAC's strategy and mandate to empower and enable the biotech industry in India especially to make it a global bioeconomy that is innovation driven would be impacted by the economic waves, both global and

national, that influence the wider macro economy of the country.

BIRAC's implementation strategy focuses on funding, mentoring and networks which are important components of the ecosystem; however another important component that defines the landscape of the evolving sector is the **regulatory landscape**. BIRAC, through the Department of Biotechnology, is working closely with the concerned agencies to bring forward the industry inputs and suggestions on how the Indian regulatory environment, whether for biopharma, medtech or agriculture, needs simplifying and reduce the turnaround time for positive evidence based regulatory changes such that it has a positive cascading effect on the overall industry. BIRAC would play a positive role in bringing to the regulatory agencies information regarding the rapid changes in biotechnology globally and the need for refining regulation as technology evolves.

A systemic hurdle that BIRAC needs to focus is to change the mindset of the stakeholders especially in academia and industry such that these two pillars of innovation can join hands, collaborate and translate R&D into high quality products.

Another issue that needs attention is communication of science, innovation and its impact to the society such that there is appreciation of the need for public funding in matters of national innovation funding. BIRAC would focus on a well planned communication strategy in 2015-16.

3. RISK AND GOVERNANCE

The initiatives which were announced by the Government of India in the National Biotechnology Development Strategy 2007 are in place. The cornerstone of the strategy was to focus on building coherence and connectivity between disciplines and bring together variegated skills across sectors to enhance synergy. The Strategy sought to address a number of challenges like R & D, creation of investment Capital, technology transfer, absorption & diffusion, intellectual property regime, regulation standards and accreditation, tailor made human capital for science and innovation and public understanding of Biotechnology.

Some of the challenges faced in India by the biotech industry are of harnessing university talent to right and relevant use in the Industry. The biggest need at this point is a balance in its universities of the right size and right skill in course content and staff in training to churn out an employable set of students. Translation of research ideas into commercially viable projects has been another area of challenge as most academic & research institutions are not well equipped to undertake innovative and translational research. The other concern is a nascent ecosystem to promote public-private initiatives. Angel Investments for companies that are focussed purely on research with a revenue model to develop their own product or technology with a time gap of 7-8 years are still not at the scale which is required. Hence more organisations with focus on early stage funding are crucial.

4. SUPPORTING DISCOVERY TO PRODUCT DEVELOPMENT

BIRAC through its various schemes provides support for Innovation Research from Discovery to Product Development in all major areas of biotechnology i.e. Healthcare, Agriculture, Industrial biotechnology and Bioinformatics/Infrastructure as part of meeting its objective of promoting affordable innovation in key social sectors. Healthcare covers the areas of Drugs (including drug delivery), Biosimilars (including regenerative medicine), Vaccines/Clinical trials & Devices/ diagnostics whereas Agriculture covers Marker assisted selection (MAS), RNAi, Transgenics & soil health management. Industrial biotechnology includes Industrial products/processes and secondary agriculture. 361 Start ups, SMEs and young entrepreneurs supported during the year have made considerable progress in these areas during 2014-15 in addition to delivering **five products/technologies, five early stage technologies and five patent applications.**

4.1 BIG Biotechnology Ignition Grants (BIG): "Planting green shoots of biotech innovation"

BIRAC believes that the "bio-innovation capital" of the nation would come from novel ideas which have a commercialization potential and that evolve out from start-ups or academic spin-offs. BIRAC's strategy is therefore to support numerous exciting ideas which have an unmet need for funding and mentorship. This strategy is fulfilled through a seed grant funding scheme called Biotechnology Ignition Grant (BIG) which is available to entrepreneurial individuals, scientist entrepreneurs from research institutes, academia and start-ups. The Applicant must be either an Incubatee or have a registered company with a functional R&D laboratory to be eligible for this grant. The scheme is designed to stimulate commercialization of research discoveries by providing very early stage grants to help bridge the gap between discovery and invention.

Noninvasive, safe technology to screen neonates for hearing impairment: Sohum Innovations

The purpose of the BIG Scheme is to foster generation of ideas with commercialisation potential and the funding support is provided up to proof-of-concept stage. The call for proposal is announced twice every year, on 1st January and 1st July. As part of this scheme, successful BIG Innovators receive up to INR 50 lakh (appox. $100K) for research projects with commercialization potential with duration of up to 18 months.

The BIG programme has spurred a biotech start-up culture in India and 6 calls for proposals have been announced. Over the 6 calls, 154 entrepreneurs have been supported spread across India and managed through 5 BIG Partners across the country viz. IKP Knowledge Park, Hyderabad, Centre for Cellular and Molecular Platforms (C-CAMP), Bangalore, Foundation for Innovation and Technology Transfer (FITT), New Delhi, KIIT Technology Business Incubator, Bhubaneshwar and Venture Center (Entrepreneurship Development Center), Pune, who work with the Ignition grantees (BIG Innovators) to provide mentoring, monitoring, networking and other business development related activities.

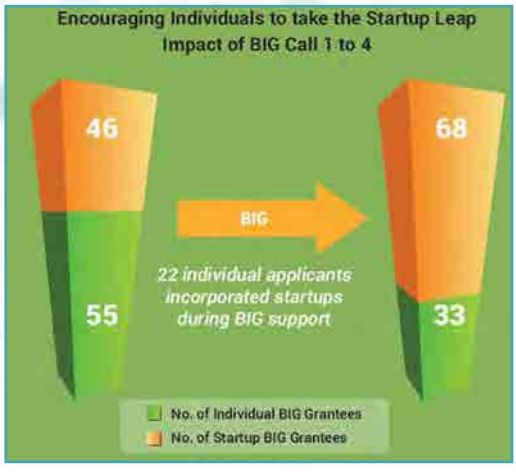
Intraosseous device: Mr.Jayant S Karve

These 5 partners not only implement the programme but proactively mentor the BIG grantees in technical and business related issues.

BIG Partners provide various platforms for BIG Innovators viz. mentoring and handholding for activities related to IP Management, legal and contract, mobilizing resources and other business development related activities to all recipients of Biotechnology Ignition Grant (BIG Innovators), organizing workshops/ seminars/ mentoring sessions for the BIG Innovators, providing a platform for interaction with senior experts and other academic partners and organizing a onetime mentoring session or pre graduation

ceremony just before the completion of the selected projects.

Data from BIG calls 1-4 reveal that 22 individuals have established start-ups, employment generated through BIG was 231, 20 IP generated and 18 women entrepreneurs have been supported.



Some important leads through the support are:

- Development of an aptamer based platform to detect TB
- Modular resilin mimetic elstomeric platform for wound healing and other uses
- Ezymatic maceration of mango pulp to produce wine
- Industrial application of a novel cancer drug screening method
- Development of a fucose knockout technology platform in CHO S cell line for improved biotherapeutics
- Novel inhibitors of DNA gyrase for treatment of multidrug resistant infections
- Pharmacological evaluation of N-oxide metabolite of antipsychotic drug for Type2 diabetes
- Novel oncotherapeutic measles virus using eSame system
- Fetal ECG and Uterine Activity signa; extraction from maternal ECG eliminating the need for use of conventional transducers.

Many of the BIG grantees have now started to receive follow-on funding either through BIRAC or through other agencies including early stage venture capitalists and angel funding.

In the last two years several healthcare focused accelerators have been active in India that aim to fund nascent start-ups. To understand the activities of accelerators and early stage angel funders in the biotech arena, BIRAC organised a focused roundtable with lifescience accelerators in December 2014. Models of functional accelerators were discussed especially their role, in partnership with governments, in spurring innovations in countries such as US, UK and Israel.

4.2 Small Business Innovation Research Initiative (SBIRI)

SBIRI supports early stage high risk innovative research in small and medium companies to get them involved in development of products and processes which have high societal relevance. This scheme was launched in 2005 by DBT and is presently managed by BIRAC. The maximum funding support from this scheme was provided to healthcare followed by industrial biotechnology and agriculture sectors. As of March 2015, 86 projects were ongoing with 26 of them as collaborative projects. Three calls were announced during 2014-15 and 33 new proposals were committed funding of ₹ 16.77 crores as BIRAC contribution and ₹ 16.30 crores supported with company contribution.

During 2014-15, four technologies were developed from the projects supported under this scheme. These are

- A rapid test for qualitative detection of malaria antigen (infection) in humans. This test is highly sensitive and can differentiate between **Plasmodium falciparum** and the other species of **Plasmodium.**
- In the field of agriculture, a technology to extract lycopene, a phytonutrient, from high yielding varieties of tomato has been developed. The technology has been

validated to produce 24 kg of lycopene per day with a crushing capacity of 2 tonnes per hour.

- On industrial biotechnology front, an E.coli K12 strain that secretes a variety of recombinant proteins of industrial and therapeutic importance into the culture medium has been developed. The technology facilitates easier purification thus reducing the cost of process and the product significantly.
- Another research study has resulted in development of indigenous technology for production of dextranase (30000 du/gm) using solid state fermentation for the first time in the country. The dextranase so produced reduces dextran in cane sugar production process by nearly 50%.

The scheme has also enabled generation of two Proof-of-Concepts for further validation. This includes:

- Production of entomopathogenic nematode "Nema Power" by solid state fermentation which has been found to be effective in the management of root grubs in areca nut and
- Development of a novel concept in treatment of type II diabetes i.e., N – oxides of antipsychotic drugs will be utilized to promote insulin secretion from beta pancreatic cells.

Bacteriophage based control of vibrio harvey infection in shrimp, Aristogene

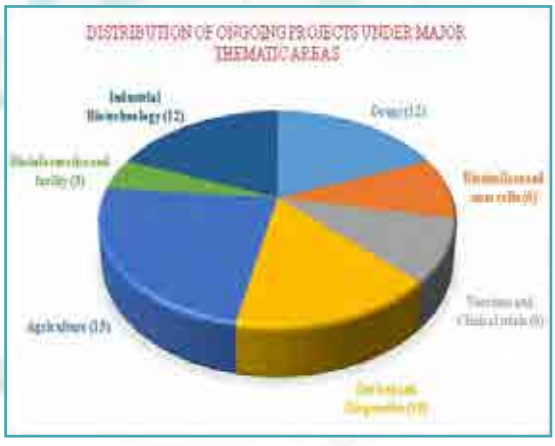
Lycopene production facility by Hydrolina Biotech Private Limited, Chennai

4.3 Biotechnology Industry Partnership Programme (BIPP)

BIPP, an advanced technology scheme, provides support to start-ups, SMEs and other biotech companies for high risk, transformational technology/process development from proof-of-concept to validation leading to commercialization of products on cost sharing basis. Indian Biotech companies registered under Companies Act, 2013 with 51% Indian shareholding and DSIR recognized R&D are entitled for BIPP funding, either independently, or in collaboration with companies, not-for-profit organization or academic partners.

So far 134 agreements have been signed with 108 companies involving approximately 60 start-ups and SMEs. A total investment of ₹ 894.23 crores (including BIRAC and company contribution) has been committed with ₹ 345.29 crores by Govt. of India and ₹ 548.93 crores as private sector contribution.

As of March 2015, 64 projects were ongoing out of which 20 were collaborative. In 2014-15, three normal calls and one special call were announced. 13 new proposals with a BIRAC contribution of ₹ 12.36 crores and Company contribution of ₹ 12.70 crores were committed during the financial year



During 2014-15, three national patents have been filed by the companies supported under the BIPP scheme. While one pertains to development of method for efficient enzymatic hydrolysis of lingo-cellulosic biomass, the others are related to development of percutaneous aortic valve and its implantation.

Under a BIPP project, Celestial Biologicals Limited, Ahmedabad has developed a process for Albumin and IVIG production at a scale of 2500 L with a purity of 95%. It has also released two products in the market under the trade name “Albucel” and “Globucel”.

In another project Tergene Biotech Private Limited has completed preclinical studies for an affordable Asia-specific 15-valent Pneumococcal vaccine which has an immunogenicity comparable to the available 13-valent reference vaccine and the formulation is ready for clinical trials.

Other promising technologies/products that are at various stages of development through BIPP support:

- Affordable mannequin for effective CPR (Cardiopulmonary Resuscitation) Training
- Development and production of Balloon catheter
- Software for NGS data analysis
- Clinical trials of polysialylated erythropoietin
- Flow analyser technology for CD4 cell counting at point-of-care locations

Balloon catheter manufacturing facility

Microfluidic Flow Analyser

Prototypes Developed:

1. Balloon Catheter

Useful during a catherization procedure and with a tapered radio opaque tip for better visibility of the balloon during PCI procedure.

2. Novel portable EEG system

Useful to diagnose epilipsy, sleep disorders, coma, encephalapathies and brain death; valuable tool for research and diagnosis.

3. Microfluidic based Flow analyzer

Technology for various disorders primarily for immune response monitoring through CD4/CD8 cell counting in HIV/ AIDS at point of care locations.

4. Affordable CPR mannequin

Useful for skill practice in CPR classes to make training more effective and more realistic and with non-linear and variable compliance technology.

BIRAC also supports cutting edge technologies in Agriculture to increase productivity, nutrition, disease resistance and to combat abiotic stress. The support extends to projects in the area of marker assisted selection for gaining resistance to biotic stress like fungus, insect and pests in crops like rice, maize, tomato, mustard, pigeon pea and okra. Most of the supported projects are in the validation and product development stages.

Funding aid has also been extended to projects using RNAi technology for generation of proof of concept in crops like okra and tomato against biotic stress. Deregulation trails to be carried out for product development were also supported primarily for *Brassica juncea*. Marker assisted selection has been used for the development of nutrionally improved mustard having low erucic acid & low glucosinolate content and for blast resistant rice hybrid/variety.

Regeneration and Transformation protocols for okra lines

Soil health management is also a part of BIRAC's mandate to encourage frontier technologies in agriculture and projects have been supported for using Nano-formulations of Zinc and Silica as pesticides.

Next Generation Sequencing (NGS) Suite: SanGeniX was developed through BIRAC funding. SanGeniX was designed to perform primary, secondary, and tertiary analysis of the Next Generation Sequencing (NGS) data. This suite offers a scalable and user friendly solution with predefined and custom workflows for seamless analysis of NGS data. SanGeniX automates all the multi-step processes involved in data analysis and delivers end results in an affordable and user-friendly format. This suite supports all the major NGS platforms, such as Illumina, SOLiD, Ion Torrent, 454 and Pac Bio. SanGeniX

has very interactive results dashboard that provides an intuitive way for navigation to data points of interest.

Integrated facility for Protein Therapeutics & Peptides: A dedicated facility for carrying out high end structural and functional characterization of protein therapeutics and peptides has been developed in an area of 49 sq.m. Several instruments such as Mass spectrometer, UPLC, Minus 80 & minus 20 freezers, conductivity meter, pH meter, weighing balance, CD spectrometer, UV, fluorescent reader and refrigerated centrifuge have been bought and installed. The services being offered include N-terminal sequencing, capillary electrophoresis, analytical characterization, mass spectrometry, protein structural and stability analysis and glycan profile characterization. The services are being offered to Academia and Industry at differential pricing.

4.4 Contract Research Scheme (CRS)

CRS applies innovation as a coherent plan to deliver academic capabilities of translational research towards product development. It enables academia to involve industry for translational research and product development towards commercialization. Funds are provided as grant in aid to both the academic as well as industrial partners. For the academia the funds are provided for In-House research which forms a part of validation of the Proof-of-Concept, while for industrial partner it is provided for validation. IP rights reside with the academia, the industry partner has first right of refusal for commercial exploitation of the New IP. Under CRS, BIRAC facilitates Freedom to Operate (FTO) search, IP management, Material Transfer Agreement (MTA), Memorandum of Understanding, (MOU) and technology transfer to the industry by the academia.

Introduced in 2012, the scheme funds projects in all key areas of biotechnology sector. Till March 31, 2015 seven call for proposals had been announced under which 13 proposals involving 15 academia and 13 industrial partners were sanctioned a grant of ₹ 13.48 crores.

Few promising technologies/products that are under development through CRS support are:

- Recombinant vaccine for Plasmodium vivax
- Production of laccase through a Bioreactor system
- Development of a linkage map in castor using Genome wide SNP's

Plasmodium vivax Duffy binding protein antigen

4.5 Social Innovation Programme for Products: Affordable & Relevant to Societal Health (SPARSH)

The program was launched on 15th August 2013, to find innovative solutions to society's most pressing social problems. The scheme aims to invest in ideas and innovations that improve health care of all Indians and provide affordable product development in social sector. The first two calls of SPARSH were aligned with the UN Millennium Development Goals 4 and 5 i.e., Reducing Child mortality and improving Maternal Health.

The scheme is also creating a pool of social innovators through **Social Innovation Immersion Program (SIIP)**, who identify the specific needs and gaps in healthcare arena. The SIIP is managed by four Incubation Partners who provide the rural and clinical immersion facilitation to the innovators. These four partners are:

BIRAC has committed ₹ 254.5 lakhs for the Immersion program. The SIIP partners have recruited 15 Social Innovators for the Immersion. These innovators are provided rural immersion and exposure to clinical settings. They are mentored for process of systematic clinical & community observations, needs assessment, refinement and affordable technology development. The Social Innovators will come out with a detailed document with 2-3 ideas, one of which will be supported for prototype development.

BIRAC expects the Social innovators to reach a point where they either have a ready business plan to pitch to investors, or an advanced proposal with some preliminary results suitable for further funding.

Under the affordable development mandate SPARSH has supported seven individuals and ten companies through two calls during last two years. The amount committed as seed fund is around ₹ 695 lakhs and ₹ 113 lakhs for early translation.

Some of the technologies which are being developed under SPARSH scheme include:

1. Microfluidics based On-chip Real-Time PCR device for neonatal and maternal health.
2. A novel technique for monitoring

of foetal growth through volume imaging of the fundus and estimating the gestational age, amniotic fluid index and intra-uterine growth abnormalities of the foetus.

3. Non-invasive electrical device for transcutaneous iron replenishment.

4. Electricity-free Baby Incubator.

4.6 Partnership with CDSA for Management of BIRAC Supported Clinical Trials

BIRAC has partnered with Clinical Development Services Agency (CDSA) to strengthen its capabilities in project management related to clinical trials and regulatory requirements. According to this partnership, CDSA has to provide technical advice in the areas of pre-clinical/clinical development, ensure quality for BIRAC funded projects and training of potential investigators. As part of this partnership, CDSA offers the following specific expertise,

- Review of clinical study protocol and other related documents
- Clinical site assessment
- Audit for clinical studies of drugs, devices, biologicals and vaccines

CDSA has already audited and submitted the report for the clinical study conducted by one of the BIRAC funded companies in 2014 -15 as part of this initiative and two more audits are proposed to be conducted by CDSA during 2015 – 16.

5. BUILDING STRATEGIC ALLIANCES

5.1 International Alliances

5.1.1 Grand Challenges India: DBT-BIRAC-GATES Foundation

On June 2012, the Bill & Melinda Gates Foundation (BMGF) and the Department of Biotechnology (DBT) signed an umbrella Memorandum of Understanding (MoU) to collaborate on mission-directed research and build Grand Challenges India to support health research and innovation. The MoU aims to support initiatives that could dramatically change the health and development landscape in India and other countries facing similar challenges.

BIRAC, acting as implementing agency, through Program Management Unit (PMU) in Grand Challenges India framework announced three calls till date. On the BIRAC 2nd Foundation Day, 20th March 2014, 5 awards (2 Interventional Development Grant and 3 Seed Grant) under Grand Challenges India First initiative "Achieving Healthy Growth through Agriculture and Nutrition" were announced for which the disbursements of funds have been made respectively and the projects were initiated at the implementation sites.

The 5 proposals which were selected were focussed on the development of innovative interventions that integrate agricultural practices with nutrition outcomes linked to improved health benefits of women and children for significant socio-economic impact.

The projects aim at :

1. Assessing the prevailing agricultural system and food consumption patterns to establish the extent to which the food supply and dietary practices meet nutrient requirements and to identify locally available, age-appropriate and affordable diets.
2. Through these IFS designs the women small holder farmers' household diet diversity would be ensured with enrichment of animal protein vegetables and honey.
3. To increase smallholder agricultural income and productivity through the micro-entrepreneur and technology-enabled approach.
4. Awareness about dehydrated products and its use in daily recipes. Local level partnership along value chain partners.
5. To improve zinc nutritional status of food crops by agronomic bio-fortification.

Achievements made so far :

- Farmers engaged till date - 440 beneficiaries

- 4 Veggie Lite, 42 Veggie Marts & Veggie Wheels brand have been established
- Number of farmers and others who have applied improved technologies or management practices as a result of program assistance : 200
- Number of individuals who have received short-term agricultural sector productivity or food security training: 200

'Reinvent the Toilet Fair' was co-hosted by the Department of Biotechnology and the Bill & Melinda Gates Foundation. On 22nd March, 2014, during the event 2nd GCI initiative "Reinvent the Toilet Challenge", six Indian innovators (1 in Field Trial Grant and 5 in Proof of Concept) with Indian and Global collaborations were awarded. The details of the awarded projects are as under:

1. A proof of concept development for using viral agents to target and kill pathogens and odour-producing bacteria in faecal waste and also develop ways to integrate this into waste treatment systems.
2. To develop financially affordable and simple to operate decentralized wastewater treatment system for a single household as well as for a gated community of 100 people equivalent (25 families) that will produce high quality effluent for safe disposal. This project is proposed to develop and demonstrate "Empowered septic tank".
3. Idea is to avoid use of water to convey faeces from the toilet & to have the deposited faecal matter sink into an incipiently fluidized bed of granular material which is removed from the bottom via a valve.
4. Use of Black Soldier Fly Larvae (BSFL) to consume the human faecal matter and other bodily wastes.
5. Re-engineer the conventional toilet seat and waste treatment tank system to enable a sustainable and affordable self-contained eco system.
6. Technology demonstrating closed-loop resource recovery by integrating the slum eToilet with a novel onsite wastewater treatment and recovery solution termed The NEW generator™, combining anaerobic membrane bioreactor (AnMBR) and solar (PV and thermal) technologies, the NEW generator™ allows for localized recovery of nutrients, energy and water from human wastes.

Achievements made so far:

- Prototypes have been fabricated.
- Wastewater characterization has been carried out at several locations.

To take the Grand Challenges India initiative on "Reinvent the Toilet" forward, BIRAC partnered for the conference titled- "International Congress on Green Urban Futures - *Urban Sanitation Challenges in the Developing World: Initiatives and Innovations In association with Centre for Urban Green Spaces*", held in Bangalore, India on 6th November, 2014. One of the primary themes of the conference was "Urban futures: Water and Sanitation".

In October, 2014, DBT-BMGF-BIRAC launched the third call — 'All Children Thriving'.

DBT-BMGF-BIRAC Grand Challenges India Call announced on – All Children Thriving

(L to R): Alain Beaudet (Canadian Institute of Health Research), Rajiv Shah (USAID), Bill Gates, Melinda Gates, Carlos Gadelha (Ministry of Health, Brazil), MK Bhan (Department of Biotechnology, India on behalf of India Initiative) and Glenda Grey (South African Medical Research Council);

Photo Credit: ©Bill & Melinda Gates Foundation/ Barbara Kinney

The program aims to ensure that all children not only survive, but also remain on the trajectory of healthy and productive lives. To effectively disseminate & to empower potential applicants with necessary tools for the Grant opportunity, a one day workshop was conducted in five cities from 13th November to 20th November 2014.

Multi sectorial interventions in the context of maternal and child health, with reference to the identified priorities of RFA - All Children Thriving, 19th November, 2014

5.1.2 Wellcome Trust

BIRAC has collaborated with Wellcome Trust, a global charity organization of UK, to scout and support innovations in translational medicine in the area of diagnostics for infectious diseases. The objective of this initiative is to fund translational research projects to deliver safe, effective and affordable healthcare products for India though collaborative research. One call was announced till date and two projects were identified for funding-one to be funded by BIRAC and the other by Wellcome Trust.

The first project is 'A benchside molecular assay for detection of carbapenem resistant gram negative bacteria' and the second project is 'High sensitivity multiplex point-of-care assay system for the detection of blood borne infections in emergency settings'.

5.1.3 CEFIPRA-BPI France

BIRAC has joined hands with CEFIPRA – the Indo-French Centre for Promotion of Advanced Research in India to support high quality bilateral research, encourage and enable Indo-French collaboration between public, private research groups, industry, clinicians and end-users. The Agreement was signed in February, 2014. Under this initiative, BIRAC has implemented two partnership programs with French continent. One with French Embassy (2014-2015) and another with Bpi France Financement (2015-2016). First call was announced on 19th March, 2014 with French Embassy as a '2+2' model in the thematic areas of Molecular Diagnostics for prediction of cardiac stroke, Rapid diagnostics for Alzheimer's or dementia in elderly people or molecular diagnostics for detection of neurological disorders in neonates and New assistive technologies for mobility of physically challenged. Two projects got funded on molecular diagnostics for cardiovascular diseases in the first call.

Bpi France Financement is a public investment bank which finances businesses from the seed phase to transfer to stock exchange listing through loans, guarantees and equity. Bpi France accompanies firms

developing export activities and provides support to innovation projects. The second call for proposals was launched on 20th March 2015 as a '1+1' model in the thematic area of new targets or biomarkers that leads to development of sensitive, specific and affordable diagnostic tests, new therapeutic options in terms of therapeutic protein or drugs and affordable process development for existing therapeutics.

5.1.4 TB Diagnostics Programme

BIRAC in partnership with USAID and IKP has launched a call to support new diagnostics for TB. IKP has entered into an agreement with BIRAC and USAID to support "Innovations in tuberculosis (TB) control in India''.

The call for proposals aims at supporting new diagnostics for TB in collaboration with BIRAC. IKP proposes to allot a total of USD 2.0 million for this call with a funding of USD 1.0 million each from BIRAC and USAID. The duration of the program is for 3 years spread over two phases. Nine proposals are expected to be selected in the first phase of program. At the end of phase I i.e. after one year, three promising projects with demonstrated proof of concept are expected to be taken into Phase II.

After a series of mandate definition meetings, a very focused call has been announced.

5.2 NATIONAL ALLIANCES

5.2.1 DeitY-BIRAC Industry Innovation Program on Medical Electronics

BIRAC partnered with Department of Electronics and Information Technology (DeitY) to launch a special programme, "Industry Innovation Programme on Medical Electronics". The programme goal is to fund a portfolio of Indian Led pilot Projects targeting innovations in the multi-disciplinary areas comprising of electronics, engineering, software, algorithms and information technology with an aim to address the challenges of Medical electronics fraternity and to bring in fast pace research and development in this not much explored area. The programme funding modalities including Implementation strategy and processes have been finalized and the call announced in May, 2015.

5.2.2 Secondary Agriculture

Several potentially high impact technologies and value added products from agriculture produce are presently at different stages of development and a coordinated effort to scale up their production and dissemination could benefit farmers. BIRAC intends to facilitate and accelerate the development of newer technologies & value added products from agro-produces and enhance professional expertise of Indian scientists and knowledge base in food processing, by-products utilization and biofuels. BIRAC is in the process of engaging institutes focussing on Secondary agriculture to achieve this.

BIRAC proposes to develop a Secondary Agriculture Bio-cluster (SAB)/Bio-incubator with the aim of benefiting the district level small and medium enterprises and two locations have been identified in the northern belt of India for setting up of a bio-cluster and bio-incubator at Punjab and Haryana respectively. The two institutions identified are CIAB, Mohali and NIFTEM, Sonepat and PSCT, Punjab will also be involved for the management of the Secondary Agriculture Bio-cluster (SAB).

BIRAC intends to collaborate with MoFPI and the initiative is expected to bring a quantum of change in the value added agriculture for the benefit of farmers.

6. AFFORDABLE PRODUCT DEVELOPMENT – DISCOVERY RESEARCH TRANSLATION

6.1 Mission for Accelerating Discovery Research to Early Development of Biologicals: National Biopharmaceutical Accelerator Programme

Research on biologics and biopharmaceuticals has emerged as the focus area in the last few decades. The current global efforts are focused on advancing biological and inter disciplinary science to accelerate the pace of biopharmaceutical R&D. There is a need to accelerate India's capabilities also in these areas so that India emerges as a hub for

design and development of novel, affordable and effective biopharmaceutical products. 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 biologics and biopharmaceuticals.

The vision of the program is to nurture India's technological capabilities in biopharmaceuticals for affordable and low cost product development by focusing on the entire biopharmaceutical value chain and thus creating (i) Discovery units and (ii) Chemistry manufacturing and control (CMC) unit(s) to promote product development leveraging upon the existing manufacturing abilities of the country. The efforts will also be directed to synergize available skills, infrastructure, and new generation technologies available in the country and provide necessary training to set up a service bioanalytical component as a part of the CMC unit.

BIRAC has set up Program Proposal Management Unit (PPMU), to be managed by IAVI, for the analysis of reports received from various agencies as well as for drafting the proposal. Advisory committee was identified and one meeting was organized with the committee. One stake holder meeting was organized to discuss affordable product development as part of 'Discovery Research Accelerator'. 3 detailed Landscape Reports have been proposed on the Biopharma sector in India; the strengths, gaps and collaboration opportunities.

6.2 Early Translation Accelerator (ETA)

In the field of life sciences, the development of an idea into a product is a multi-step process, which includes discovery (that happens in the laboratory), early translation and product development (that happens as an industrial activity). Of these, the important link, early translation, is often missing which eventually prevents scientific research from turning into a useful commodity for the society, and therefore, into an economic activity. This gap between basic research and product needs initiatives that help translate early discoveries made in a basic research setting into potentially valuable validated technologies. In the Indian setting, this sort of translational model does not currently exist and hence even though many exciting discoveries are made in the lab, very few see the light of day in terms of being commercialized

BIRAC's mission is to facilitate translation of innovative ideas into biotech products and as a part of meeting this objective, BIRAC has supported an Early Translational Accelerator (ETA) at C-CAMP, Bangalore, which identifies early academic discoveries with possible commercial and societal impact and processes them to industry ready technologies. During the year two such discoveries have been identified and are being worked upon.

6.3 Niche Area Meetings

BIRAC organizes discussion meetings in niche areas by inviting experts from academia, industry to identify requirements and to formulate strategies accordingly.

Two meetings, one on 'HPV' and the other on 'Waste to Energy' were organized during 2013-14 and the recommendations emerged from these meetings were taken forward during 2014-15. A special call was announced by inviting proposals in the area of 'HPV' as part of BIPP scheme and the proposals so recommended are being funded. A mission program has been conceptualized in the area of 'Waste to Energy' as per the recommendations of the discussion meeting and the efforts to launch the program are in progress.

6.4 New Initiatives

6.4.1 Translational Facilities for pre-clinical toxicology & Phase I Clinical trials I

The process of new drug discovery and their full evaluation in patients incorporates five fundamental stages of preclinical, Phase I,

Phase II, Phase III and Phase IV. There is a growing need for national level pre-clinical toxicology and Phase I clinical trial facilities which can be accessed by start-ups, SMEs and public sector researchers for taking their research leads into the next stage of validation and trial. Although the facilities are available in private sector, the researchers from start-ups, SMEs and public sector institutions often find it difficult to engage the existing facilities in the process of drug discovery. As a part of its mission to stimulate, foster and enhance the strategic research and innovation capabilities of start-ups and SMEs, BIRAC intends to strengthen the existing pre-clinical toxicology facilities in the private sector and make them accessible to start-ups, SMEs and public sector researchers at discounted prices.

6.4.2 Research Alliance for Product Innovation and Development (RAPID)

Under the RAPID initiative of BIRAC, the focus is on accelerating rapid development of nationally important technologies and products that need co-ordinated efforts from understanding national & market needs, policy & milieu surrounding a technology/ product to technology acquisition and development.

6.4.2.1 USAID-Wheat Project

BIRAC in partnership with DBT-ICAR and USAID is considering support for a project on "Improved wheat for heat tolerance and climate resilience'' which addresses a very crucial area of crop biotechnology under the RAPID initiative in collaboration with USAID. Food security in the Indo-Gangetic plains has become important considering the increasing population in this area, deteriorating soil quality, continuously and unsustainably sinking water table coupled with the proportion of the population below the poverty line. The goal of the proposed project is to develop high yielding heat tolerant wheat cultivars for the Indo-Gangetic plains.

6.4.2.2 Waste to Energy Mission Program

BIRAC has conceptualized a mission program for conversion of MSW to energy with an intention to promote biotechnological intervention for the conversion of municipal solid waste to energy. The mission program aims to set up pilot scale facilities for treatment of MSW in a Public Private Partnership (PPP) model. Projects may take a multi-process approach which could involve segregation as well as extracting value-added products from the waste but the major focus will be energy generation. The aim will be to fund a portfolio of Indian-led pilot projects that can be incorporated into a process of sustainable waste management.

Expression of interest document for mixed waste and modalities of funding are being finalized. Stakeholder meetings have been held and priority areas have been identified.

A minimum of 2-3 demonstration plants are to be supported with a budget up to ₹ 100 lakhs for each plant.

6.4.3 Anti-Microbial Resistance (AMR) - A PPP Consortia for Innovation Research

BIRAC proposes a mission program on anti-microbial resistance (AMR). The mission would be to tackle the problem of antimicrobial resistance by focusing on discovery, development and diffusion of new drugs, diagnostics, infection- treatment options and other tools with the following components :

- Discovery research, molecular-epidemiology, and early stage translational programmes involving academia and industry
- Develop opportunities to support spin-outs
- Building of capabilities and resources for the above
- Connecting with similar global consortia

Partnership with various stakeholders to accomplish the objectives of the mission not only from India but also from overseas is envisaged. This partnership would be mainly to bring together Global Organizations with

a keen interest to promote this important initiative. Stakeholders would partner for :

- Collaborative Research
- Human Resource Training and Skill Development

All funders meet was held as a part of foundation day by involving academia, industry, international organizations and officials from Government. The following have emerged as key action items from the discussion meeting,

- Analysing the surveillance data and identifying key priorities and gaps for new technology development
- A service facility for start-ups and researchers for access to repositories, libraries, in vitro screening etc. to be considered
- To stimulate technologies for surveillance & new technologies for diagnostics
- To develop repositories of biological samples

6.4 Bio-toilets in Schools in North East India

An initiative to address the problem of sanitation in India and for the development of safe and affordable sanitation was laid down when DBT/BIRAC partnered with Bill and Melinda Gates Foundation in announcing the Reinvent the Toilet Challenge-India. BIRAC has already supported 6 projects under the RTTC – India initiative.

However, it is important to look for other existing solutions available within the country as well. In this regard, a proposal was received from The Energy and Resources Institute, Northeastern Regional Centre, Guwahati for installation of 100 toilets in schools in north eastern region of India which was forwarded to Department of Biotechnology for funding. This is a programme of societal relevance covering children from all three sectors (SC, ST, Women). BIRAC would be responsible for overall coordination by setting up a program management cell for,

- Overall management and co-ordination of the entire project
- Connecting with right providers of technologies
- Implementation

7 ENTREPRENEURSHIP DEVELOPMENT

7.1 Bio incubator Support (BIS)

Bio-incubation allows harnessing of the entrepreneurial potential of start-ups by providing access to infrastructure as well as mentoring and networking platforms that the start-ups could use during their fledgling days.

BIRAC has upgraded and strengthened existing incubation facilities at certain strategic locations in the country. BIRAC has supported Bioincubators in Biotech parks, IITs, Universities/ research institutes and Biotech clusters as mentioned below.

Through continuous support BIRAC has managed to create approximately **1,24,000 sq. ft.** of functional bioincubation space. Through these bioincubation facilities BIRAC has supported directly or indirectly around **199 start-ups/entrepreneurs**.

These bioincubation facilities not only provide access to cutting edge instrumentation and space for start-ups but also foster and facilitate mentorship for start-ups and connect them to a whole host of stakeholders- business & scientific advisors, angel firms and venture capitalists and connect. These bioincubators create vibrant local ecosystems.

Till now BIRAC has extended support to fifteen Bio incubators across the nation :

S.No.	Bio-Incubator
1	IKP Knowledge Park, Hyderabad
2	Venture Center, NCL, Pune
3	C-CAMP, Bangalore
4	FIIT, IIT Delhi
5	KIIT-TBI, Bhubaneswar
6	IIT Madras-IIT Madras Research Park
7	SIDBI, IIT Kanpur
8	SBTIC, Hyderabad
9	ZTM-BPD, IARI, Delhi
10	HTIC, IIT Madras Research Park, Chennai

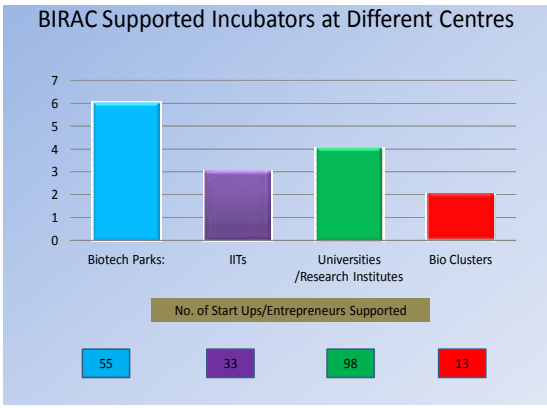
11	Golden Jubilee Women Bio Park, Chennai
12	RCB Bio Cluster, Faridabad
14	GSBTM, Savli
15	KSIDC, Trivandrum

One of the recent locations that BIRAC has focused on developing a world class bioincubation centre is at Regional Centre for Biotechnology (RCB), Faridabad which is part of the DBT Biocluster of NCR, Faridabad that includes Translation Health Science & Technology Institute (THSTI). Besides, the bioincubator would draw upon the dynamism of IT technology hub at Gurgaon as well as create new bioinnovation synergies through interactions with IIT-Delhi, AIIMS Delhi, National Institute of Immunology (NII), Delhi, Delhi University to name a few. The facility would cater to the needs of start-ups as well as provide soft-landing space for companies that would like to acquire technologies from abroad and be operational in India.

BIRAC has supported Centre for Cellular & Molecular Platforms (C-CAMP), Bangalore which is part of the Bangalore Biocluster. C-CAMP is a major technology platform that provides access to its high end instrumentation to industries and start-ups besides providing bioincubation space. Similar functional BIRAC supported bioincubator is at IKP Knowledge Park at Hyderabad (one of the oldest biotech/ lifescience park in the country).

There is an emerging medtech industry in the country and BIRAC has strategically fostered this domain through its support to Health Technology Innovation Center (HTIC) at IIT Madras Research Park for establishing a medtech incubator which would incubate and nurture medtech start-ups besides seeking avenues for technology development through industry partnership. HTIC incubator would have a core equipment facility and a policy center as well.

In order to promote Women entrepreneurship in Biotechnology, BIRAC has extended its support to Golden Jubilee Biotech Park, Chennai to exclusively support women entrepreneurs in Biotechnology.



Through BIS Support BIRAC has created specialized manpower in Bioincubation management. Till now 41 positions/ jobs has been created through 6 incubation centers. This number will increase with the operationalization of other funded incubators.

- BIRAC Bio-incubator program provides support for
- Establishing incubator space for Start-ups and Entrepreneurs which includes:
- – Lab space: 200 Sq.ft; 300 Sq.ft, 500 Sq.ft
- – Bench space: Half / full bench
- – Office space
- Creating Specialized facility
- – Plant growth, Quality Testing, Microbial fermentation
- Access to a pool of special equipment in the Central Equipment Facility
- Connect and facilitate Industry - Academia Interaction for both smooth flow of knowledge from Academia to Industry and also for providing the required Technical Mentorship
- Enabling services and required mentorship for:
- Intellectual Property Rights (IPR)
- Legal Consultations
- Business Mentoring
- Other Consultancy Services
- Other Funding Support
- Resource mobilization and networking platform.
- Other services
- Relevant Manpower required to run the Bio-incubator

Some of the operational bioincubators and facilities created under BIS :

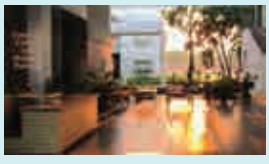
BIRAC INCUBATION FACILITY

C-CAMP, Bangalore

Bio-incubator Space : 3000 Sq. Ft. **Number of Resident Incubatees : 6**

C-CAMP is envisioned to be a major platform technology, industry-interaction and incubator unit which is a part of Bangalore Bio Cluster

Focus area: Life-science/Biotech Technologies



- Lab Space, Office Space
- R&D and High Equipments Facility Support
- Mass Spectrometry, Confocal imaging, flow cytometry, next generation genomics, High through put screening
- Purification and Downstream Facilty housing high end equipments
- Development of Novel Technologies & Tools
- Intellectual Property Management and Technology Transfer Services
- Entrepreneurship Development in collaboration with IIM-Bangalore

BIRAC BIO-INCUBATOR

Venutre Centre, NCL Pune

Bio-incubator Space : 6000 Sq. Ft. **Number of Resident Incubatees : 18**
No. of Virtual Incubatees : 2

The BIRAC Bio-Incubator at Venture Center aims to nucleate and nurture technology and knowledge-based enterprises

Focus area: Biotech I Biomed I Bioinformatics I Biomass Start-ups and Entrepreneurs

- Lab Space
- Office Space
- R&D and Equipments Support
- High End Equipment Facility
  - Microwave Plasma Atomic Emission Spectrometer
  - High Resolution Mass Spectrometer
  - Flow Cytometer
  - Scanning Electron Microscope
  - Confocal Microscope
- Advice, Mentoring & Referrals
- Visibility & Branding
- Technical Training Programs & Workshops
- Grant Funding Schemes
- Seed Investment

BIRAC INCUBATION FACILITY

ZTM & BPD Unit, IARI, New Delhi

Bio-incubator Space : 3000 Sq. Ft. **Number of Resident Incubatees : 5**

ZTM & BPD Unit, Indian Agricultural Research Institute, (IARI) helps technology start-ups in Agri-business sector for technology up-scaling & development

Focus area: Agri Biotech I Seed Technology I Bio-fertilizer I Biomass I Start-ups and Entrepreneurs

- Lab Space, Incubation & Office Space
- R&D and Equipments Support
- Specialized Facility
  - Microbial Fermentation/ Bio-fertilizer Unit
  - Agro Processing Unit
- Intellectual property protection in the form of patent/ copyright/ trademark and varieties protection under PPV&FR Act.
- Commercialization of Technology
- Mentoring support & Consultancy Services
- Technical Training Programs & Workshops

BIRAC LIFE SCIENCE INCUBATOR

IKP Knowledge Park, Hyderabad

Bio-incubator Space : 3000 Sq. Ft. **Number of Resident Incubatees : 12**
Number of Virtual Incubatee : 10

IKP Knowledge Park has set up a Life Science Incubator (LSI) with fully furnished dedicated lab space, shared equipment and an assistance programme

Focus Area: Pharma I Diagnostics I Industrial Biotech I Food & Nutrition I Start-ups & Entrepreneurs

- Incubation Lab Space-Furnish/ Unfurnish: Bench/ Desk Space/ Office Space
- R&D and Equipments Support
- High End Equipment Facility
  - Digital Confocal Microscope
  - NMR
  - LC-MS/MS
  - ÄKTApurifer UPC100 Core System
  - GC-MS
  - Polarising microscope
  - HPLC/GC
- Animal Cell Culture Facility
- Technical Training Programs & Workshops
- Seed Fund support from NSTEDB & DST
- Grant Programs-Technopreneur Program (TePP) & BIRAC BIG Partner
- IP & Technology Management

BIRAC BIO-INCUBATOR

KIIT, Bhubaneswar

Bio-incubator Space : 8000 Sq. Ft. **Number of Resident Incubatees : 5**

BIRAC Bioincubator at KIIT is the first incubator in Odisha that provides a holistic ecosystem for nurturing and incubating ideas into commercially feasible ventures in various areas of Life Sciences

Focus area: Industrial Biotech I Agri Biotech I Diagnostics I Biomed I Bioinformatics I Clean and renewable fuels/ chemicals/ materials

- Incubation Space for the start-up companies
- Common equipment facilities
- Analytical Instrumentation Facility
- Product development and Validation lab
- Fermentors for pilot level up-scaling
- Clean room facilities
- Enabling services and required mentorship for IP and Technology Management, Legal and Contract, resource mobilization and networking platform
- Technical and business mentoring for start-ups
- Training and workshops for start-ups and incubators

BIRAC BIO-INCUBATOR

Alexandria Knowledge Park, SBTIC, Hyderabad

Bio-incubator Space : 3550 Sq. Ft. **Number of Resident Incubatees : 10**

DBT supported Biotechnology Incubation Centre (BTIC) at Alexandria Knowledge Park is a high end incubation center managed by Alexandria, under a unique publically owned and privately managed model. The facility has been created under DBT-BIRAC support

Focus area: Scale up of bio processes and technologies I Start-ups and Entrepreneurs

- cGMP compliant Pilot plant facilities, for quality manufacturing and minimizing contamination.
- Research laboratories, knowledge based service centers and utility generation facilities.
- High end equipment facility :
  - AVS NMR 500,
  - LCMS,
  - HPLC,
  - Microplate multimode Reader and Luminometer
  - UV/V Spectrophotometer

BIRAC BIO-INCUBATOR

Biotechnology Business Incubation Facility (BBIF) at IIT Delhi

Bio-incubator Space : 3000 Sq. Ft. **Number of Resident Incubatees : 7**

BIRAC Bioincubator at FITT, IIT Delhi has been established to support life science based start ups originating from IIT Delhi Campus

Focus area: Medical Devices I Diagnostics I Bioinformatics I Clean and renewable fuels/chemicals/Bio-materials

- Incubation Space for the start-up companies
- Fermentors for pilot level up-scaling
- Common equipment facilities
- Product development and Validation lab
- Enabling services and required mentorship for IP and Technology Management, Legal and Contract, resource mobilization and networking platform.
- Analytical Instrumentation Facility
- Technical and business mentoring for start-ups.
- Training and workshops for start-ups and incubators.

BIRAC BIO-INCUBATOR

SIDBI Innovation & Incubation Centre (SIIC) at IIT Kanpur

Bio-incubator Space : 7000 Sq. Ft. **Number of Resident Incubatees : 6**

BIRAC Bioincubator to foster innovation, research and entrepreneurial activities in technology

Focus area: Biotech I Biomed I Bioinformatics I Biomass Start-ups and Entrepreneurs

- Incubation Space for the start-up companies
- Common equipment /Analytical Instrumentation Facility
- Seed Capital Support/ 2nd stage funding
- Enabling services and required mentorship for IP and Technology Management, Legal and Contract, resource mobilization and networking platform.
- Technical and business mentoring for start-ups.
- Training and workshops for start-ups and incubators.

BIRAC BIO-INCUBATOR

MedTech Core Facility and Incubator, HTIC, IIT Madras Research Park

Bio-incubator Space : 20250 Sq. Ft. **Number of Companies Supported : 6**

BIRAC Bioincubator to foster innovation, research and entrepreneurial activities in med tech

Focus area: Biomed –MedTech-informatics

- Incubation facility for med-tech entrepreneurs
- core facilities for use by med-tech industry, entrepreneur and incubatees for med-tech development
- testing and validation with capabilities to support design concept, engineering, testing, verification and validation
- unique integrated structure of R&D, core facilities, training, and incubation at HTIC to create a high quality and effective med-tech ecosystem.
- Acceleration Service and capital from seed fund

BIRAC BIO-INCUBATOR

IIT Madras-IIT Madras Research Park

Bio-incubator Space : 3000 Sq. Ft. **Number of Resident Incubatees : 4**

BIRAC Bioincubator at IIT Madras-Research Park act as a accelerator to set up Biotech companies by the students and faculty of the Institute and other R&D labs and academic institutes in and around IIT Madras

Focus area: Fermentation Biology I Microbiology I Diagnostics

- Incubation Space for the start-up companies
- Fermentors for pilot level up-scaling
- Common equipment /Analytical Instrumentation Facility
- Funding from the Entrepreneurship Support Scheme of the IITM Alumni
- Enabling services and required mentorship for IP and Technology Management, Legal and Contract, resource mobilization and networking platform.
- Technical and business mentoring for start-ups.
- Training and workshops for start-ups and incubators.

7.2 University Innovation Cluster (UIC) : In partnership with industry : A public private partnership model

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 view of this, BIRAC has established 5 University Innovation Cluster (UIC) at 5 state universities to promote bioinnovation potential regionally.

The 5 UICs are:

1. Anna University, Chennai
2. Panjab University, Chandigarh
3. Tamil Nadu Agricultural University, Coimbatore
4. University of Rajasthan, Jaipur
5. University of Agricultural Sciences, Dharwad

Inauguration of UIC facility at Anna University

Academia Industry Workshop at UIC – Panjab University

Each UIC has been supported with an incubation space of 2500-3000 sq ft and fellowships (2 postdoc fellows and 4 post master fellows). Each postdoc fellow receives INR 50000/month as fellowship plus a grant of INR 500,000 while a postmasters innovation fellow receives INR 30,000/month and a grant of INR 200,000.

Each UIC acts as a hub for boosting bioinnovation locally and proactively seeks industry inputs, mentors the BIRAC innovation fellows, conducts entrepreneurial and technical workshops and creates networks for benefit of the fellows as well as other entrepreneurial individuals. The 5 UICs are now operational and through a national level selection process 6 postdoctoral innovation fellows and 9 postmasters innovation fellows have already been selected.

The UIC at Panjab University conducted a seminar MICRON-2015, a seminar to discuss the role of microbes in economic in which a panel discussion was dedicated on the development of UIC at Panjab University.

7.3 Collaborating with SRISTI for promoting Grass root Innovations

BIRAC collaborated with **SRISTI (Society for Research and Initiatives for Sustainable**

Technologies and Institutions), a non-profit organization, for promoting grass root level innovations at the university/ college level among the students. BIRAC has constituted **BIRAC-SRISTI GYTI Awards**, in partnership with **SRISTI** to select **15 entrepreneurial ideas** at the university level from across India which then would be nurtured for **2 years** in-situ with a grant of **INR 15 lakhs**. Also, **INR 1 lakh** will be given to 100 young innovators to take their innovations to next level. The objective is to inculcate the sense of entrepreneurship among the young students who can be motivated to take their innovations to commercial level.

The Award Function for 2015 was held at Rashtrapati Bhavan, New Delhi on 8th March, 2015. Five projects were awarded the BIRAC-GYTI Awards and four projects were awarded the BIRAC-GYTI Appreciation Awards.

- The Awardees for the BIRAC - GYTI Awards were:
- Flexicast: A Breathable, Washable and Customized Cast for Immobilization of Fractured Limb

Innovator: Nikhil Jamdade, IIT Kanpur

- Rightbiotic: The Fastest Antibiotic Finder

Innovator: Shivani Gupta, BITS Pilani, Hyderabad Campus

- Redefined Spoon For Parkinson's Patient

Innovator: Dhyey Mayank kumar Shah, IIT Gandhinagar

- Development of A Powerful New Antibiotic that kills all Drug-resistant Bacteria

Innovator: Venkateswarlu Yarlagadda, Jawaharlal Nehru Centre For Advanced Scientific Research (JNCASR)

- Real Time Wound Management System Wound Segmentation & Analysis using Image Processing on Mobile Platform (Android)

Innovator: Abhiraj Gupta, Manipal Institute of Technology

7.4 BIRAC Regional Innovation Centre (BRIC) at IKP Knowledge Park, Hyderabad

In 2013, BIRAC set up a BIRAC Regional Innovation Centre (BRIC) at IKP to advance the mandate of BIRAC in Southern India through deeper engagement with life sciences based organizations in the region. The Regional Innovation Centre has been created to carry out the RIS mapping of Andhra Pradesh, Karnataka, Tamil Nadu and Kerala; development of database of technologies for in and out licensing, IP & Technology evaluation; and fostering the entrepreneurship in R&D institutes and colleges.

Regional Centre has completed the RIS Mapping of the Hyderabad region and for Bangalore, mapping has been initiated. Centre has also carried out patent searches, patent landscape analysis for the Universities as well as for the Start-ups. Centre has also conducted IP awareness and entrepreneurship workshops at different universities and institutes.

7.5 BIRAC AcE – Equity Fund

During its 3rd Foundation Day, BIRAC announced the launch of an equity based funding programme called - BIRAC AcE Fund: Accelerating Entrepreneurs. The programme intends to work on a Co-Funding model along with incubators, angel firms, business accelerators and early stage VCs, where the focus will be on providing the equity funding of upto INR 1 Crore to entrepreneurs for taking their venture onto the next stage. The programme launch was announced by the Hon'ble Minister of State for Science &

Technology & Earth Sciences, Shri Yalamanchili Satyanarayana Chowdary. The programme is in process of being rolled out.

8 MENTORING AND CAPACITY BUILDING

8.1 Regulatory Facilitation

BIRAC has an In-house Regulatory facilitation Cell which examines and ensures compliance of the BIRAC funded proposals with Regulatory guidelines of India. The Cell draws upon the expertise of Regulatory Experts from Central Drugs Standard Control Organization (CDSCO), ICMR and other Experts from Medical Institutes and Industries. The mandate of the Regulatory cell is to address the queries and build capacities of SMEs, Young Entrepreneurs, academic institutes and start-ups on issues related to the regulatory compliance of Product Approvals.

Under the Capacity Building mandate, BIRAC in collaboration with Clinical Development Services Agency (CDSA) has planned to organise a set of four Regulatory Workshops under the series "Demystifying Indian Drug Regulations for Product Approvals" in North and South India.

The four workshops in first phase in North India have already been organised on Regulations of "New drugs", "Biopharmaceuticals", "Phytopharmaceuticals" and "Medical Devices & Diagnostics". Around 330 participants have benefited from these regulatory events.

8.2 BIRAC-University of Cambridge Entrepreneurship Education Programme :

BIRAC IGNITE fellows at Cambridge

BIRAC and Centre of Entrepreneurial Learning (CfEL) of Judge Business School, University of Cambridge had initiated a partnership that enables 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 start-Up's to explore entrepreneurial opportunities of their innovative ideas and transform them into a business project. In the year 2014, BIRAC along with its Ignition Grant partners (C-CAMP, IKP Knowledge Park and FITT, IIT Delhi) selected 2nd batch of five candidates to attend the intensive programme at Cambridge. The second batch of 5 BIRAC supported IGNITE candidates underwent training at Cambridge for two weeks in July,

2014.

The two week programme focussed on: meetings with successful bio-entrepreneurs, companies, and funders in the Cambridge bio cluster; market research activities at the Judge Business School; working on plans for their companies; feedback on their business plans; 1:1 meetings initiated by the Ignite BIRAC delegates; opportunities to explore ideas, questions with experienced people; and pitching to an expert panel with their plans.

8.3 Entrepreneurship Development and Awareness Programme with ABLE

Nascent Entrepreneurs Development Programme

BIRAC joined Hands with ABLE to ignite and promote the entrepreneurial flair in the university students through **Stimulating Bio-Entrepreneurs Talk Programme** organized at 4 academia – University of Rajasthan, Jaipur; Panjab University, Punjab; University of Agricultural Sciences at Dharwad and Tamil Nadu Agriculture University, Coimbatore.

Also 3 workshops (Nascent Entrepreneurs Development Programme) were organized with ABLE at Delhi, Chennai and Ahmedabad, targeted at young innovators who need help in go-to market strategies, business modeling and competitive positioning.

8.4 BIRAC Roadshows, IP Sensitisation and Grant Writing Workshops

BIRAC Roadshow and IP workshop at Gandhinagar, Gujarat

BIRAC organized a series of **Roadshows and IP Management Workshops** at Gandhinagar, Guwahati, Gangtok and Lucknow to enhance its outreach and sensitize the stakeholders and potential innovators and entrepreneurs about the evolving biotechnology landscape in India especially on the funding scenario for biotech innovation and how BIRAC is fostering the innovation. This also involved a session on effective grant writing skills as well as a dedicated workshop on IP issues. The four workshops together witnessed the participation from around 240 participants comprising of researchers, scientists, and academicians, representatives of small, medium and large industry, start-ups and students.

8.5 Hands on Training for Skill Development

Participants at the BIRAC-JNU hands on training workshop

Laboratory set-up during the training

Enhancing the research and innovation capabilities of the Indian biotech industry particularly start-ups and SME's for creation of affordable products by providing mentoring support is the main aim of BIRAC. BIRAC intends to organize a series of training / workshops in the area of fermentation technology for enhancing the innovation capabilities of the start-ups and SMEs.

It is important to conduct hands-on training workshops for upgrading the technical skills of the industry personnel with respect to the tools and techniques used in bioprocess engineering.

Accordingly BIRAC organised a training workshop on "Optimization and scale-up of recombinant protein production for bacterial systems" at School of Biotechnology, Jawahar Lal Nehru University, Delhi. The primary aim of this workshop was to provide hands on training to participants from industries who are working in the area of bioprocess optimization, with a primary focus on recombinant systems. The training consisted of

- Hands on training on Laboratory Techniques
- Lectures on Lab Techniques and recent areas

The training was attended by a total of 20 participants from 16 different BIRAC funded enterprises.

9. OUTREACH INITIATIVES

9.1 BIRACi3 – The Quarterly Newsletter of BIRAC

BIRACi3 – the quarterly newsletter of BIRAC, launched in March 2014, has now entered into its 2nd year. The publication focuses on the emerging issues in the biotechnology sector, expert views on the challenges faced by the industry, success and experiences of the bio-entrepreneurs and the present and upcoming calls for the BIRAC Programmes. The newsletter also has the updates on the news about BIRAC and the workshops conducted by BIRAC.

9.2 Hunarbazz : Skilled to Win

BIRAC partnered with Cinema Vision India - a media firm, to promote the BIRAC supported entrepreneurs on a national platform. The partnership was aimed at showcasing the innovations of bio-innovators to the national audiences and promote the innovators to come forward and take bio-entrepreneurship as a career option. 13 bio-innovators were showcased during the

various episodes of the Hunnarbaaz show aired on Doordarshan.

9.3 BIRAC's presence at BIOtech Japan 2014

BIRAC at BIOtech Japan 2014

BIOtech Japan 2014 was an international biotechnology conference and event held at Tokyo, Japan from May 14th-16th. BIRAC participated at the conference by taking up a booth and presenting on the topic – **"India Govt's Biotech Strategies for Early-stage Support"**. The event was attended by delegates from various geographies from the academic, industry, and Government background.

9.4 BIRAC's presence at BIO International Convention 2014, San Diego

The 2014 BIO International Convention was convened from 23rd-26th June. The Convention acted as a platform for the global biotech community to meet, interact and discuss the areas of interests in Biotechnology and showcase the potential of biotechnology in various countries by various organizations. The event was organized by the Biotechnology Industry Organization (BIO), which witnessed the presence of 15,667 industry leaders, including nearly 2,500 CEOs, from 50 states and 70 countries.

The India pavilion at BIO was formally inaugurated on 24th June, 2014 by Prof. K. VijayRaghavan, Secretary, DBT. During the opening ceremony, the exhibitor brochure was also released. The India session involved a Keynote Address by Prof. K. VijayRaghavan, Secretary, DBT on "Biotech for Social and Economic Transformation : Making the Impossible Happen Requires Partnership". The participants of the event included leading biotech companies, Pharma companies, CROs and CMOs, Academic institutions including the major research labs and government agencies and the leading consultants and service companies. BIRAC setup a booth at the convention that showcased the capabilities and capacity of BIRAC in promoting innovation entrepreneurship in the biotechnology arena in India.

BIRAC at Bio International Convention 2014, San Diego

9.5 Indo-US Technology Summit & Knowledge Expo

BIRAC participated in the **India – US Technology Summit 2014** & Knowledge Expo co-organized by Confederation of Indian Industries (CII), Department of Science and Technology, Government of India and Department of State, United States of America. The event was a platform for Indo–US engagement in science, technology, innovation and education focusing on policy dialogues and exhibition by more than 300 Indian and US Stakeholders. The focus areas were Manufacturing, IT, Clean and Renewable Energy, Life Sciences, Pharmaceuticals, Biotechnology and Healthcare and Natural Resources. The event was organized at The India Expo Centre, Greater Noida from 18th to the 21st November, 2014. The inaugural function witnessed the opening of the Technology Summit by Dr Harsh Vardhan, Union Minister for Science & Technology & Earth Sciences, Government of India along with Dr Venkatesh Valluri, Chairman – CII National Committee on Technology, Ms Diane Farell, Acting President, US India Business Council, and Dr Naushad Forbes, Vice – President, CII.

The **Knowledge Expo** was inaugurated by Smt. Smriti Irani, Hon'ble HRD Minister, Government of India. BIRAC participated in both the events by taking up a booth to showcase its activities and communicate its programmes to the masses. Dr. Renu Swarup, Senior Adviser, DBT and MD, BIRAC gave perspective about BIRAC and DBT in panel discussions focused on promoting bio-entrepreneurship, and role and opportunities for Women entrepreneurs in biotechnology ecosystem.

9.6 Festival of Innovations at Rashtrapati Bhavan

National Innovation Foundation-India (NIF), an autonomous body of the Department of Science and Technology, Government of India, provides institutional support to grassroots innovators and outstanding traditional knowledge holders from the unorganized sector of the society. The NIF organized Festival of Innovations at Rashtrapati Bhavan from 07th-13th March, 2015, which recognized the innovations from the grass-root levels of the society by giving them a platform to exhibit their innovations to the public forum. The event also witnessed the awarding of the BIRAC-SRISTI GYTI awards to five innovators and BIRAC-SRISTI GYTI Appreciation awards to four innovators.

Dr. Renu Swarup, MD, BIRAC and Senior Members of BIRAC participated in round table discussions focussed on – Inclusive Innovations and Financing of Innovations.

9.7 Bangalore India Bio

The Bangalore India Bio 2015 event, from 9th-11th February, provided a platform to BIRAC for interaction with like-minded partners and other stakeholders in the biotechnology ecosystem. The 3 day conference provided a comprehensive overview of the dynamic landscape of the biotechnology industry with a special emphasis on Agri-Biotechnology. The deliberations included multi track conferences focussing on Biotech Investment; Agri-Biotechnology; Biopharmaceuticals; Bio Medical Innovations & Diagnostics among other facets of the biotechnology industry. The event provided BIRAC with a platform to showcase its contribution to the biotech industry for encouraging innovation and product development.

9.8 BioAsia

BioAsia 2015 conclave was organized at Hyderabad from 2nd-4th February, 2015. Technology Conferences of BioAsia acts a Science-Business bridge, that aims to bring together a trans-disciplinary environment for driving innovation in the life sciences industry. The event witnessed the participation of

around 1200 delegates from 51 nationalities. The focus theme was - New Era of Life Sciences; opportunities in transition. BIRAC participated in the event by organizing a whole day focussed session on "DRUG DISCOVERY CONFERENCE - Showcasing India's Innovation Pipeline". **Accelerating India's Biopharmaceutical Discovery** was the main theme of the Session. BIRAC also put up a stall at the exhibition area to enhance the outreach and branding of BIRAC activities and initiatives.

10 INDUSTRY ACADEMIC INTERACTION

10.1 Innovators' Meet

3rd BIRAC Innovators' Meet 2014

BIRAC's Third Innovators Meet was organized on 22nd & 23rd September, 2014 at New Delhi with over 200 participants from academia, industries, key stakeholders and policy makers. The theme of the event was – **Prioritizing Innovation Research for Affordable Product Development**.

The event started with the Welcome Address and theme introduction by Dr Renu Swarup, MD, BIRAC and Senior Adviser, DBT. Dr. Swarup emphasized on the need for directed and focused innovation research for addressing the most challenging problem which our country is facing. This was followed by the Key Note Address by Dr M K Bhan, Former Secretary, DBT, whereby he stated the importance for having a performance matrix and making programmes focused on the development of the innovation ecosystem. Prof. Padmanaban, Senior Science and Innovation Advisor, BIRAC, highlighted the importance of BIRAC support to the bio-entrepreneurs while also mentioning the need of directed efforts towards the bio-manufacturing for a sustainable future. The gathering was also addressed by Prof. K. VijayRaghavan, Secretary, DBT and Chairman, BIRAC, who emphasized that BIRAC should find out radical and innovative methods for funding and also that BIRAC should expand its reach to SAARC nations.

3rd BIRAC Innovators' Meet 2014

The flagship BIRAC Innovators Award was awarded to four best innovations by the industry who have delivered cutting edge innovative products. The criteria of selection included the level of innovation, scientific merit and risk factor attached in each of the project.

- Best Innovation in the **Healthcare Sector** was awarded to **Healthline Private Limited**, Bangalore, in recognition of their significant contribution to innovative research towards the development of face mask for cosmaceutical application using sericin and other natural bio-active agent on non-woven silk sheet.
- Best Innovation in the **Biomedical Devices, Implants and Diagnostics Sector** was awarded to **Janacare Solutions Pvt. Ltd., Bangalore, All India Institute of Medical Sciences, New Delhi and Narayana Hrudayalaya Hospital, Bangalore**, in recognition of their significant contribution to innovative research towards the development of a "Software Platform - DXPhone", a P-o-C diagnostic tool comprising of a novel hardware sensor which plugs into any smartphone and an array of proprietary

Roundtable Discussions at 3rd BIRAC Innovators' Meet

dry-chemistry strips for testing six basic blood parameters – Blood Glucose, HbA1c, Lipids, Triglycerides, Hemoglobin and Serum Creatinine.

Group Picture at 3rd BIRAC Innovators' Meet 2014

- Best Innovation in the **Agriculture Sector** was Awarded to **Indo – American Hybrid Seeds Pvt Ltd.**, Bangalore, in recognition of their significant contribution to innovative research for the development of salt tolerant hybrids in rice *(Oryza sativa)* using marker assisted selection
- Best Innovation in the **Industrial Processes and Green Technology Sector** was awarded to **Rossari Biotech Ltd.**, Mumbai in recognition of their significant contribution to innovative research towards the production of viable Enzymes using Agro waste produce as raw material of industrial Feed and health care use with large viable market demand.

The technical discussions were focussed on:

- Innovation Research and Product Development – Setting the Priorities for Biopharmaceuticals, Medical technologies, Agriculture and Industrial Products
- Accessing and Optimizing the resources for supporting successful BioVentures.

10.2 BIRAC Foundation Day

Lamp Lighting at BIRAC 3rd Foundation Day

BIRAC organized a two day technical programme focused on Make in India, on its 3rd Foundation Day on 19th – 20th March 2015 at New Delhi. The overarching theme was: **Accelerating Innovations: India the next Biotech Global Hub**. The event started with a video message from the Hon'ble Union Minister of Science & Technology & Earth Sciences, Dr Harsh Vardhan conveying his wishes to the participants and congratulating

BIRAC Team at 3rd Foundation Day

Panelists at BIRAC 3rd Foundation Day

BIRAC for the role it has played in spurring and strengthening the Entrepreneurial ecosystem within the Biotech landscape of the country. The Hon'ble Minister of State for Science & Technology & Earth Sciences, Shri Y.S. Chowdary was the Chief Guest for the 3rd Foundation Day and inaugurated the event. In his address, Sh. Chowdary announced the launch of the equity based **"BIRAC AcE Fund"** for Accelerating Entrepreneurs. The Equity Fund is aimed at addressing the pressing needs of accelerating the growth of entrepreneurs, in the field of Biotechnology and will be operated by BIRAC with Incubators and Business Accelerators as its partners.

Thereafter, a documentary movie on the role, activities and impact of BIRAC on the innovation ecosystem was shown. Prof. K. VijayRaghavan, Secretary, DBT & Chairman, BIRAC, gave the keynote address highlighting the future roadmap that BIRAC could venture into for further catalysing the Indian biotech ecosystem. Dr. Renu Swarup, Senior Adviser, DBT & MD, BIRAC gave the Welcome Note and BIRAC's journey since its inception. She highlighted BIRAC's achievements in the past 3 years in fostering the innovation ecosystem and provided the vision for its future endeavours. Sh Y.S. Chowadary, Prof. K. VijayRaghavan and Dr. Renu Swarup also launched the BIRAC Brochure for the year 2015. During the inaugural session, three BIRAC supported innovators (from Achira Labs, Pandorum Technologies and Navya Biologicals) showcased their success stories and journey to entrepreneurship with the support of BIRAC.

BIRAC Brochure Release

The first panel discussion in the evening themed, "**India the next Global Biotech Hub: The status of our readiness?**" witnessed the participation of eminent speakers from the field of Biotechnology. The panel was moderated by Sh. Utkarsh Palnitkar, Partner, KPMG and the panellists were:

- Prof. K. VijayRaghavan, Secretary, DBT & Chairman, BIRAC
- Dr. MK Bhan, Former Secretary DBT & Founder Chairman, BIRAC
- Prof. G. Padmanaban, INSA Senior Scientist & Senior Science & Innovation Adviser, BIRAC
- Sh. Amitabh Kant, Secretary, Department of Industrial Policy & Promotion
- Dr. VM Katoch, Former Director General, ICMR
- Dr. Kiran Mazumdar-Shaw, Chairman and Managing Director, Biocon
- Dr. Krishna M. Ella, Chairman and Managing Director, Bharat Biotech
- Sh. Pramod Chaudhari, Executive Chairman, Praj Industries.

The panel deliberated on the policy changes and inherent modalities that would hasten the process of making India a destination of choice in the global biotech landscape. The scope of discussion was diversified over various issues including size and scale of biotech industry, financing landscape for biotech start-ups & SMEs, risk taking capabilities of Indian innovators & entrepreneurs, risk aversive approach of investors, tax benefits and government initiatives to promote lending in the sector, and creation of a motivating entrepreneurial ecosystem at the university level in the

country.

The **second day** started with a Theme presentation - **Enabling Vibrant Biotech Hubs in India**, by Bain and Company, aimed at highlighting the role of critical components of the biotech ecosystem in India required for making India a choice destination for biotech industry. Following session was a Plenary Talk on *'Make in India': a perspective on the Biotech Sector: the opportunities, the enablers, and the challenges*, by Dr. Kiran Mazumdar-Shaw, where she highlighted the importance of a strong connect between academia and industry to realize the commercial potential of biotech leads.

The second day discussions focussed on:

- India a Bio-manufacturing hub: Bridging the paradigm for quality & affordability
- Ecosystems & Platforms to accelerate the product pipeline: Facilitating transition to the next level
- Leveraging Partnerships to Make in India: Collaborating with national and international partners for enhanced competency
- Scaling Innovation through market creation & diffusion: Effective Role of stakeholders

Dr. Kiran M. Shaw, CMD, Biocon Limited at BIRAC 3rd Foundation Day

Panel Session at BIRAC 3rd Foundation Day

The event witnessed the participation of around 250 researchers from academia, entrepreneurs, policy makers, industries, SMEs and start-ups.

11 INTELLECTUAL PROPERTY AND TECHNICAL MANAGEMENT SUPPORT: SAFEGUARDING THE INDIAN BIOTECH INNOVATION

11.1 Intellectual Property

BIRAC in-house IP Cell conducts an IP due diligence for all the eligible proposals received under various public-private partnership funding schemes such as BIPP, CRS, BIG, SPARSH, BMGF, Wellcome Trust etc. BIRAC has set up an Intellectual Property Management and Technology Commercialization (IPM-TC) unit at DBT-ICT Centre for Energy Bio-Sciences and envisages setting up similar units in different institutes/ universities. Keen with the sense to step up efforts to engage with India's thriving Biotech entrepreneurial ecosystem, BIRAC has started to provide assistance for Intellectual Property protection via *"Patent Assistance Scheme"*.

In order to enhance the proportion of Life science invention coming out of Public Institutes that can be translated, BIRAC has initiated technology mapping of the DBT Institutes. A preliminary technology mapping was conducted at NCCS, Pune, NII and NIPGR, Delhi. The technology mapping involved mapping institute's collaboration at National & International level, number of Patents filed/commercialized and creating a pool of technologies for transferring to the Companies. During this process, two technologies from NCCS, one from NII and two from NIPGR were identified to transfer to companies. BIRAC is continuously following up with these institutes for any emerging technologies which needs further assistance.

Apart from the various IP services, the IP cell also helps to formulate Patent policies of universities & organizations. 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 SMEs, Start-ups, Academia and also to Indian Biotech Industry. IP & Technology Management services includes Patent searches, Patent drafting, filing & Prosecution, Patent Analytics, IP Policy development and process set up, Technology evaluation, marketing, license negotiation and IP & Tech Management awareness and capacity building programmes.

11.2 Patent Assistance Scheme

To facilitate the protection of entrepreneur's, industries and SMEs Intellectual Property, BIRAC has initiated a Patent Assistance Scheme (PAS) to encourage the technological innovation in the country. To implement the scheme, BIRAC has also empanelled technically competent and experienced IP & Technology Transfer (TT) firms who could provide assistance for Patent search, filing, drafting and commercialization of such technologies if required. BIRAC had supported projects under BIG, SBIRI and BIPP and had provided assistance in supporting IP generated in the funded program. A total of two patents have been supported through the Patent Assistance Scheme (PAS). Patent filing support has been extended for national phase entries in different countries such as US, EU, Australia and India. These patent applications are filed mainly in the area of secondary agriculture and healthcare.

11.3 DBT-ICT Centre for IP & Technology Transfer activities

BIRAC has set up an IP Management and Technology Commercialization (IPM-TC) unit at DBT-ICT Centre for Energy Bio-Sciences at Mumbai and intends to set up similar centres in different institutes which can provide competent IP & Technology Management related activities to the local ecosystem in India. Specific objectives of the Centre are to protect the technologies generated at the centre which has commercial potential; IP Management with regard to technology transfer drafting MoUs and other relevant agreements and Generating awareness related to IP protection within and outside the Centre, assistance on IP related issues within ICT and outside ICT.

DBT-ICT IPM-TC Unit has filed more than 20 Patent applications at the Indian Patent Office out of which 3 patent applications have entered the national phase of many countries such as US, EP, AU, JP, Pakistan, Korea etc. IPM-TC Unit has also carried out patentability searches for more than 30 projects and has signed MoUs, CDA with Industries to take the research forward.

11.4 BIRAC – QUT Australia - Bio-fortification and disease resistance in Banana

Queensland University of Technology, Australia has developed bio-fortified banana under the Grand Challenges in Global Health Program to alleviate vitamin A and iron deficiency in Uganda. They have also developed technologies related to Banana Bunchy Top Virus (BBTV) and Fusarium Wilt resistance in banana. QUT is willing to share these technologies with India. An agreement was signed between BIRAC on the behalf of Government of India and QUT, Australia for "Development and Transfer of Technology from Queensland University of Technology, Australia to India for Bio fortification and Disease Resistance in Banana" on 24th August, 2012.

Under this project, the experience and achievements of Queensland University of Technology (QUT), Australia have been utilised for the development, validation and transfer of specific traits in Indian banana varieties. QUT has done substantial work on efficient regeneration & transformation of banana for provitamin A (PVA) & iron bio-fortification including good leads. They have also obtained good leads related to Banana Bunchy Top Virus (BBTV) and Fusarium Wilt resistance. QUT has been improving the constructs (Generation 1, Gen 2 and Gen 3) with respect to fold increase in expression of the above mentioned genes that will be applied to Indian banana varieties, evaluated under Indian conditions of growth and improved, as may be required. Accordingly, QUT will provide Gen1 constructs. This will be followed by the development of data and sharing of Gen 2 and Gen 3 constructs in a timely manner.

The Technology Transfer for Bio-fortified Banana from QUT, Australia, has been transferred to 5 Indian Partners for development and validation into Indian Banana Varieties

1. National Agri-Food Biotechnology Institute, **Mohali, Punjab**
2. National Research Centre for Banana, **Trichy, Tamil Nadu**
3. Bhabha Atomic Research Centre, **Trombay, Mumbai**
4. Tamil Nadu Agricultural University, Centre for Plant Molecular Biology & Biotechnology, **Coimbatore**
5. Indian Institute of Horticultural Research, **Bangalore, Karnataka**

Scope of application indicating anticipated product and processes: This study will lead to the development of bio-fortified and disease resistance transgenic Indian bananas. High level expression of gene constructs involved in carotenoid & iron biosynthesis pathways and BBTV & fusarium resistance will be aimed through joint efforts with QUT, Australia. On successful achievement of milestones, bio-fortified and disease resistant varieties of Rasthali and Grand Nain will be developed.

Prime Minister of India, Mr. Narendra Modi, during the recent G20 Conference held in Brisbane also visited QUT. Prof Dale along with his team had the opportunity to talk with the Prime Minister in the glasshouse and discuss the QUT-BIRAC Banana Biofortification project.

12. LEGAL ADVISORY SUPPORT

The Legal cell of BIRAC provides a wide array of advisory support services including drafting, reviewing, executing and modifying contracts, agreements and internal policies to assist and support various activities of the organisation and ensure that they are in compliance with all statutory or legal requirements.

The services provided by the Legal Cell also includes providing legal guidance for the on-going and new funding programs, providing legal protection and risk management advice to management, managing the legal due diligence process pertaining to the various funding schemes of BIRAC and reviewing and advising the management on legal implications of internal policies and procedures.

13. INTERNAL CONTROL SYSTEM AND THEIR ADEQUACY

The Company has established systems providing adequate internal controls, commensurate with its size and nature of the business. Such systems have been appropriately documented. There is very clear policy to maintain confidentiality and ensure No-Conflict of Interest

14. HUMAN RESOURCES

Human Resource department provides a structure and the ability to meet the needs of the Company through managing the most valuable resources of the Company - its employees. The various HR Functions are performed by few officials including Administration, achieving the same level of efficiency and workforce management through continuous development. During the year 2014-15, BIRAC recruited twelve personnel including four support staff at various key positions which helped the Company to structure appropriately into various branches and divisions. This in turn helped the Company to stabilize its activities.

Last year BIRAC shifted its office to new premises in the month of September, 2014 and the shifting was planned meticulously that despite minimum resources the regular office work was carried out smoothly and safely without any disruption even for a day.

Inauguration of new office at MTNL Building on September 8, 2014

Keeping in view the core mandate of the Company, HR and Administration department worked dedicatedly providing logistics and other support for various activities as a backbone of the Company. As a link between various departments of the Company, it ensured smooth flow of information in adherence with the policies and timelines provided.

Training & Performance rating

The dynamic economy demands constant changes in the Company to cope with the changing global scenario. Continuous attempts are being made to develop the skillset and abilities which are critical for the success of the Company to achieve its Organizational objectives. Various Human Resource Development activities were carried out to enhance the competency of the employees. Extensive orientation and induction training programs were organized to help employees adapt to the culture of the company and their professional development.

To ensure that the human resources are appropriately placed and the best talent is retained, the Human Resource department implemented an effective Performance Management System (PMS) and valuated the variable pay accordingly.

Various training programs and seminars were organized for the personnel of BIRAC to address their area of development and enhance their efficiency and knowledge. Total number of **81.5 man-days** training was imparted in the FY 2014-2015 as compared to **40 man-days in FY 2013-2014.**

Specialized subjective training on the following area was imparted to all employees of BIRAC.

1. **Noting & Drafting Skills** by Shri Surendra Nath, Director & Faculty of Institute or Secretariat Training & Management
2. **Right to Information Act.**- Shri Mahabir Singh Kanaa Former Faculty & Joint Director ISTM. Workshop Conducted by NAHRD
3. **Combating Corruption- Technology as an enabler** - Shri K. V. L. Narshimham, Director (Tech) & CVO (EDCIL) India Ltd.

BIRAC personnel also attended trainings in their specific domain at renowned Institutions / Organizations as mentioned below:-

S. No.	Areas of Training	Institutions
1	FEMA & FDI Policy Emerging Issues and recents developments.	VC Circle, Training conducted at Hotel Royal Plaza Connaught Place, Delhi
2	Project- Finance Funding & Appraisal	FORE School of Management, Delhi
3	Project Planning, Implementation, Monitoring & Evaluation	IIM, Kozhikode
4	Managing Commercials Contracts	FORE School of Management, Delhi
5	Corporate Social responsibility (CSR) Practice In India	PHD Chamber of Commerce, New Delhi
6	Improving Inter Personal Skills at work place	FORE School of Management , Delhi
7	Water Sanitation & Hygiene	TARA Livelihood Academy Delhi

Observing various national events:-

BIRAC observed various national events in a befitting manner, such as :-

Swachh Bharat Abhiyan – a cleanliness drive and an essay competition was organized as a part of observance of Swachh Bharat Abhiyan, where 16 persons participated on October 2, 2014

Swachh Bharat Abhiyan, October 2, 2015

Women's Day – Team games & cultural activities were organized for the female employees on March 9, 2015

Women's Day Celebration on March 9, 2015

- **Vigilance awareness week -** A lecture on "combating corruption –Technology as an enabler" was held as a part of observance of Vigilance Awareness week. Shri K.V.L. Narshimham, Director (Tech) and CVO (EDCIL) India Ltd. was invited to deliver the lecture on October 27, 2014
- **Hindi Pakhwara -** Essay and Poem writing competitions were conducted as a part of Hindi Pakhwara where all employees participated between October 15-30, 2014.

Hindi Pakhwara from 15th -30th October, 2014

Participation in conferences and meetings

- International Congress on Green Urban Futures - Urban Sanitation Challenges in the Developing World: Initiatives and Innovations - Dr. Shilpi Gupta
- Bangalore India Bio - Dr. Amita Joshi and Ms. Jaya Sitaram

- Bio Asia Hyderabad - Dr. Dhiraj Kumar and Dr. Jyoti Shukla
- BIOtech Japan - Dr. Vinita Jindal
- BIO, USA - Dr. Shilpi Gupta
- Indo-US Technology Summit and Knowledge Expo - Mr. Ankur Gupta, Mr. Shariq Suhail, Dr. Amita Joshi and Ms. Sonia Gandhi
- Nano-India Summit, ASSOCHAM - Dr. PKS Sarma and Dr. Amita Joshi
- IPR and Biodiversity Seminar by TNTDPC - Dr. Vinita Jindal and Mr. Amit Katiyar
- BioPharma International Conference, Chemtech Foundation - Mr. Ankur Gupta
- Global R&D, FICCI - Dr. Jyoti Shukla & Dr. Dhiraj Kumar
- Indian Science Congress - Dr. Vinita Jindal and Mr. Ankur Gupta
- IPR Workshop at Venture Center-NCL, Pune - Dr. Vinita Jindal
- Festival of Innovations, Rashtrapati Bhavan - Dr. Satya Prakash Dash, Dr. Sanjay Saxena, Dr. PKS Sarma, Ms. Lalitha Balakrishnan and Mr. Ankur Gupta

15. FUTURE OUTLOOK

In the past 3 years, BIRAC has been able to strengthen its activities and create a positive nurturing environment for the growth of the Indian biotech innovation ecosystem. BIRAC's focus has been to understand the needs of the Indian biotech industry and then design and implement effective mechanisms to bridge the existing gaps.

Several of the programmes such as BIG, SBIRI, BIPP, BIS have started to show national impact. BIRAC has been able to make an impact through funding, mentoring, helping secure Indian IP and catalyse development of innovative products that bridge the paradigm of high quality and affordability.

In 2014-15, BIRAC on one hand, expanded its range of activities and on the other deepened several of its existing programmes. In 2015-16, BIRAC has strategised to focus on creating greater impact through the following:

1. Design and launch BIRAC AcE Fund which is a equity fund to help Indian biotech start-ups bridge the valley of death. This will be a crucial step in creating greater impact in the biotech start-up scenario in India.
2. Establish a BIRAC Regional Centre for Entrepreneurship Development which will amplify BIRAC efforts in catering to the needs of biotech start-ups in India
3. Implement and expand Patent Assistance Scheme such that BIRAC is able to help support and secure strategically important IP emerging out of BIRAC supported projects.
4. Establish Technology Acquisition and Development Fund to acquire global technologies which would be nationally important for further development of innovative products within the country.
5. Expand its Mission on Biopharmaceuticals and focus in a few strategic areas of biotherapeutics in consultation with all stakeholders.
6. Explore strategic partnerships to push R&D in antimicrobial resistance, secondary agriculture and other important areas of biotechnology

Annexure I

Affordable Products, Technologies and Intellectual Property

Category	Accomplished
Products/Technologies	05
Early stage technologies	05
IP generated	05

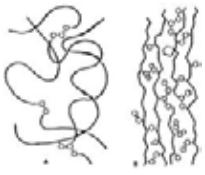
Annexure 2

Products/ Technologies/ Process Developed through BIRAC Funding

Technologies/Products:

1. **Malaria Antigen Detection Kit:**
   A rapid test for the qualitative detection of human malaria antigen in whole blood as an aid in the diagnosis of malaria infection. This test is designed for the differential diagnosis between plasmodium Falcifarum and the other plasmodium species (Commercialized).
2. **Wine from Mango pulp:**
   A technology to produce clarified juice and clear wine from viscous mango pulp. The resulting wine has low sugar content and characteristic flavour (Ready for Commercialization).
3. **Lycopene from Tomato:**
   A technology to extract lycopene, phytonutrient, from high yielding varieties of tomato. Validated to produce 24 kg of lycopene per day with a crushing capacity of 2 tonnes per hour (Ready for further validation/Commercialization).
4. **Novel Strain for production of industrial enzymes:**
   An E.coli K12 strain that can be used for highly efficient secretion of a wide variety of recombinant proteins of industrial and therapeutic importance into the culture medium was developed. The technology facilitates easier purification and reducing costs of process and product (Ready for further validation).
5. **Production of Dextranase using SSF technique:**
   First indigenous production of dextranase in the country using solid state fermentation with an activity of 30000 du/gm. The dextranase so produced has achieved 51% average reduction of dextran in cane sugar production process (Ready for further validation/Commercialization).

Proof of Concept:

1. **NEMA POWER production Technology:**
   Solid state fermentation for production of entomopathogenic nematode (EPN) i.e. NEMA POWER which has application in the management of root grubs in areca nut (Ready for next phase).
2. **Myocardial Infarction detection technology:**
   
   Rapid diagnosis of myocardial infarction by detecting multiple cardiac markers with high sensitivity and selectivity in less than 10 minutes. Can be used in a rural primary healthcare centre or in a small ambulance (Ready for next phase).
3. **Modular Resilin-mimetic Elastomeric Platform for wound management:**
   
   Novel class of bio-compatible scaffold material that can form hydrogel material and encapsulate complex loads with different applications in tissue engineering and regeneration, useful in the field of advanced wound management (Ready for next phase).
4. **Activated dendritic cells for cancer treatment:**
   Autologous activated dendritic cells as a therapy to treat cancer by initiating a potent immune response against cancer cells, resulting in delayed time to progression of cancer and prolonged survival (Ready for next phase).
5. **Tuberculosis marker detection technology:**
   
   An aptamer based platform, with unique characteristics e.g. Low sample volume, quick turnaround time, automated fluid movement control, low reagent consumption and sensitive fluorescent readings, to detect novel tuberculosis markers in human serum (Ready for next phase).

Intellectual Property:

The following Indian patents were filed,

1. Percutaneous aortic valve (71/CHE/2014) and Delivery system for percutaneous aortic valve Implant (72/CHE/2014)
2. Method for efficient enzymatic hydrolysis of lignocellulosic biomass (IN1907/MUM/2014)
3. Microorganisms for enhanced production of 2,3 – butanediol and uses thereof (3120/DEL/2014)
4. A Biodegradable insecticidal palm fibre mat from remnants of bio-oil extraction (4613/CHE/2014)
5. Automated clinical microscopy by image based flow cytometer for analysing substances and a method thereof (2432/ CHE/2014)

Report on Corporate Governance

REPORT ON CORPORATE GOVERNANCE

1. BIRAC PHILOSOPHY ON GUIDELINES ON CORPORATE GOVERNANCE

Corporate governance refers to the set of systems, principles and processes by which a company is governed. They provide the guidelines as to how the company can be directed or controlled such that it can fulfill its goals and objectives in a manner that adds to the value of the company and is also beneficial for all stakeholders in the long term. Stakeholders in this case would include everyone ranging from the board of directors, management, shareholders to customers, employees and society. BIRAC is committed to sound principles of Corporate Governance with respect to all its policies, practices and procedures. The Company's policy clearly reflects its values of transparency, professionalism and accountability. BIRAC constantly strives to uphold these values so as to generate long term economic value to all the stakeholders.

2. BOARD OF DIRECTORS

The Board of Directors consists of seven directors viz. an Executive Chairman, an Executive Managing Director, 4 independent directors and 1 Government Nominee director.

Five board meetings of the Company were held on the following dates: June 3, 2014, August 13, 2014, September 9, 2014, December 12, 2014 and February 27, 2015.

The details of Directors and Board meetings attended are as follows:

Name of the director	Category	Director-ships in other companies	Member/ Chair-man of Com-mittees in other companies		Board Meet-ings at-tended (Nos.)	Attend-ance at last AGM
			Member	Chairman		
Prof. K. VijayRa-ghavan	Chairman (Executive)	3	NIL	NIL	5	Yes
Dr. Renu Swarup	Managing Director (Executive)	1	NIL	NIL	5	Yes
Dr. Ashok Jhunj-hunwala	Independent Director	11	4	2	3	NA
Dr. Deepak Pental	Independent Director	NIL	NIL	NIL	5	NA
Dr. Dinakar Ma-sanu Salunke	Independent Director	NIL	NIL	NIL	5	NA
Dr. Gagandeep Kang	Independent Director	1	NIL	NIL	3	NA
Dr. Mohd. Aslam	Government Nominee	NIL	NIL	NIL	5	NA

None of the Directors are members of more than 10 committees and or act as Chairman of more than 5 committees as prescribed under the Guidelines on Corporate Governance for Central Public Sector Enterprises (CPSEs) issued by the Department of Public Enterprises (DPE)

There are no pecuniary relationships or transactions of the non-executive directors of the Company.

3. AUDIT COMMITTEE

The Audit Committee consists of 3 directors, Prof. Ashok Jhunjhunwala, Dr. Dinakar Mashnu Salunke, who are independent and Dr. Renu Swarup, who is the Managing Director of the Company. Dr. Dinakar Salunke is the Chairman of the Committee. Four audit committee meetings

were held during the year on the following dates: June 2, 2014, September 9, 2014, December 12, 2014 and February 27, 2015. The details of attendance of the directors at the Audit Committee meetings are as follows:

Name of the Director	No. of audit committee meetings attended
Dr. Dinakar Mashnu Salunke	4
Dr. Ashok Jhunjhunwala	3
Dr. Renu Swarup	4

The Company Secretary acts as the Secretary to the Committee.

4. BOARD PROCEDURE

The meeting of the board of directors are generally held at the Company's registered office in New Delhi. The Company complies with the statutory requirements for holding board meetings. Apart from the statutory matters requiring the Board's approval, all major decisions including financial results, actual operations, feedback reports and minutes of meetings are regularly placed before the Board.

5. SHAREHOLDER INFORMATION AS ON MARCH 31, 2015

Category Code	Category of shareholders	Total no. of shares	Total value of shares (in ₹)	Total Shareholding as a percentage of total number of shares
Shareholding of Promoter and Promoter Category	President of India	9000	90,00,000	100
	Prof. K. VijayRaghavan (held on behalf of President of India)	900	900000	
	Dr. Renu Swarup (held on behalf of President of India)	100	100000	
	GRAND TOTAL	10000	1,00,00,000	100

6. GENERAL BODY MEETINGS

The details of the Annual General Meetings & Extraordinary General Meetings are as follows:

a) Annual General Meetings

Period ended on	Venue	Date	Time
31.03.2013	A/254, 3rd floor, Bhisham Pitamah Marg, Defence Colony, New Delhi – 110 024.	30.09.2013	11.30 a.m.
31.03.2014	MTNL Building, 1st floor, 9 CGO Complex, Lodhi Road, New Delhi – 110 003	30.09.2014	10.00 a.m.
31.03.2015	MTNL Building, 1st floor, 9 CGO Complex, Lodhi Road, New Delhi – 110 003	09.09.2015	4.30 p.m.

No special resolutions had been passed at the last Annual General Meeting.

b) Extraordinary General Meetings (EGM)

Period ended on	Venue	Date	Time	Details of Special Resolutions passed
31.03.2015	2, CGO Complex , 7th Floor Lodhi Road, New Delhi -110003	30.03.2015	10.00 am	Approval of shareholders under section 186 of the Companies Act, 2013

7. DISCLOSURES (AS PER DPE GUIDELINES)

1. Company has not entered into any material, financial or commercial transaction with the Directors or the management or their relatives in which they are either directly or through their relatives interested as directors and/or partners.
2. The Company has complied with applicable rules and regulations and no penalties or strictures were imposed on the Company by any statutory authority during the last two years.
3. The Company has complied with the applicable provisions of the guidelines of Corporate Governance.
4. Department of Public Enterprises vide its OM dated 29.07.2010 advised all CPSEs to submit an annual compliance report on implementation of policies and guidelines issues by DPE by 30th June every year. In compliance to directives of DPE, BIRAC submitted its Compliance Report to Department of Biotechnology for onward transmission to DPE.
5. No item of expenditure was debited in the Books of Accounts which was not for the purpose of the organization.
6. No expenses of personal nature of the Members of the Board of Directors were incurred out of the funds of the Company.
7. BIRAC has in place a suitable Risk Management Policy approved by the Board

8. MEANS OF COMMUNICATION

Members/Shareholders are apprised about the performance of the Company at each Annual General Meeting. The Company is an unlisted, private limited Section 8 company and therefore, the need to communicate its quarterly or half-yearly results does not arise.

9. TRAINING OF DIRECTORS

The First Independent Directors capacity building workshop was organised by the Company for its Directors on 9th February 2015. The training was organised by Department of Public Enterprises at Scope Complex, New Delhi. It was attended by our independent Directors.

10. MEETING OF INDEPENDENT DIRECTORS

The first meeting was held on 12th December 2014 and was attended by all the independent Directors

11. COMPLIANCE CERTIFICATE

In terms of Clause 8.2 of the DPE guidelines on Corporate Governance, a certificate from a practising Company Secretary, M/s. Neelam Gupta & Associates, New Delhi confirming the compliance with the provisions of Corporate Governance forms a part of the report on Corporate Governance

12. CODE OF CONDUCT

BIRAC is committed to conduct business in accordance with the highest standards of business ethics and compliance with the applicable laws, rules and regulations. A Code of Business Conduct & Ethics in accordance with the DPE Guidelines has been laid down for all the Board members and senior management.

All the members of the Board and senior management personnel have affirmed compliance with the same for the financial year 2014-15. The Code of Business Conduct & Ethics has also been put up on the website of the Company (www.birac.nic.in)

DECLARATION AS REQUIRED UNDER THE DPE GUIDELINES ON CORPORATE GOVERNANCE

"All the members of the Board and Senior Management Personnel have affirmed compliance f the Code of Business Conduct & Ethics for Board Members and Senior Management for the financial year ended on March 31, 2015"

Sd/-
Dr. Renu Swarup
Managing Director

CERTIFICATE OF COMPLIANCE OF CORPORATE GOVERNANCE AS PER THE GUIDELINES OF DEPARTMENT OF PUBLIC ENTERPRISES (DPE) BY A COMPANY SECRETARY IN WHOLE TIME PRACTICE.

To the members of Biotechnology Industry Research Assistance Council (BIRAC)

We have examined the compliance of the conditions of Corporate Governance by Biotechnology Industry Research Assistance Council ("the Company") for the year ended on March 31, 2015, as stipulated in the guidelines of Corporate Governance for Central Public Sector Enterprises (CPSEs) issued by Department of Public Enterprises (DPE) vide its order dated May 14, 2010.

The compliance of the conditions of Corporate Governance is the responsibility of the Management. Our examination was carried out in accordance with the provisions of the guidelines of DPE and limited to a review of the procedures and implementation thereof, adopted by the Company, for ensuring the compliance of the conditions of Corporate Governance. It is neither an audit nor an expression of opinion of the financial statement of the Corporation.

In our opinion and to the best of our information and according to the explanations given to us, and according to the records and documents maintained by the Company, we certify that the Company has complied with the conditions of Corporate Governance, as stipulated in the guidelines of DPE.

We further state that such compliance is neither an assurance as to the future viability of the Company nor the efficiency or effectiveness with which the management has conducted the affairs of the Company.

For Neelam Gupta & Associates
Company Secretaries

(Neelam Gupta)
Practicing Company Secretary
Proprietor
PCS 6950

Date: July 29, 2015
Place: New Delhi

Auditors' Report & Annual Accounts

SAMPRK & ASSOCIATES
CHARTERED ACCOUNTANTS

To The Members of
BIOTECHNOLOGY INDUSTRY RESEARCH ASSISTANCE COUNCIL

Report on the Financial Statements

We have audited the accompanying financial statements of BIOTECHNOLOGY INDUSTRY RESEARCH ASSISTANCE COUNCIL ("the company"), which comprise the Balance Sheet as at March 31, 2015, the statement of Profit and loss accounts, the Cash Flow Statement for Year ended 31 March, 2015, and a summary of significant accounting policies and other explanatory information.

Management's Responsibility for the Financial Statements

The Company's Board of Directors is responsible for the matters stated in Section 134(5) of the Companies Act, 2013 ("the Act") with respect to preparation and presentation of these financial statements that give a true and fair view of financial position, financial performance and Cash Flows of the company in accordance with the accounting principles generally accepted in India including the Accounting Standard specified under section 133 of the Act, read with rule 7 of the Companies (Accounts) Rules, 2014. The responsibility also includes maintenance of adequate accounting records in accordance with the provision of Act for safeguarding the Assets of the Company and for preventing and detecting frauds and other regularities: selection and application of appropriate accounting policies; making judgments and estimates that are reasonable and prudent; and design, implementation and maintenance of adequate internal financial controls, that were operating effectively for ensuring the accuracy and completeness of accounting standard, relevant to the preparation and presentation of the financial statements that give a true and fair view and are free from material misstatements, whether due to fraud or error.

Auditor's Responsibility

Our responsibility is to express an opinion on these financial statements based on our audit.

We have conducted our audit in accordance with the Standards on Auditing specified under section 143(10) of the Act. Those Standards require that we comply with ethical requirements and plan and perform the audit to obtain reasonable assurance about whether the financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial statements. The procedures selected depend on the auditor's judgment, including the assessment of the risks of material misstatement of the financial statements, whether due to fraud or error. In making those risk assessments; the auditor considers internal control relevant to the Company's preparation of the financial statement that give a true and fair view in order to design audit procedure that are appropriate in the circumstances, but not for the purpose of expressing an opinion whether the Company has in place an adequate internal financial control system over financial reporting and the operating and operating effectiveness of such control. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of the accounting estimates made by

Company's Director, as well as evaluating the overall presentation of the financial statements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

Opinion

a) In our opinion and to the best of our information and according to the explanations given to us, the financial statements give the information required by the Act in the manner so required and give a true and fair view in conformity with the accounting principles generally accepted in India of the state of affairs of the Company as on 31st March 2O15, its Income and Expenditure Account and its Cash Flow Statement for the year ended on that date.

Other Matter:-

Out of total DBT Portfolio of Rs. 253.64 Crores taken in account of BIRAC from BCIL, Portfolio of Rs. 79.60 Crores needs a sincere strategical recovery plan due to overdue nature. In this portfolio of Rs. 79.60 Crores consisting of 57 accounts, Rs. 27.87 Crores is overdue on account of principal and interest as on 31st March, 2015.

Report on Other Legal and Regulatory Requirements

1. As required by the Companies (Auditor's Report) Order 2015 ("the Order") issued by the Central Government of India in terms of sub-section (11) of Section 143 of the Act, are not applicable.

2. As required by Section 143(3) of the Act, we report that:

    a) we have sought and obtained all the information and explanations which to the best of our knowledge and belief were necessary for the purpose of our audit;

    b) in our opinion proper books of account as required by law have been kept by the Company so far as appears from our examination of those books;

    c) the Balance Sheet, Statement of Income and Expenditure and Cash Flow Statement Account dealt with by this Report are in agreement with the books of account

    d) In our opinion, the Balance Sheet, Statement of Income and Expenditure Account, comply with the Accounting Standards specified under section 133 of the Act, read with Rule 7 of the Companies (Accounts) Rules 2014;

    e) With respect to the other matter to be included in the Auditor's Report in accordance with Rule 11 of the Companies (Audit and Auditors) Rules, 2014, in our opinion and to the best of our information and according to the explanations give to us:

        1) The Company does not have any pending litigation which would impact its financial position

        2) The Company did not have any long-term contracts including derivatives contracts for which there were any material foreseeable losses.

Further as per the direction of Comptroller and Auditor General of India we are reporting on the points as asked for u/s 143(5) as given below:-

S.No.	Directions u/s 143(5)	Reply
1.	If the Company has been selected for disinvestment, a complete status report in terms of valuation of Assets (including intangible assets and land) and Liabilities (including committed & General Reserves) may be examined including the mode and present stage of disinvestment process.	Not Applicable
2.	Please report whether there are any cases of waiver / write off of debts / loans/ interest etc,, if yes, the reasons there for and the amount involved.	Yes, waiver of additional interest amounting to Rs.100.26 lacs have been approved vide board resolution dated 27.2.2015, on reschedulement of two loan accounts during the financial year 2014-15. The reasons for the waiver of additional interest and reschedulement has been attributed to the fact that the product of the companies were not commercialized, resulting in loss.
3.	Whether proper records are maintained for inventories lying with third parties & assets received as gift from Government or other authorities.	Not Applicable
4.	A report on age wise analysis of pending legal / arbitration cases including the reasons of pendency and existence / effectiveness of a monitoring mechanism for expenditure on all legal cases (foreign and local) may be given'	Not Applicable

Sd/-
For **SAMPRK & ASSOCIATES**
Chartered Accountants
Firm Registration No. 013022N

CA. Pankaj Sharma
Partner
Membership No. 093446

Place: New Delhi
Dated: 30/06/2015

Office:-102-03/106/302, Neelkanth House, S-524, School Block, Shakarpur, Delhi-110092
Phone: 011-22481918, 22482446, Mobile: 9810955575, 9212343336
Email: sharmapanjul@gmail.com/keshavfca@gmail.com
Please courier at Admin Office: 302, 3rd Floor, Neelkanth House, S-524,
School Block, Shakarpur, Delhi - 110092

Biotechnology Industry Research Assistance Council (BIRAC)

Balance Sheet As at 31st March, 2015

(Amount in ₹)

Particulars	Note No.	Figures as at the end of the current reporting period (31.03.2015)	Figures as at the end of the previous reporting period (31.03.2014)
1 EQUITY AND LIABILITIES			
(1) Shareholder's Funds			
(a) Share Capital	1	1,00,00,000	1,00,00,000
(b) Reserves and Surplus	2	2,72,93,40,718	2,55,37,78,458
CURRENT LIABILITIES			
Current Liabilities	3	22,65,11,051	27,16,03,433
TOTAL		**2,96,58,51,769**	**2,83,53,81,891**
II ASSETS			
(1) Non-Current Assets			
Fixed Assets	4		
(a) Tangible Assets		2,40,10,521	40,15,442
(b) Intangible Assets		51,135	3,96,690
Long-Term Loans and Advances	5	2,06,72,86,658	1,99,96,98,736
Current Assets			
(a) Cash and Cash Equivalents	6	31,77,35,589	26,27,48,934
(b) Other Current Assets	7	55,67,67,865	56,85,22,089
TOTAL		**2,96,58,51,769**	**2,83,53,81,891**
Significant Accounting Policies and the accompanying Notes to Accounts are an integral part of financial statements	13 & 14		

For and on behalf of Board of Directors of BIRAC

Kavita Anandani	Renu Swarup	K. VijayRaghavan
(Company Secretary)	(Managing Director)	(Chairman)
	Din No. 01264943	Din No. 02721859

Auditors Report

As per our report of even date attached
For SAMPRK & Associates
Chartered Accountants
Firm Reg.No. 013022N

CA. Pankaj Sharma
(Partner)
Membership No.093446

Place : New Delhi
Dated : 30/06/2015

Biotechnology Industry Research Assistance Council (BIRAC)

Statement of Income & Expenditure for the period ended 31st March, 2015

(Amount in ₹)

Particulars	Note No.	Figures for the current reporting period (31.03.2015)	Figures for the previous reporting period (31.03.2014)
(1) INCOME :			
Grants Received as Utilised	8	74,83,45,941	61,76,67,081
Other Income	9	1,16,24,247	88,33,798
Total Revenue (A)		**75,99,70,188**	**62,65,00,879**
(2) EXPENDITURE:			
Programme Expenditure	10	63,19,14,165	49,88,93,042
Employee Benefit Expenses	11	2,77,28,579	2,20,69,034
Depreciation & Amortisation Expenses	4	49,31,239	10,17,870
Other Expenses	12	8,73,32,223	9,67,05,006
Total Expenses (B)		**75,19,06,206**	**61,86,84,952**
(3) Surplus of Income over Expenditure before exceptional and extraordinary items C=(A-B)		**80,63,982**	**78,15,927**
(4) Add: Prior Period Income (net) (D)		36,693	31,87,314
(5) Surplus before extraordinary items (E = C+D)		81,00,675	1,10,03,241
(6) Extraordinary Items (F)		-	-
(7) Income Before Tax (G = E-F)		**81,00,675**	**1,10,03,241**
Add: Depreciation adjusted from Capital Reserve		60,27,983	-
		1,41,28,658	1,10,03,241
Less: Provision for Income Tax		-	-
Surplus for the Year Carried Forward to Reserve & Surplus A/c		**1,41,28,658**	**1,10,03,241**
Earnings per equity share:			
(1) Basic		1,413	1,100
(2) Diluted		1,413	1,100
Significant Accounting Policies and the accompanying Notes to Accounts are an integral part of financial statements	13 & 14		

For and on behalf of Board of Directors of BIRAC

Kavita Anandani	Renu Swarup	K. VijayRaghavan
(Company Secretary)	(Managing Director)	(Chairman)
	Din No. 01264943	Din No. 02721859

Auditors Report
As per our report of even date attached
For SAMPRK & Associates
Chartered Accountants
Firm Reg.No. 013022N

CA. Pankaj Sharma
(Partner)
Membership No.093446

Place : New Delhi
Dated : 30/06/2015

Biotechnology Industry Research Assistance Council (BIRAC)

Cash Flow Statement for the Year Ended March 31, 2015

For The Year Ended March 31, 2015 **(Amount in ₹)**

Cash Flow from Operating Activities:		
Net Surplus as per Income & Expenditure Account		80,63,982
Adjustments for :		
Depreciation	49,31,239	
Management Expenses - BMGF	(11,86,786)	
Foreign Exchange Fluctuation	(37,707)	
Interest Income	(1,03,69,398)	(66,62,652)
Increase/ (Decrease) in Provisions - Payables	73,12,666	
Increase/ (Decrease) in Grant Utilisation	(5,24,05,048)	
Increase/ (Decrease) in Long Term Liabilities	(64,436)	
Increase In Capital Reserve (Non Recurring)	2,45,80,763	
Fund Utilisation Towards I & M Sector (Net)	14,29,45,258	
(Increase)/ Decrease in Current Assets - Securities	17,06,073	
(Increase)/ Decrease in Other Current Assets -Recoverable	3,18,60,894	
Increase in Advances I & M Sector (Net)	(8,81,39,480)	6,77,96,690
Cash Generated from / (used in) Operations		6,91,98,019
Income Tax Refund / (Paid)		-
Net Cash from (Used in) Operating Activities (A)		6,91,98,019
Net Cash from (Used in) Fixed Assets (B)	(2,45,80,763)	(2,45,80,763)
Cash Flow From/ (Used In) Finance Activities:		
Interest	1,03,69,398	
Net Cash from (Used in) Financing Activities (C)		1,03,69,398
Net Increase in Cash and Cash Equivalents D=(A+B+C)		5,49,86,655
Cash and Cash Equivalent at beginning of the year (E)		26,27,48,934
Cash and Cash Equivalent at end of year F=(D+E)		31,77,35,589

Note: Previous year's figures are not given as the requirement to prepare cash flow statement has been introduced as per Companies Act, 2013 with effect from 1st April, 2014.

For and on behalf of Board of Directors of BIRAC

Kavita Anandani	**Renu Swarup**	**K. VijayRaghavan**
(Company Secretary)	**(Managing Director)**	**(Chairman)**
	Din No. 01264943	**Din No. 02721859**

Auditors Report

As per our report of even date attached

For SAMPRK & Associates
Chartered Accountants
Firm Reg. No. 013022N

CA. Pankaj Sharma
(Partner)
Membership No. 093446

Place : New Delhi
Dated : 30/06/2015

Biotechnology Industry Research Assistance Council (BIRAC)

Notes to Financial Statements

1. Share Capital (Amount in ₹)

Particulars	Figures as at the end of the current reporting period (31.03.2015)	Figures as at the end of the previous reporting period (31.03.2014)
A. Authorized		
10,000 (10,000) Equity shares of ₹ 1000/-each	1,00,00,000	1,00,00,000
B. Issued ,Subscribed & Fully paid		
10,000 (10,000) Equity shares of ₹ 1000/-Each fully paid up	1,00,00,000	1,00,00,000
TOTAL	**1,00,00,000**	**1,00,00,000**

C. Reconciliation of Number of Shares

Particulars	Figures as at the end of the current reporting period (31.03.2015)	Figures as at the end of the previous reporting period (31.03.2014)
	No of shares	**No of shares**
Number of equity shares at the beginning	10,000	10,000
Add: Equity shares issued during the year	-	-
Number of equity shares at the end (closing balance)	10,000	10,000

D. Details of Shareholder's holding more than 5% in equity shares of the company

Name of Shareholder	No. of fully paid up shares	% of shares held	Figures as at the end of the current reporting period (31.03.2015)	Figures as at the end of the previous reporting period (31.03.2014)
President of India	9,000	90	9,000	9,000
Dr. (Prof.) K VijayRaghavan (held on behalf of President of India)	900	9	900	900
Dr. Renu Swarup (held on behalf of President of India)	100	1	100	100
TOTAL	**10,000**	**100**	**10,000**	**10,000**

E. Other details and Rights

- The company has only one class of equity shares issued at par value of Rs.1000 each.
- Each Equity shareholder has right to one vote per share.
- The shares do not have dividend rights.
- Shares carry no distribution right in the event of liquidation.

2. Reserves and Surplus **(Amount in ₹)**

Particulars	Figures as at the end of the current reporting period (31.03.2015)	Figures as at the end of the previous reporting period (31.03.2014)
I. Capital Reserve		
BIRAC Fund (Non Recurring)		
Opening Balance	55,08,846	43,37,966
Add: On Account of Capital Expenditure during the year	2,45,80,763	11,70,880
	3,00,89,609	55,08,846
Less: Depreciation on Capital Expenditure (Refer Note No.4.1)	60,27,983	-
	2,40,61,626	55,08,846
II. Other Reserves		
(A) Pre-BIRAC Funding by DBT		
(DBT portfolio taken in account by BIRAC from BCIL as on 31/03/2014 vide DBT Transfer order dated 25th September, 2012 and as per Board Approval dated 17th December, 2013.)		
Loan Portfolio taken over from Biotech Consortium India Limited	2,26,90,07,696	2,50,25,74,146
Loan Portfolio Realised	26,73,92,527	3,38,26,078
	2,53,64,00,224	2,53,64,00,224
Less: Rectification due to excess application of accrued interest in earlier years	64,436	-
	2,53,63,35,788	2,53,64,00,224
Less: Funds Utilised towards BIRAC, I & M Programme	17,89,10,137	-
	2,35,74,25,651	2,53,64,00,224
(B) Funds Utilised for Loans under I&M Sector after 31/03/2014(#) (Refer Note No. 5) (**)	32,18,55,395	-
(C) General Reserve		
Surplus		
Opening Balance	1,18,69,388	8,66,147
Add: Transfer from Statement of Income & Expenditure	1,41,28,658	1,10,03,241
	2,59,98,046	1,18,69,388
(#) Includes Accrued Interest not yet realisable		
TOTAL	2,72,93,40,718	2,55,37,78,458

3. Other Current Liabilities (*) **(Amount in ₹)**

Particulars	Figures as at the end of the current reporting period (31.03.2015)	Figures as at the end of the previous reporting period (31.03.2014)
Unutilised grant (DBT/Welcome Trust)	11,69,11,122	10,99,33,492
Unutilised grant (DBT-BMGF PMU)	5,33,00,246	1,12,97,260
Unutilised grant (DietY)	3,50,00,000	-
Unutilised Grants Carried forward		
BIRAC Fund (I&M) Sector	-	11,08,09,529
BIRAC Fund(Non Recurring) A/c	-	44,91,154
BIRAC Fund(Recurring) A/c	-	2,10,84,981
	20,52,11,368	**25,76,16,416**
Others Payable		
Statutory Liabilities	9,48,918	6,03,979
Liability under DBT-BMGF-PMU	60,10,350	63,33,536
Liability under DBT- Wellcome Trust	27,18,799	-
Others	1,16,21,616	70,49,502
	2,12,99,683	**1,39,87,017**
TOTAL (*) Refer Notes 14.13 and 14.16	**22,65,11,051**	**27,16,03,433**

4. Schedule of Fixed Assets **(Amount in ₹)**

		Gross Block			Depreciation				Net Block	
Asset Description	**As on**	**Addition**	**Sales/ Adjust-ments**	**As on**	**As on**	**For the year**	**Adjust-ments**	**As on**	**WDV As on**	**WDV As on**
	1st Apr 2014	2014 - 2015	2014 - 2015	31st Mar 2015	1st Apr 2014	2014 - 2015	2014 - 2015	31st Mar 2015	31st Mar 2015	31st Mar 2014
Tangible Asset										
Furniture & Fixtures	26,85,011	2,78,74,314	45,00,000	2,60,59,325	1,93,337	31,98,048	-	33,91,385	2,26,67,940	24,91,674
Office Equipments	31,517	2,06,276	-	2,37,793	460	83,811	-	84,271	1,53,522	31,057
Computers	20,66,329	32,48,618	22,48,445	30,66,502	5,73,618	13,03,825	-	18,77,443	11,89,059	14,92,711
Total Tangible Assets	47,82,857	3,13,29,208	67,48,445	2,93,63,620	7,67,415	45,85,684	-	53,53,099	2,40,10,521	40,15,442
Intangible Assets	7,26,019	-	-	7,26,019	3,29,329	3,45,555	-	6,74,884	51,135	3,96,690
Total Intangible Assets	7,26,019	-	-	7,26,019	3,29,329	3,45,555	-	6,74,884	51,135	3,96,690
Total	**55,08,876**	**3,13,29,208**	**67,48,445**	**3,00,89,639**	**10,96,744**	**49,31,239**	**-**	**60,27,983**	**2,40,61,656**	**44,12,132**
Previous Year Figures	43,37,996	46,27,832	34,56,952	55,08,876	1,93,730	10,17,870	(1,14,856)	10,96,744	44,12,132	41,44,266

Note 4.1 Depreciation upto 31st March 2015 on fixed assets is amortised against the capital reserve.

5. Non Current Assests **(Amount in ₹)**

Long Term Loans & Advances		Figures as at the end of the current reporting period (31.03.2015)	Figures as at the end of the previous reporting period (31.03.2014)
Security Deposits - MTNL Premises		94,08,300	1,05,28,300
Security Deposit - BCIL		6,74,242	12,60,315
Long Term Loans and Advances			
Secured against Bank Guarantee/Hypothecation/Personal Guarantee - Considered Good			
Loans Portfolio taken over from Biotech Consortium India Limited	2,26,88,58,230		2,50,25,74,145
Interest on loan accounts (I&M) - Not yet Realisable (**)	4,78,35,795		-
Loans disbursed during the year (I&M) (**)	27,40,19,600		-
	2,59,07,13,625		
Less: Current portion of Long Term Loans & advances reflected under Current assets ($) (Refer Note No 7)	**53,35,09,509**	2,05,72,04,116	(51,46,64,024)
TOTAL		**2,06,72,86,658**	**1,99,96,98,736**

($)The current portion of Long term Loans & Advances of Rs. 53,35,09,509.00 includes the overdues as per Note no. 14.3 of Notes to Accounts.
(**) Disbursement and Accrued Interest on loans portfolio after 31/03/2014

6. Current Assets **(Amount in ₹)**

Cash & Cash Equivalents	Figures as at the end of the current reporting period (31.03.2015)	Figures as at the end of the previous reporting period (31.03.2014)
Cash in Hand	14,330	18,771
Balances with Banks:		
Corporation Bank (BIRAC)	1,68,15,585	76,25,381
State Bank of Hyderabad (I & M)	2,18,50,891	11,01,23,742
State Bank of Hyderabad - FD (Portfolio Fund)	10,51,81,873	1,93,85,503
State Bank of Hyderabad - FD (DBT / Wellcome Trust)	11,34,56,217	10,81,62,118
State Bank of Hyderabad - (DBT / Wellcome Trust)	11,06,097	10,62,938
State Bank of Hyderabad - (DBT / BMGF PMU)	5,93,10,596	1,63,70,481
TOTAL	**31,77,35,589**	**26,27,48,934**

7. Other Current Assets **(Amount in ₹)**

Particulars	Figures as at the end of the current reporting period (31.03.2015)	Figures as at the end of the previous reporting period (31.03.2014)
Current Portion of Long Term Loans and Advances: - Secured against Bank Guarantee/Hypothecation/Personal Guarantee - Considered Good	53,35,09,509	51,46,64,024
Other Assets		
(Unsecured - Considered Good)		
Accrued Interest on FD - (I & M, DBT / Wellcome Trust)	46,70,034	4,38,712
Recoverable from Government Agencies (Tax Credit)	25,61,033	8,15,523
Prepaid Expenses	31,95,769	1,92,50,625
Recoverable from BCIL	37,30,807	1,22,24,864
Recoverable from DBT / BMGF Fund	58,88,066	61,09,262
Recoverable from DBT / Wellcome Trust Fund	27,18,799	-
Other advances Recoverable	4,93,848	1,50,19,079
TOTAL	55,67,67,865	56,85,22,089

8. Income **(Amount in ₹)**

Particulars	Figures for the current reporting period (31.03.2015)	Figures for the previous reporting period (31.03.2014)
Grants received as utilized		
I & M Schemes:		
- Biotechnology Industry Partnership Programme	15,07,86,019	11,94,57,575
- Bio Incubator Support Scheme	10,40,58,042	19,25,64,000
- Small Business Innovation Research Initiative	6,73,21,676	6,70,58,258
- Biotechnology Ignition Grant	14,90,32,201	5,50,66,671
- Contract Research Scheme	5,45,99,401	1,20,55,000
- Early Translational Accelerator	62,06,292	-
- University Innovation Cluster	3,94,84,942	-
BIRAC Activities	6,03,98,946	5,26,91,537
Manpower Expenses	2,77,28,579	2,20,69,034
Recurring Expenses	8,73,32,223	9,67,05,006
Refund of Unspent Grant and Additional Interest - (I&M)	13,97,621	-
TOTAL	**74,83,45,941**	**61,76,67,081**

* Refer notes 14.13 & 14.16

9. Other Income **(Amount in ₹)**

Particulars	Figures for the current reporting period (31.03.2015)	Figures for the previous reporting period (31.03.2014)
Interest Received - Bank Accounts	1,03,82,600	80,93,580
Management Expenses - BMGF	11,86,786	5,73,217
Foreign Exchange Fluctuation	37,707	1,40,914
Miscellaneous Income	17,154	26,087
TOTAL	**1,16,24,247**	**88,33,798**

10. Programme Expenditure (*) **(Amount in ₹)**

Particulars	Figures for the current reporting period (31.03.2015)	Figures for the previous reporting period (31.03.2014)
GRANTS DISBURSED		
Biotechnology Industry Partnership Programme (BIPP)	12,97,06,000	9,06,74,900
Small Business Innovation Research Initiative (SBIRI)	5,77,60,516	4,42,23,361
Bio Incubators Support Scheme (BISS)	10,30,13,000	19,25,64,000
Biotech Ignition Grants - (BIG)	14,22,00,000	5,23,57,832
University Innovation Cluster - (UIC)	3,81,00,000	-
Early Translational Accelerator (ETA)	62,04,000	-
Contract Research Scheme - (CRS)	5,04,98,900	1,20,55,000
Total Grants Disbursed (A)	52,74,82,416	39,18,75,093
ACTIVITIES		
Partnership Programmes	2,57,80,605	19,41,040
Capacity Building	69,30,944	96,87,345
Technology Transfer & Acquisition	1,06,63,904	1,63,40,776
Intellectual Property Services	1,06,32,030	1,67,00,569
Entrepreneurial Development / Regional Centre	63,91,463	80,21,807
Management Fee	-	27,08,839
Total Activities (B)	6,03,98,946	5,54,00,376
Programme Expenditure (C)	4,40,32,803	5,16,17,573
(I & M operational expenditure on Advertisement, Meeting and PMC)		
Total (A+B+C)	**63,19,14,165**	**49,88,93,042**
(*) Refer Notes 14.14		

10A. Programme Management Unit DBT & BMGF (Amount in ₹)

Particulars		Figures for the current reporting period (31.03.2015)	Figures for the previous reporting period (31.03.2014)
Programme Expenditure (GCI)		1,94,36,000	-
Operational Expenditure		3,36,83,572	1,86,58,213
	(A)	5,31,19,572	1,86,58,213
Less:			
Programme Funds from DBT (GCI)		88,98,000	-
Programme Funds from BMGF (GCI)		88,99,000	-
Programme Funds from US AID (GCI)		16,39,000	-
	(B)	1,94,36,000	-
Less:			
Operational Fund from DBT		1,13,67,146	93,29,106
Operational Fund from BMGF		2,23,16,426	93,29,107
	(C)	3,36,83,572	1,86,58,213
(Refer to Note : 14.13)	(A-B-C)	-	-

11. Employees Benefit Expenses (Amount in ₹)

Particulars	Figures for the current reporting period (31.03.2015)	Figures for the previous reporting period (31.03.2014)
Salary & Allowances to Staff	2,60,81,444	2,06,77,289
Employer's Contribution to Provident Fund	16,47,135	13,91,745
TOTAL	**2,77,28,579**	**2,20,69,034**

12. Other Expenses **(Amount in ₹)**

Particulars	Figures for the current reporting period (31.03.2015)	Figures for the previous reporting period (31.03.2014)
(A) Rent	4,54,41,910	4,59,91,700
(B) Advertisement & Publication	19,05,356	1,03,46,122
(C) Journal & Subscription	1,95,25,809	1,18,51,195
(D) Meetings:		
Meetings & Conferences	53,77,544	91,30,622
Sitting Fees & TA and DA	6,87,801	14,12,985
(E) Office and Administration Expenditure:		
Travel	45,38,675	92,97,151
Office Expenses	43,44,859	41,30,154
AMC Computer	5,14,180	-
Legal & Professional	16,53,828	15,95,708
Postage & Telephone Expenses	4,99,699	7,22,464
Power & Electricity	8,80,972	9,27,630
Printing & Stationery	2,81,636	10,87,990
Internet Expenses	10,72,333	-
(F) Training Expenses	3,52,271	-
(G) Statutory Audit Fees	1,41,349	1,39,888
(H) Miscellaneous Expenses	1,14,002	71,397
TOTAL	**8,73,32,223**	**9,67,05,006**
Refer Notes: 14.16 List of Abbreviations used in Financial Statement:		

13. Significant Accounting Policies

1. **Corporate Information :**

Biotechnology Industry Research Assistance Council (BIRAC) "the Company" is a Section 8 "Not-for-Profit Company" incorporated under the provisions of the Companies Act, 2013, vide Registration No. U73100DL2012NPL233152 dated 20th March 2012. BIRAC is also registered under Section 12A of the Income Tax Act 1961. The Company is engaged in nurturing, promoting and mentoring Research and Development in Biotech Sector.

2. Basis of Preparation of Financial Statements:

The Financial Statements of the Company are prepared in accordance with Generally Accepted Accounting Principles in India (Indian GAAP). These are incompliance, in all material respects, with the Accounting Standards notified under the Companies (Accounting Standards) Rules, 2006, (as amended) and the relevant provisions of the Companies Act 2013. The Financial Statements are prepared on accrual basis and under the historical cost convention.

Preparation of Financial Statement requires the Management to make estimates and assumptions in regard to the reported amount of assets, liabilities, expenses and income of the reporting period. The estimates used in preparation of the Financial Statement are prudent and reasonable. The difference between the actual results and estimates, if any, are recognised in the reporting period in which the results are known and / or materialised.

2.1 Revenue Recognition

i) Interest:

a) Interest on loan granted is recognised on a time proportion basis taking into account the amount outstanding and applicable rate of interest. Interest Accrued, not yet realizable during the year on loans under various schemes are shown under other Reserves. Additional interest on the delayed payment is recognised on receipt basis.

b) Interest against time deposits with banks are accounted on accrual basis.

ii) Royalty is recognised on accrual basis on acknowledgement of amount due by the beneficiary.

iii) Management Fee is recognised on accrual basis in accordance with the terms of the relevant agreement.

2.2 Grants-in-Aid:

Income by way of grants-in-aid has been recognised under Matching Principle of Accounting. All expenditure incurred out of the grants-in-aid, comprising of grants disbursed and other programmatic expenditure are matched with equal amount of income and adjusted against the grants-in-aid. Unspent balance of Grants-in-aid are carried forward as liability to be utilised in subsequent years.

The application of funds for disbursement of loans under different schemes is shown as Loans and Advances under Non-Current Assets Loans disbursed during the year under different scheme are shown under other reserves as per Matching Principle of Accounting.

2.3 Expenditure:

All expenses are accounted for on accrual basis.

Funds released as grants-in-aid are treated as expenditure in the Income & Expenditure Account. Further, amount unutilised as per the Utilisation Certificates received on completion of the projects are accounted as Income.

2.4 Reserve & Surplus:

a) Assets acquired are treated as Capital Reserve and amortised every year with depreciation charged.

b) DBT portfolio taken in account by BIRAC from BCIL as on 31/03/2014 vide DBT Transfer order dated 25th September 2012 and approved by Board of BIRAC dated l7th December, 2013 is classified as "Other Reserves".

c) Loans disbursed and interest accrued, but not realisable during the financial year has been shown under "Other Reserve".

2.5 Fixed Assets :

Fixed Assets are stated at cost, net of accumulated depreciation and accumulated impairment losses, if any. Gains or losses arising from disposal of fixed assets are measured as the difference between the net disposal proceeds and the carrying amount of the assets disposed of.

2.6 Depreciation and Amortisation :

Depreciation on assets is provided on useful life basis as prescribed under Schedule ll to the Companies Act, 2013.

Depreciation on fixed assets added/disposed of during the year/period is provided on pro-rata basis with reference to the date of addition/disposal.

2.7 Intangible Assets:

Intangible assets acquired are measured separately at cost. Intangible assets are carried at cost less accumulated amortization and accumulated impairment losses, if any. Internally generated intangible assets are not capitalized and expensed off in the Statement of Income and Expenditure in the year in which the expenditure is incurred.

Intangible assets are amortized over a period of five years as per Accounting Standard - 26 as no useful life provided in Schedule ll to the Companies Act, 2013.

2.8 Foreign Exchange Transactions/ Translation:

Foreign currency transactions and balances: Foreign Currency Transfer is made as per the approved Government guidelines. For any contribution being received from foreign entities, the necessary approval is obtained under the Foreign Contribution. (Regulation) Act, 2010.

(i) **Initial Recognition** : Foreign currency transactions are recorded in the reporting currency by applying the exchange rate between the reporting currency and the foreign currency at the date of the transaction.

(ii) **Conversion** : Foreign Currency monetary items are retranslated using the exchange rate prevailing at the reporting date.

(iii) **Exchange Difference** : Exchange differences arising on long-term foreign currency monetary items related to acquisition of a fixed asset are capitalized and depreciated over the remaining useful life of the asset. The exchange differences on other foreign currency monetary items are accumulated in 'Foreign Currency Monetary Item Translation Difference Account' and amortized over the remaining life of the concerned monetary item.

All other exchange differences are recognized as income or as expenses in the period in which they arise.

2.9 Employees Benefits:

a) All the employees of the Company are on contractual basis. Provision of Employer's contribution is made as per the provisions of Employees Provident Fund Act, 1952.

b) Gratuity to employees shall be accounted as and when it becomes due.

2.10 Provisions & Contingent Liabilities

a) Funds sanctioned and yet to be released till the reporting period due to timing difference of milestone are not taken as liability, these are accounted as expenses on actual release of payment.

b) A provision is recognized when the company has present obligations as a result of past event. It is probable that an outflow of resources embodying economic benefits will be required to settle the obligations and reliable estimate can be made of amount of the obligation. Provisions are not discounted at their present value and are determined based on the best estimate required to settle the obligation at the reporting date. These estimates are reviewed at each reporting date and adjusted to reflect the current best estimates.

2.11 Earning Per Share:

The company is a section 8 "Not for Profit Company". It does not generate any income / revenue from its activities. It does not distribute any dividend to its shareholders. However for the compliance of AS -20 the company has computed EPS as under:

a) Basic earnings per share are calculated by dividing the net income or loss for the period attributable to equity shareholders by weighted average number of equity shares outstanding during the period.

b) For the purpose of calculating diluted earnings per share, the net profit or loss for the period attributable to equity shareholders and the weighted average number of shares outstanding during the period are adjusted for the effects of all diluting potential equity shares.

14. Notes to Accounts for the year ended March 31, 2015

14.1 Biotechnology Industry Research Assistance Council receives funds from Department of Biotechnology (DBT), Ministry of Science & Technology, Government of India by way of grant-in-aid for its operation.

14.2 During the current financial year BIRAC disbursed ₹ 80.15 Crore in various schemes under I & M Sector and ₹ 6.04 Crore for activities under BIRAC core. The disbursement were made in tranches as per the milestones determined for the projects/ activity. The scheme wise details as under: (Amount in ₹)

I&M Sector Scheme	Grant	Loan	Total
Biotechnology Industry Partnership Programme (BIPP)	12,97,06,000	23,63,43,000	36,60,49,000
Small Business Innovation Research Initiatives (SBIRI)	5,77,60,516	3,76,76,600	9,54,37,116
Bio-Incubators support Scheme (BISS)	10,30,13,000	-	10,30,13,000
Biotech Ignition Grant (BIG)	14,22,00,000	-	14,22,00,000
University Innovation Cluster (UIC)	3,81,00,000	-	3,81,00,000
Translation Accelerator (TA)	62,04,000	-	62,04,000
Contract Research Scheme (CRS)	5,04,98,900	-	5,04,98,900
Total	**52,74,82,416**	**27,40,19,600**	**80,15,02,016**
BIRAC ACTIVITIES	**Grant**	**Loan**	**Total**
Partnership Program	2,57,80,605	-	2,57,80,605
Capacity Building & Awareness	69,30,944	-	69,30,944
Technology Transfer / Acquisition	1,06,63,904	-	1,06,63,904
IP Services	1,06,32,030	-	1,06,32,030
Entrepreneurial Development / Regional Centres	63,91,463	-	63,91,463
Total	**6,03,98,946**	**-**	**6,03,98,946**

14.3 As on 31.3.2015, the details of the Loan Portfolio under the schemes designated as BIPP & SBIRI under I&M Sector are as follows: (Amount in ₹)

Table I

Particulars	Opening Balance as on 01.04.2014	Disbursed/ Rescheduled During FY 2014-15	Recovered/ Rescheduled During FY 2014-15	Closing balance as on 31.03.2015
Principal Loan Outstanding#	2,37,10,83,763	28,82,56,555	21,24,16,205	**2,44,69,24,113**
Accrued Interest Outstanding#	13,14,90,383	4,76,86,329	3,53,87,200	**14,37,89,512**
Total	**2,50,25,74,146**	**33,59,42,884**	**24,78,03,405**	**2,59,07,13,625**

During the year, 2 loan accounts have been rescheduled where accrued interest upto 31.03.2015 amounting to ₹ 1,42,36,955/- has been capitalized in principal outstanding of respective loan accounts.

The loan & advances are secured by way of Bank Guarantee/ Hypothecation / personal Guarantee. The current maturities of the loan & advances amounting to ₹ 53,35,09,509/-, includes overdue amounts as per table II and are disclosed under "Other Current Assets" (Refer to Schedule 7) (Amount in ₹)

Table II				
Particulars	**Opening Balance as on 01.04.2014**	**Addition During FY 2014-15**	**Reduction During FY 2014-15**	**Closing balance as on 31.03.2015**
Overdue Amount	20,22,54,977	12,02,92,397	4,38,09,050	**27,87,38,324**
Additional Interest on the overdue amount as on 31.3.2015	3,43,58,461	4,75,72,864	2,95,561	**8,16,35,764**
Age wise overdue position				
Upto one Year (A)	3,33,77,415	10,03,21,665	2,75,38,941	**10,61,60,139**
More than one year (accumulated) (B)	16,88,77,562	1,99,70,732	1,62,70,109	**17,25,78,195**
			Total (A+B)	**27,87,38,324**

14.4 Status of Loan Outstanding in Overdue Account

As on 31st March 2015, an amount of ₹ 79,59,92,852/- is outstanding loan amount in respect of overdue accounts as compared to ₹ 72,35,59,400/- in previous year.

14.5 Suit Filed Accounts:

14.5.1 Suits filed by the company: Nil

14.5.2 Suits filed against the company: Nil

14.6 Programme Management Unit - DBT and BMGF

Department of Biotechnology (DBT) and Bill Melinda Gates Foundation (BMGF) have signed a MoU for supporting priority areas of research. BIRAC has been entrusted the responsibility to be the "Technical Management Unit". In this regard, BIRAC established a programme Management Unit to administer programmes, of affordable product development in the area of Health Care and Agriculture. **Refer Notes 14.14.3**

14.7 DBT- Wellcome Trust programme

The amount received from Department of Biotechnology under DBT - Wellcome Trust Programme amounting to ₹10.25 crore received in the financial year 2012-13 along with interest amount is kept in a separate bank account. Board has approved a joint call on "Translational Medicines". MoU has been signed with Wellcome Trust. **Refer Notes 14.14.4**

14.8 BIRAC – DIETY collaborative programme

Industry innovation programme on Medical electronics has been initiated by BIRAC in collaboration with Department of Electronics and Information Technology (DeitY),

Ministry of Science & Technology, Government of India. **Refer Notes 14.14.5**

14.9 Prior Period adjustment

The prior period items are accounted for in accordance with Accounting Standard - 5.

The previous year figures are reclassified and regrouped in accordance with the requirements applicable in the current financial year.

14.10 Related party disclosure:

The provisions of Accounting Standard-18 are not applicable as there is no transaction between a reporting enterprise and its related parties.

14.11 Provision for Tax:

No Provision for Income Tax has been made in the current year since the company has been registered as a charitable entity u/s 12A of Income Tax Act, 1961 vide order No. 2974 dated 12th May,2014.

14.12 Foreign Exchange Transactions:

During the Current financial year the following income/expenditure has been incurred.

A. Income: NIL

B. Expenditure:

(i) Foreign Travel: USD 1,450/- & AUD 5,800/-

(ii) Books, Journal and Database Subscription: USD 178,383/- & GBP 7,500/-

(iii) Entrepreneurship Development: AUD 50,312/-

C. CIF Value of import is NIL for the current financial year.

14.13 Details of Grant Utilisation

(Amount in ₹)

S.No.	Particulars	Fund Available	Fund Utilised	Balance
1.	BIRAC	20,00,40,511	20,00,40,511	-
2.	I & M Funds	84,55,34,819	84,55,34,819	-
3.	PMU - DBT/BMGF :			
	(i) **Operational**	**4,53,47,659**	**3,36,83,572**	**1,16,64,087**
	BMGF	4,23,43,723	2,23,16,426	2,00,27,297
	DBT Operational	3,936	91,18,701	(91,14,765)
	DBT - Non Recurring	30,00,000	22,48,445	7,51,555
	(i) Projects	**6,10,72,159**	**1,94,36,000**	**4,16,36,159**
	BMGF	3,45,52,759	88,99,000	2,56,53,759
	DBT	2,00,00,000	88,98,000	1,11,02,000
	USAID	65,19,400	16,39,000	48,80,400
		10,64,19,818	**5,31,19,572**	**5,33,00,246**
4.	Wellcome Trust	11,96,29,921	27,18,799	11,69,11,122
5.	DeitY	3,50,00,000	-	3,50,00,000

14.14.1 Supplementary Schedule on Scheme Balances as on 31.03.2015

BIRAC FUNDS (I&M) SECTOR			Amount (₹)
	Opening Balance		11,08,09,529
Add:	Funds received from DBT	55,37,00,000	
	Recoveries from Unspent Grant	2,65,52,882	58,02,52,882
			69,10,62,411
Add:	Funds Utilised from the available resources*		15,44,72,408
Less:	Amount disbursed during the year:		84,55,34,819
	Grants Disbursed	52,74,82,416	
	Loan Disbursed	27,40,19,600	
	Programme Expenses	4,40,32,803	84,55,34,819
	Unutilised Balance Carried Forward		-

* DBT vide order dated 28th April, 2015 has permitted to carry forwards an amount of ₹ (-) 1482.82 Lakhs to the Financial Year 2015-16 as against utilisation of ₹ 1544.72 Lakhs from the available funds during the year.

14.14.2

BIRAC FUNDS			Amount (₹)
	Opening Balance		2,55,76,135
	Recurring	2,10,84,981	
	Non Recurring	44,91,154	
Add:	Received from DBT		15,00,00,000
			17,55,76,135
Add:	Funds Utilised from the available resources*		2,44,64,376
Less:	Amount disbursed for Grants		
	Discovery Accelerator	60,01,177	
	SPARSH	1,97,79,428	
	Intellectual Property	1,06,32,030	
	Entrepreneurial Development	63,91,463	
	Technology Transfer & Acquisition	1,06,63,904	
	Advertisement, Outreach Activities and Workshops	69,30,944	6,03,98,946
			13,96,41,565
Less:	Utilisation towards:		
	Manpower Expenses	2,77,28,579	
	Non Recurring Expenses	2,45,80,763	
	Recurring Expenses	8,73,32,223	13,96,41,565
	Unutilised Balance Carried Forward		--

*DBT vide order dated 14th May 2015 has permitted to carry forward an amount of ₹ (-) 247.68 Lakhs to the Financial Year 2015-16 against utilisation from the available funds during the year.

14.14.3

BMGF PMU			Amount (₹)
	Opening Balance		1,12,97,260
	BMGF - Operations	2,05,07,324	
	DBT (Recoverable)	(92,10,064)	
Add:	Received From BMGF - Project	3,45,52,759	
	Received From BMGF - Operations	2,08,69,181	
	Received From DBT - Non Recurring	30,00,000	
	Received From DBT - Operations	92,14,000	
	Received From DBT - Project	2,00,00,000	
	US AID Project	65,19,400	9,41,55,400
Add:	Bank Interest		9,67,218
			10,64,19,818
Less:	Project Disbursement:		
	GCI: Agriculture - Nutrition Projects	1,10,55,000	
	GCI: RTTC Projects	83,81,000	1,94,36,000
Less:	Expenditure:		
	Manpower Expense	38,50,076	
	Meeting Expenses	1,03,75,274	
	Expenses for Space	1,32,42,260	
	Administrative Expenses	27,64,531	
	Equipment Expenses	22,64,645	
	Management Expenses	11,86,786	3,36,83,572
	Unutilised Balance Carried Forward		5,33,00,246
	Balance Fund		
	BMGF - Projects	2,56,53,759	
	DBT - Projects	1,11,02,000	
	USAID - Projects	48,80,400	
	BMGF - Operations	1,97,00,891	
	DBT - Operations	(80,36,804)	5,33,00,246
			5,33,00,246

14.14.4

WELCOME TRUST			AMOUNT (₹)
	Opening Balance		10,99,33,492
Add:	Bank Interest	43,159	
	FD Interest	54,91,914	
	Accured Interest	41,61,356	96,96,429
	Total		**11,96,29,921**
Less:	Advertisement & Other Expenditure		27,18,799
	Unutilised Balance Carried Forward		**11,69,11,122**

14.14.5

DEPARTMENT OF ELECTRONICS & INFORMATION TECHNOLOGY (DeitY)			AMOUNT (₹)
	Opening Balance		-
Add:	Received From DeitY		3,50,00,000
	Unutilised Balance Carried Forward		**3,50,00,000**

14.15 The amendments made in the significant accounting policies for the year 2014-15 are explanatory in nature. The financial impact on account of these amendments is as under:

S.No.	Particulars	Impact
1.	Reserves & Surplus	Assets acquired amounting to ₹ 2,45,80,769 has enhanced the Capital Reserves and Depreciation amounting to ₹ 60,27,983 reduced the Capital reserve.
2.	Depreciation & Amortisation	Depreciation on assets is provided on useful life basis as prescribed under Schedule ll to the Companies Act, 2013, due to which excess depreciation of ₹ 17,41,856 has been charged to income & expenditure account.

14.16 List of Abbreviations used in Financial Statement:

S.No.	Abbreviation	Description
1	BIRAC	Biotechnology Industry Research Assistance Council
2	BCIL	Biotech Consortium India Limited
3	BIG	Biotechnology lgnition Grant
4	BIPP	Biotechnology lndustry Partnership programme
5	BISS	Bio Incubator Support Scheme
6	BMGF	Bill Melinda Gates Foundation
7	CRS	Contract Research Scheme
8	DBT	Department of Biotechnology, Ministry of Science & Technology, Government of India
9	DeitY	Department of Electronics and Information Technology
10	ETA	Early Translational Accelerator
11	FD	Fixed Deposit
12	I&M	Industry and Manufacturing
13	IP	Intellectual Property
14	Misc	Miscellaneous
15	MTNL	Mahanagar Telephone Nigam Limited
16	PMU	Programme Management Unit
17	SBH	State Bank of Hyderabad
18	SBIRI	Small Business Innovation Research Initiative
19	TA&DA	Travel Allowance & Diem Allowance
20	UIC	University Innovation Cluster
21	WT	Wellcome Trust
22	PMC	Projects Monitoring committee
23	GCI	Grand Challenges of India

14.17 The previous year's figures are reclassified and regrouped in accordance with the requirements applicable in the current financial year to make item comparable.

Kavita Anandani
(Company Secretary)

Renu Swarup
(Managing Director)
Din No. 01264943

K. VijayRaghavan
(Chairman)
Din No. 02721859

For SAMPRK & Associates
Chartered Accountants
Firm Reg. No. 013022N

CA. Pankaj Sharma
(Partner)
Membership No. 093446

COMMENTS OF THE COMPTROLLER AND AUDITOR GENERAL OF INDIA UNDER SECTION 143(6) (B) OF THE COMPANIES ACT, 2013 ON THE FINANCIAL STATEMENTS OF BIOTECHNOLOGY INDUSTRY RESEARCH ASSISTANCE COUNCIL FOR THE YEAR ENDED 31ST MARCH 2015

The preparation of financial statements of Biotechnology Industry Research Assistance Council for the year ended 31 March 2015 in accordance with the financial reporting framework prescribed under the Companies Act, 2013 is the responsibility of the management of the company. The statutory auditor/ auditors appointed by the Comptroller and Auditor General of India under Section 139(5) of the Act is/are responsible for expressing opinion on the financial statements under section 143 of the Act based on independent audit in accordance with the standards on auditing prescribed under section 143(10) of the Act. This is stated to have been done by them vide their Audit Report dated 30.06.2015.

I, on behalf of the Comptroller and Auditor General of India, have decided not to conduct the supplementary audit of the financial statements of Biotechnology Industry Research Assistance Council for the year ended 31 March 2015 and as such have no comments to make under section 143(6)(b) of the Act.

For and on the be half of the
Comptroller & Auditor General of India
Sd/-
(Dr. Ashutosh Sharma)
Pr. Director of Commercial Audit &
Ex-Officio Member. Audit Board-IV

Place: Delhi
Date: 05.08.2015

Regd. Office: 1st Floor, MTNL Building, 9, CGO Complex, Lodhi Road, New Delhi-110003
Website: www.birac.nic.in, E-mail: birac.dbt@nic.in Tel: +91-11-24389600 Fax : 011-24389611
CIN NO: U73100DL2012NPL233152

Attendance Slip

Name of the Member/proxy (In Block Letters)	
Address of Member /Proxy:	
Folio No. :	
No. of Shares Held	

Certify that I am a member /proxy for the member of the Company.

I hereby record my presence at the 3rd Annual General Meeting of the Company held on Wednesday, 9th September 2015 at 04:30 p.m. at MTNL Building, 1st Floor, 9 CGO Complex, Lodhi Road, New Delhi-110003

.....
Member's /Proxy's Signature

Regd. Office: 1st Floor, MTNL Building, 9, CGO Complex, Lodhi Road, New Delhi-110003
Website: www.birac.nic.in, E-mail: birac.dbt@nic.in Tel: +91-11-24389600 Fax : 011-24389611
CIN NO: U73100DL2012NPL233152

PROXY FORM

[Pursuant to Section 105(6) of the Companies Act, 2013 and Rule 19 (3) of the Companies (Management and Administration) Rules, 2014]

Name of the Member(s) :		E-mail ID:
Registered Address :		Folio No. :

I/We, being the member(s) of ..... shares of the above named Company, hereby appoint:

(1) Name:.....
Address: .....
E-mail Id: .....
Signature: .....

as my/our proxy to attend and vote (on a poll) for me/us and on my/our behalf at the **3rd Annual General Meeting** of the Company, to be held on 9th September 2015 at 4:30 p.m. at MTNL Building, 1st Floor , 9 CGO Complex, Lodhi Road ,New Delhi-110003. New Delhi-110 003 and at any adjournment thereof in respect of such resolutions as are indicated below:

S.No	Resolutions	For	Against
1.	**Ordinary Business** To receive, consider and adopt the Audited Financial Statement of the company as on March 31, 2015 together with the Reports of the Directors and Auditors thereon and comments of the Comptroller & Auditor General of India in terms of Section 143 (6) (b) of the Companies Act 2013		
2.	TTo fix the remuneration of the Statutory Auditor for the financial year 2015-16, in terms of provisions of Section 139(5) read with Section 142 of the Companies Act, 2013.		

Signed this..... day of..... 2015. Signature of the Shareholder_____

Affix Revenue Stamp

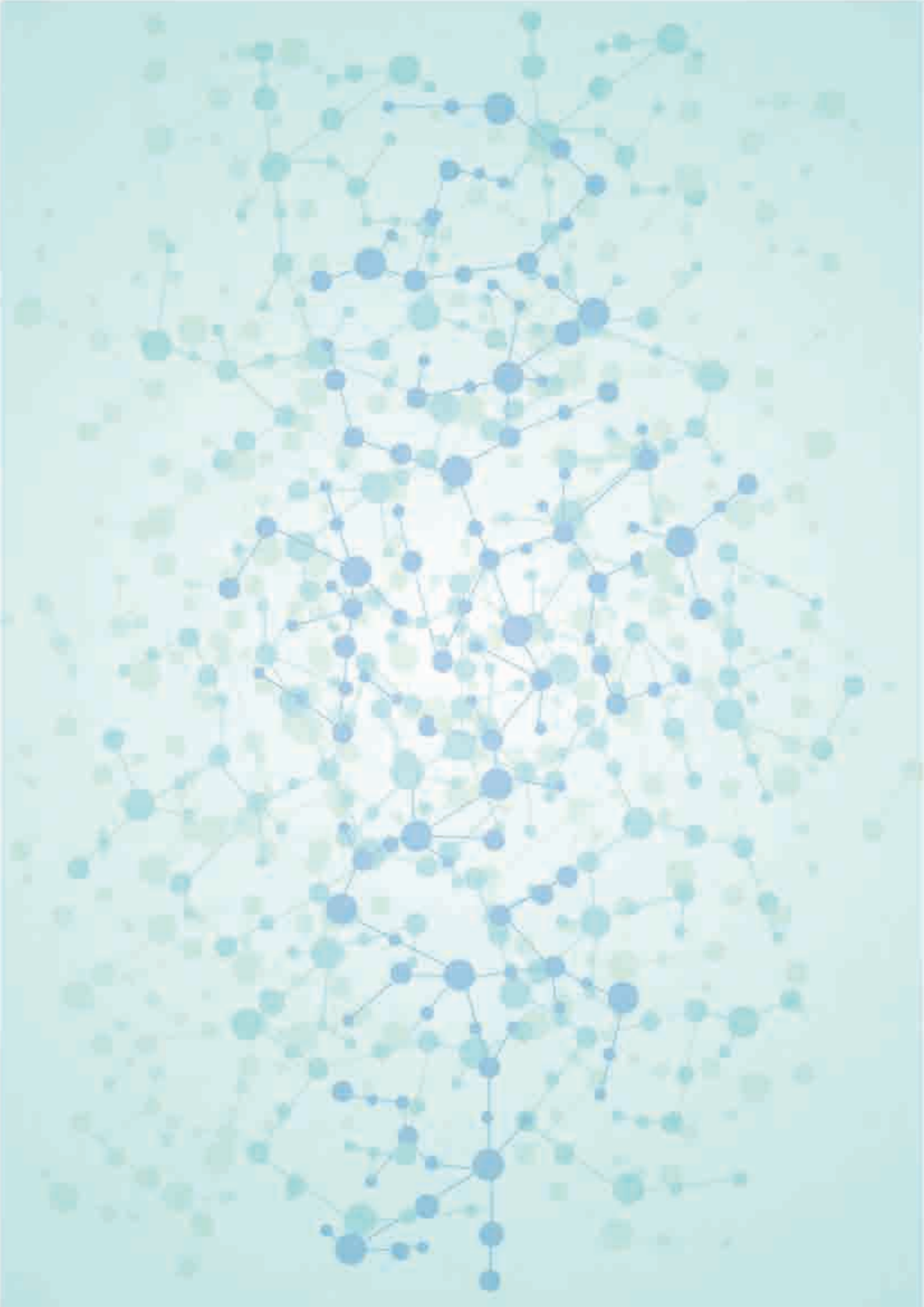
Signature of first proxy holder

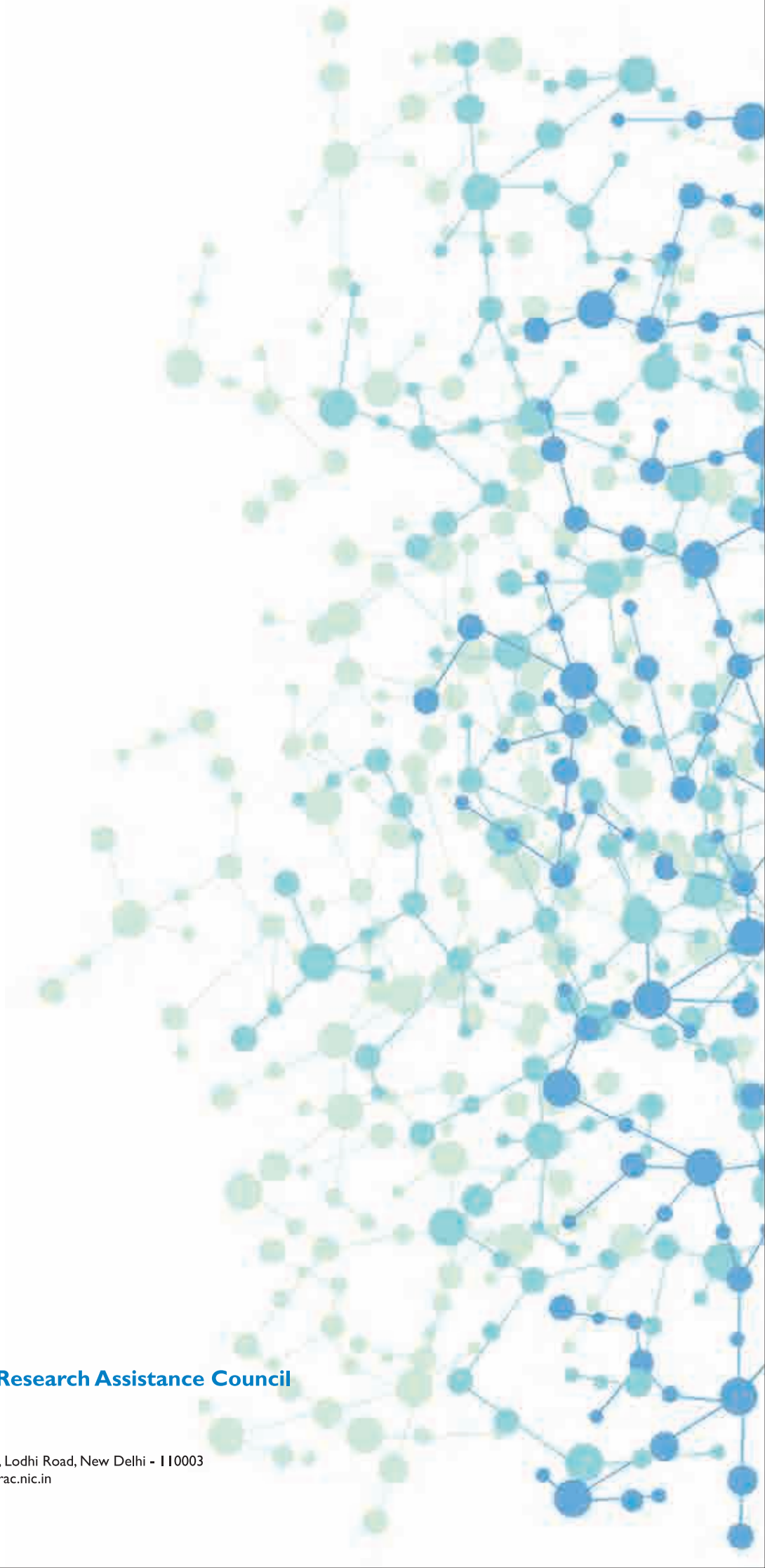
Signature of Second proxy holder

* Applicable for investors holding shares in electronic form.

Notes :

1. MEMBERS ENTITLED TO ATTEND AND VOTE MAY APPOINT ONE OR MORE PROXIES TO ATTEND AND VOTE INSTEAD OF THEMSELVES. PROXIES TO BE VALID MUST BE RECEIVED AT THE REGISTERED OFFICE OF THE COMPANY NOT LESS THAN FORTY-EIGHT HOURS BEFORE THE APPOINTED TIME OF THE MEETING
2. Only bonafide members of the Company whose names appear on the Register of Members in possession of valid attendance slips duly filed and signed will be permitted to attend the meeting. The company reserves its right to take all steps as may be deemed necessary to restrict non-members from attending the meeting.





birac
Ignite Innovate Incubate

Biotechnology Industry Research Assistance Council
(A Govt. of India Enterprise)

1st Floor, MTNL Building, 9 CGO Complex, Lodhi Road, New Delhi - 110003
Email : birac.dbt@nic.in, Website : www.birac.nic.in