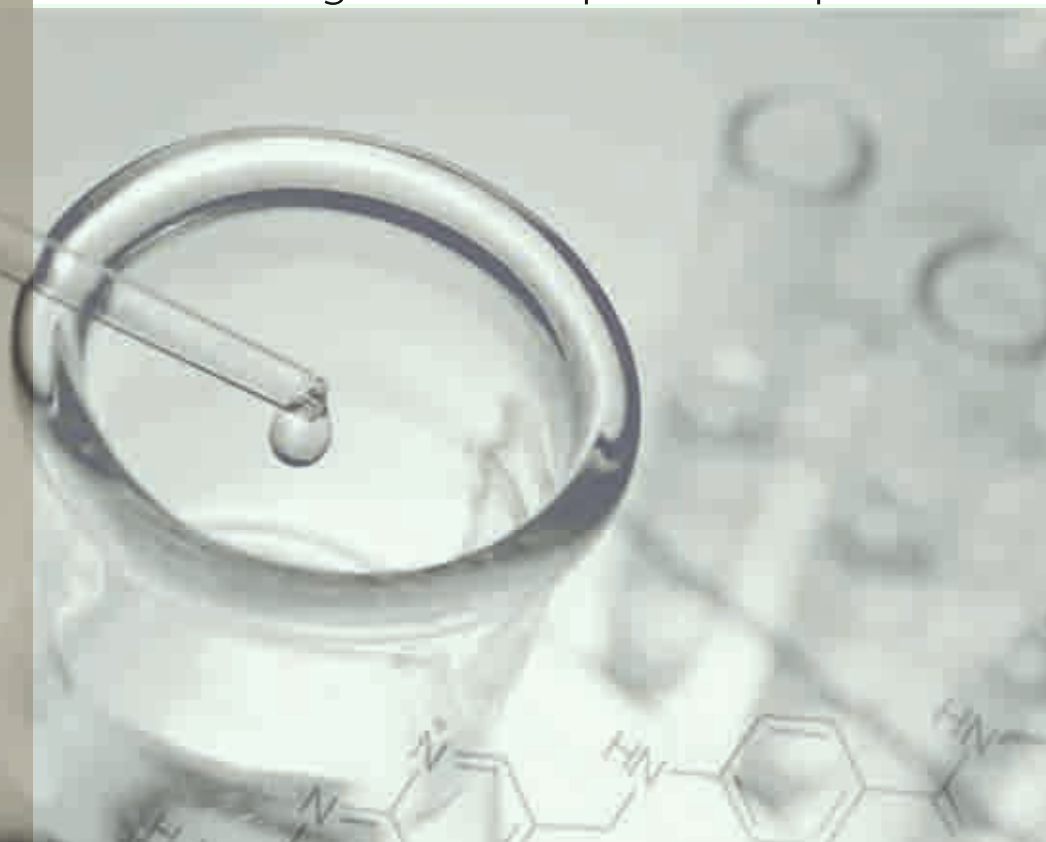


A BIRAC - C-CAMP Initiative

**BIRAC Regional Entrepreneurship Centre**



**ANNUAL REPORT - 2017**





# C O N T E N T S

## INTRODUCTION



## ACHIEVEMENTS OF 2017

## PROGRAMMES UNDER BREC





### Introduction

Centre for Cellular and Molecular Platforms (C-CAMP) has set up the BIRAC Regional Entrepreneurship Centre (BREC) in partnership with Biotechnology Industrial Research Assistance Council (BIRAC), with an objective of encouraging the spirit of bio-entrepreneurship, facilitating the creation of life science start-ups and mentoring start-ups to increase their chances of success.

### Aims

The aim of BREC is to foster and facilitate bio-entrepreneurship including imparting bio-entrepreneurs necessary knowledge and skills for transforming innovative biotech ideas into successful & sustainable ventures, which create national and global impact.

### Objectives

- Create and inculcate a spirit of bio-entrepreneurship
- Facilitate and catalyze the journey of biotech ideas of bio-entrepreneurs towards commercialization
- Enable and empower bio-entrepreneurs through business and technology advice and mentorship

Encouraging the spirit of bio-entrepreneurship, facilitating the creation of life science start-ups and mentoring start-ups to increase their chances of success.



# BREC

A BIRAC - C-CAMP Initiative

## SNAPSHOTS OF 2017







## Programmes under BREC

The activities of BREC are divided into five programmes, namely:

- National Life Science Entrepreneurship Awareness Programme
- Entrepreneurship Development Workshops
- Meet the Investors Series
- National Bio-Entrepreneurship Boot Camp
- National Bio Entrepreneurship Competition

## ACHIEVEMENTS OF 2017

# 75+

Founders and co-founders of start-ups and 11 innovators were provided intense mentoring on business development strategy, pitching, and fund-raising

# 100+

One-on-one meetings between 23 start-ups and 19 investors for raising next round of funding

# 150+

Bio-entrepreneurs and innovators were provided specialised domain knowledge

# 250+

Students reached out through awareness programmes to excite them about bio-entrepreneurship as positive career option

# 1500+

Registrations for National Bio Entrepreneurship Competition from 32 states/UTs across the country

# 180+

Business pitches across the country for National Bio Entrepreneurship Competition

# 10

Industry partners for National Bio Entrepreneurship Competition in various capacities such as grand prize sponsor, investment partner, and mentorship partner

# USD \$100,000

Investment opportunity and INR 10 lakh as grand cash prize for the winner of National Bio Entrepreneurship Competition

### BREC launch and visibility

BREC was officially launched on 23rd February 2017 in New Delhi in the presence of Prof. G. Padmanaban, Honorary Professor and Former Director, Indian Institute of Science and Prof. K. VijayRaghavan, Secretary, DBT, Government of India.

"BIRAC's strategy for establishing BREC at C-CAMP is to amplify our portfolio of activities which can be leveraged by biotech start-ups to transition and scale to the next level", observed Dr. Satya Dash, Head - Strategy, Partnerships, Entrepreneurship Development (SPED), BIRAC on the occasion. "C-CAMP has some exciting programmes in fostering innovation and entrepreneurship in biotechnology. Launching of BREC at C-CAMP provides an ideal platform to step up and amplify biotechnology entrepreneurship scenario across India", added Dr. Taslimarif Saiyed, Director and COO, C-CAMP.

A press release sent out on the occasion received a good coverage including on the websites of Economic Times, the Hindu Business Line, ABLE (Association of Biotechnology Led Enterprises), and social media websites.

Following the official launch of BREC, C-CAMP has also created a separate webpage for BREC on its website (<http://ccamp.res.in/brec>). Information about aims and objectives of BREC and upcoming events is available through the BREC webpage.



**“Launching of BREC at C-CAMP provides an ideal platform to step up and amplify biotechnology entrepreneurship scenario across India”.**

Dr. Taslimarif Saiyed,  
Director and COO, C-CAMP

## PROGRAMMES

### National Life Science Entrepreneurship Awareness Programme

The objective of this programme is to disseminate awareness about bio-entrepreneurship among undergraduate and postgraduate students in regional centres for education including colleges, universities and research institutions.

This programme is a half day event and is typically divided into four sessions. These sessions are delivered by industry and domain experts as well as by successful entrepreneurs. The first session talks about essential aspects of entrepreneurship vis-à-vis other established career options for students and covers topics such as 'what it takes to be a bio-entrepreneur', 'business ideas and converting them into start-up ventures', and 'elements of a business plan'. The second session talks about different forms of intellectual property and how to safeguard them. The third session talks about elements of existing entrepreneurship ecosystem, including various funding schemes of BIRAC and incubation, acceleration, and mentoring support provided by C-CAMP. In the final session, invited bio-entrepreneurs share the excitement, trials and tribulations of their entrepreneurial journey.



Encouraging students to view bio-entrepreneurship as a positive career option.





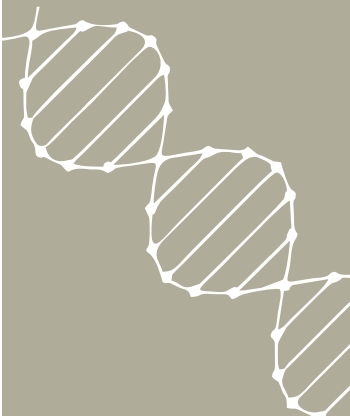
In the year 2017, BREC organised four awareness programmes across the country. The list of programmes is as follows:

#	DATE	PLACE
1	March 28, 2017	Vellore Institute of Technology, Vellore, Tamil Nadu
2	June 28, 2017	Christ University, Bengaluru, Karnataka
3	November 20, 2017	Guwahati Biotech Park, Guwahati, Assam
4	November 22, 2017	Sikkim Manipal University, Gangtok, Sikkim



Through four awareness programmes, BREC reached out to over 250 undergraduate and postgraduate students to excite them about bio-entrepreneurship as a positive career choice.

Two of the programmes were organised in North-East regions of India, so that students in these regions leverage the opportunities available.





## PROGRAMMES

"Yesterday's investor term sheet workshop and today's investor pitches have given us a lot of confidence in interacting and negotiating with investors"

**Rajneesh Prasad**  
Co-founder, REVY  
Environmental  
Solutions

### Entrepreneurship Development Workshops

To be successful in bio-entrepreneurship requires understanding of many specialised domains such as intellectual property rights, business strategy, regulations, clinical trials, bio-statistics, and health economics. As most of the innovators and start-up entrepreneurs come from core science, technological, or business background, it is imperative for them to understand the intricacies of these specialised domains. The objective of entrepreneurship development workshops is to impart knowledge about such specialised domains through half/full day sessions offered by domain experts.

BREC organised four entrepreneurship development workshops:

#	DATE	PLACE	TOPIC
1	February 3, 2017	C-CAMP, Bengaluru, Karnataka	Biodiversity act and its provisions
2	November 20, 2017	C-CAMP, Bengaluru, Karnataka	Health Technology Assessment (HTA)
3	February 14, 2018	India Habitat Centre, New Delhi	Understanding Investor Term Sheets
4	February 27, 2018	CDSCO Regional Office, Hyderabad, Telangana	Regulatory Requirements in Clinical Trials

## ENTREPRENEURSHIP DEVELOPMENT WORKSHOP S E R I E S



The objective is to impart knowledge about such specialised domains through half/ full day sessions offered by domain experts.

“The workshop on Understanding Investors Term Sheets was an eye-opener for technology driven start-ups since majority of the time we are so focussed on product development”

**Dr. Kavita Singh**  
RCupe Health Technologies

In the first workshop, an eminent expert from the field described various aspects of the Biodiversity Act in detail, including its objectives, important provisions, consequences of non-compliance, and benefit sharing guidelines.

The second workshop introduced the concept of Health Technology Assessment (HTA) – a tool that examines the clinical, economic, social, and ethical implications of integrating a new medical technology, be it a device or a drug, in the health system. Speakers also talked about how government decides to purchase a new health technology and how HTA helps in this decision making process.

In the third workshop, investment and fund-raising process was discussed in detail with some very practical tips. The workshop faculty also deconstructed and demystified an investor term sheet clause by clause in close interaction with the start-up bio-entrepreneurs.

In the fourth workshop, present and former drug controller officers provided valuable information about regulatory requirements for clinical trials in India, including those for clinical study design, approvals, documentation, and ethical responsibility. Comparative understanding of these aspects of regulations related to clinical trials in the USA and European Union vis-à-vis that in India were also discussed.

Through the four entrepreneurship development workshops, BREC provided valuable domain specific information to more than 150 start-up entrepreneurs and innovators across the country.

## ENTREPRENEURSHIP DEVELOPMENT WORKSHOP S E R I E S

“It was a very informative workshop. Had I attended this workshop one year ago, my clinical trial protocol would have been much better. Please organise such a workshop in Chennai”

**Jayashri Ganesan,**  
GreenOcean Research Labs



An investor term sheet was deconstructed and demystified clause by clause in close interaction with the bio-entrepreneurs.

# PROGRAMMES

## Meet the Investors Series

This programme includes a series of quarterly one-on-one meetings between investors and start-up bio-entrepreneurs. The objective of this series is to initiate and catalyse interactions between start-ups and investors by providing them a common platform. The start-up entrepreneurs in the domain of life science are identified through open call. In each quarterly series, 5-10 start-up bio-entrepreneurs are selected based on criteria such as value proposition, commercialisation potential, team strength, and technology readiness level, as well as fit of their proposal with the profiles of participating investors.

BREC has organised four Meet the Investors Series meetings this year. The details are as following:



#	DATE	PLACE	NO. OF INVESTORS	NO. OF START-UPS	NO. OF MEETINGS
1	July 18, 2017	Bengaluru	6	6	36
2	September 27, 2017	Bengaluru	4	6	15
3	December 6, 2017	Mumbai	5	5	24
4	February 15, 2018	New Delhi	8	10	32

"We found interactions with investors highly beneficial to fine-tune our business strategy and pitch – something I could not figure out myself over past few years."

**Dr. Sujay Shad**  
Co-founder,  
Innovator Lab  
Consultants India

At the end of each Meet the Investors Series, investors were asked to provide feedback on their one-on-one meetings with the start-ups based on criteria such as team strength, market readiness, ability to scale, and strong differentiators, and if they wanted to have follow-on meetings with any of the start-ups. BREC team then passed on the feedback to the start-ups and initiated further communication between start-ups and investors.

Through the four Meet the Investors series, 23 start-up entrepreneurs met 19 investors in 100+ one-on-one meetings.



"I did not find such platform of quarterly one-on-one meetings for bio-entrepreneurs anywhere else. This is a much needed programme"

**Dr. Pankaj Parashar,**  
Founder & CEO,  
Cutting Edge Medical  
Devices

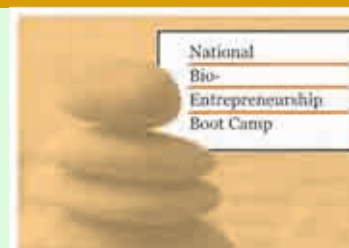


## PROGRAMMES

### National Bio-Entrepreneurship Boot Camp

Over the past few years bio-entrepreneurship in India has received a great impetus due to introduction of various grant funding schemes, grand challenge competitions, and increased interest of private investors. Academic researchers and innovators are translating their research and technologies into market-ready products and solutions. Coming from core science and technology background these budding bio-entrepreneurs many-a-time grapple with initial challenges of starting and managing various business processes.

To help these budding bio-entrepreneurs understand the nitty-gritties of starting and running businesses, BREC organises a 3-day residential boot camp. The National Bio-Entrepreneurship Boot Camp is a structured program to develop and enhance business, finance and management capabilities for founders and co-founders of life science start-ups to kick-start their businesses.



"One of the biggest take away was 'what not to do'. The work presented by the faculty based on their work and research also clearly gave me the trends when the business will be down. At least now I will not be worried, stressed, or frustrated during these phases"

**Dr. Priyangshu Sarma**  
Innotech Interventions

"It was great! The course content was good and well formatted for 3 days program. The faculty was very approachable and have shared insights regarding scaling, business model, commercialisation strategy. Every problem was attended with example. Organisation and venue was good. Thanks for organising the boot camp!"

**Vishal Mahale**  
Barefeet Analytics

"I could cross-verify line of action strategies which I am applying presently"

**Dr. Ashish Polkade**  
Vision Ecologica



Designed and delivered by eminent faculty from the United Kingdom, Dr. Shailendra Vyakarnam and Dr. Uday Phadke, along with specialists from India, the 2017 edition of National Bio-Entrepreneurship Boot Camp was organised from November 6, 2017 to November 8, 2017. It was an intense 3-day entrepreneurship development program comprised of following sessions:

#	SESSION TOPIC
---	---------------

1	<b>The Commercialisation Canvas</b>
---	-------------------------------------

- |  |  |
|--|--|
|  | <ul style="list-style-type: none"><li>• Triple Chasm Model Overview</li><li>• Modified Technology Readiness Levels</li><li>• Vectors and Sub Vectors</li></ul> |
|--|--|

2	<b>Maturity Mapping Exercise</b>
---	----------------------------------

- |  |   |
|--|---|
|  | <ul style="list-style-type: none"><li>• Mapping current maturity of your proposition</li><li>• Discussion in pairs</li><li>• Feedback from tables</li></ul> |
|--|---|

3	<b>External Vectors</b>
---	-------------------------

- |  |  |
|--|--|
|  | <ul style="list-style-type: none"><li>• Market space and proposition framing</li><li>• Customer Definition</li></ul> |
|--|--|

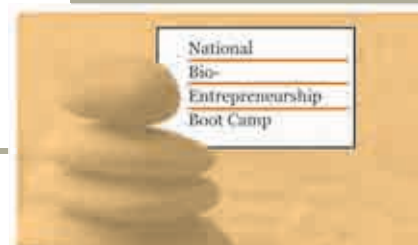
4	<b>Customer definition exercise</b>
---	-------------------------------------

- |  |   |
|--|---|
|  | <ul style="list-style-type: none"><li>• Understanding the value proposition for your customers</li><li>• Discussion in pairs</li><li>• Feedback from tables</li></ul> |
|--|---|

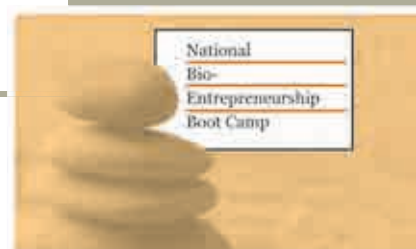
5	<b>Distribution, Marketing &amp; Sales</b>
---	--

6	<b>Pitching for investment</b> – the next round
---	---

- |  |   |
|--|---|
|  | <ul style="list-style-type: none"><li>• The nature of chasm II funding</li><li>• Making your pitch compelling – the evidence you need</li></ul> |
|--|---|



#	SESSION TOPIC
7	Panel Discussion – <b>Investor outlook on Biotech</b>
8	<b>Internal Vectors1</b> <ul style="list-style-type: none"> <li>• Technology Deployment</li> <li>• Product or Service Definition</li> </ul>
9	<b>Company formation, Tax and Legal Structures, Corporate Governance and Best Practices</b>
10	<b>Internal Vectors 2</b> <ul style="list-style-type: none"> <li>• Teams, Leadership &amp; Culture</li> <li>• Building a Board</li> </ul>
11	<b>Composite Vectors 1</b> <ul style="list-style-type: none"> <li>• Using the commercialisation canvas to develop your strategy</li> <li>• Developing your business model</li> </ul>
12	<b>Writing your business plan</b> <ul style="list-style-type: none"> <li>• What improvements can you make based on what you learnt from crossing the chasm</li> <li>• How to improve what you have – making it fit for external investors</li> <li>• What were the gaps in your first business plan</li> </ul>
13	<b>Business Model</b> <ul style="list-style-type: none"> <li>• Outline your target business model</li> <li>• Discuss in pairs</li> <li>• Feedback from tables</li> </ul>
14	<b>Composite Vectors 2</b> <ul style="list-style-type: none"> <li>• Valuing your business</li> <li>• Science vs Art</li> </ul>



2017 Boot Camp gave 57 founders and co-founders of life science start-ups from across the country a great opportunity to enhance business skills for making their innovative technologies successful in the market. The 3-day Boot Camp was spread over 14 sessions and was addressed by two international and 10 national faculty members.



## PROGRAMMES

“Thank you for organizing such an event. It was indeed a thought provoking process and the journey has taught us many interesting facts about our business”

**Dr. Kavitha Sairam**  
FIB-SOL Life  
Technologies (NBEC  
Ankur Seeds Award  
winner)

### National Bio Entrepreneurship Competition

This programme is a nationwide competition to attract, identify, and nurture bio-entrepreneurs with path-breaking, novel and scalable business ideas with significant societal impact in the life sciences domain spanning healthcare, agri-biotech, animal health, and industrial biotech. The 2017 edition of the National Bio Entrepreneurship Competition (NBEC) was organised over a period of 4 months between August 16 and December 16. The competition was open for all aspiring entrepreneurs, biotech companies, and start-ups. NBEC 2017 received 1500+ registrations from 32 states/UTs in India. 150 applicants were shortlisted for regional qualifiers that were held in Bengaluru, Delhi, Mumbai, Hyderabad and Chennai in late October. From these, 39 finalists were shortlisted for 2-day entrepreneurship development and mentoring sessions held in Bengaluru on December 14 and 15, under the mentorship of lead faculty Dr. Vijay K Vijayaraghavan, Chairman, Sathguru Consultants. Topics for these sessions included: developing business model, value proposition, and investment and revenue models. The finalist also got ample mentoring in fine-tuning and practicing their business pitches.

Following the two day boot camp, the finalist gave a 5-minute pitch to a Jury comprising of 2-3 experts. Pre-finale jury members were Dr. T. M. Manjunath, Veteran Agricultural Scientist, Dr. Shriram, Vice-President, Evolve Biotech, Dr. Anand Sivaraman, Director, Remidio Innovative Solutions, Mr. D. A. Prasanna, Managing Partner, Acunova LifeSciences, Dr. Rajath Athreya, Lead Consultant Neonatologist and Paediatrician, Rainbow Children's Hospitals, Dr. Suresh Ramu, Co-founder & CEO, Cytecure, Dr. Balu Sarma, President & Chief Technology Officer, Praj Matrix. The pitches were broadly divided into three panels, namely medical devices, health care, and agri- and industrial biotech. From this pre-final round, 9 business ideas were selected for the Grand Finale.

In the Grand Finale event on December 16, the nine shortlisted finalists pitched their business ideas in front of the Grand Jury. The Grand Jury panel was chaired by Dr. Kiran Mazumdar-Shaw, Chairman and Managing Director, Biocon and other members included Dr. Vijay Chandru, Chairman, Managing Director and Co-founder, Strand Life Sciences, Mr. Nitin Deshmukh, CEO and Founding Member, Kotak Private Equity, Dr. Gopala Krishna Dasika of Pfizer Biologics Development Center, Mr. Ashwin Raguraman of Bharat Innovation Fund, Dr. Ashwin Kashikar of Ankur Seeds Pvt. Ltd., Ms. Deepthi Reddy of Social Alpha, Ms. Prachi Sinha of Axilor and Dr. Taslimarif Saiyed, CEO and Director, C-CAMP.



“The participants were truly aspirational and competent entrepreneurs, very carefully chosen [for the challenge] ... the final competition itself was very well organized. This is a pioneering effort by C-CAMP to nurture bio entrepreneurship”

**Dr. Vijay K. Vijayaraghavan,**  
Chairman,  
Sathguru  
Consultants  
(lead faculty for  
NBEC  
mentoring  
sessions)





Finalists were judged on the novelty, business sustainability, and societal impact of their ideas. Finalists with best ideas across different categories, stood to win a grand cash prize of INR 10 lakhs sponsored by Ankur Seeds, \$15,000 AWS Credits sponsored by Amazon Web Services (AWS), INR 3 lakhs sponsored by Pfizer, investment opportunity of up to \$100,000 USD from Social Alpha/Tata FISE and mentoring.

C-CAMP partnered with many organisations to make this competition successful. As mentioned earlier, the Grand Prize Sponsors were Ankur Seeds, Amazon Web Services, and Pfizer. The Associate Partner was CII, Investment Partner was Social Alpha/Tata FISE, Accelerator Partner was Axilor, Mentorship Partners were Biocon, Kotak Private Equity and Novozymes, and the Apex Industry Association Partner was CII.

Kavitha S. of FIB-SOL Life Technologies Pvt. Ltd. won the Ankur Seeds Prize as well as investment opportunity from Social Alpha/Tata FISE. FIB-SOL Life Technologies offers ultra-light weight, biodegradable and water-soluble nanofiber carriers for biofertilizers, Fertilizer Carrying Membrane (FCM), intended to be used in organic farming. The bacteria are more stable in this membrane and 5gm of the membrane is sufficient to fertilize an acre. Started in 2013, this spin-off from IIT Madras has been a recipient of various government grants.

Harpreet Singh of iNICU Medical Pvt. Ltd. won the AWS prize. Neonatal intensive care units (NICU) are specialized care centers that provide continuous care to ill and premature neonates. iNICU is an effort to virtually eliminate human error in neonate health monitoring. The Solution is an IoT based platform, which automatically captures real-time clinical data from the diversified connected devices, laboratory results and live camera feeds. The captured data is stored and analysed in medically comprehensive formats to predict the onset of infections.



"I am a researcher and interaction with mentors helped me improve my pitch from the perspective of what a corporate or VC will like to know and would be interested in, in order to investing in my proposal"

**Rashmi Shukla**  
SINE IIT Bombay  
(NBEC finalist)



“We are honoured to partner for India’s lab to market journey. Appreciate this initiative as continued effort in this regards”

**Deepthi Reddy,**  
Social Alpha  
(Investment Partner of NBEC)

Kristin K. of Saathi Eco Innovations India Pvt. Ltd. won the Pfizer award. The Vision of Saathi is to create affordable, high-quality sanitary napkins for Indian women which are also environment friendly. Saathi has developed 100% biodegradable and compostable sanitary napkins using banana fibre, thus making them eco-friendly, non-toxic and also affordable. Saathi’s business model includes differential pricing: selling napkins to eco- and socially-conscious urban women at premium price and providing napkins to rural women at subsidised price.

Finally, Mohit Chelani of Clensta International Pvt. Ltd. received a special recognition from the Grand Jury. Clensta in association with IIT Delhi has created an innovative Personal Hygiene solution that addresses the concern of inaccessibility to hygiene due to non-availability of water. The products being Clensta Waterless Body Bath & Clensta Waterless Shampoo help maintain optimum levels of body and head hygiene without the use of water. The solution is completely Alcohol & SLS (Sodium Lauryl Sulphate) free.

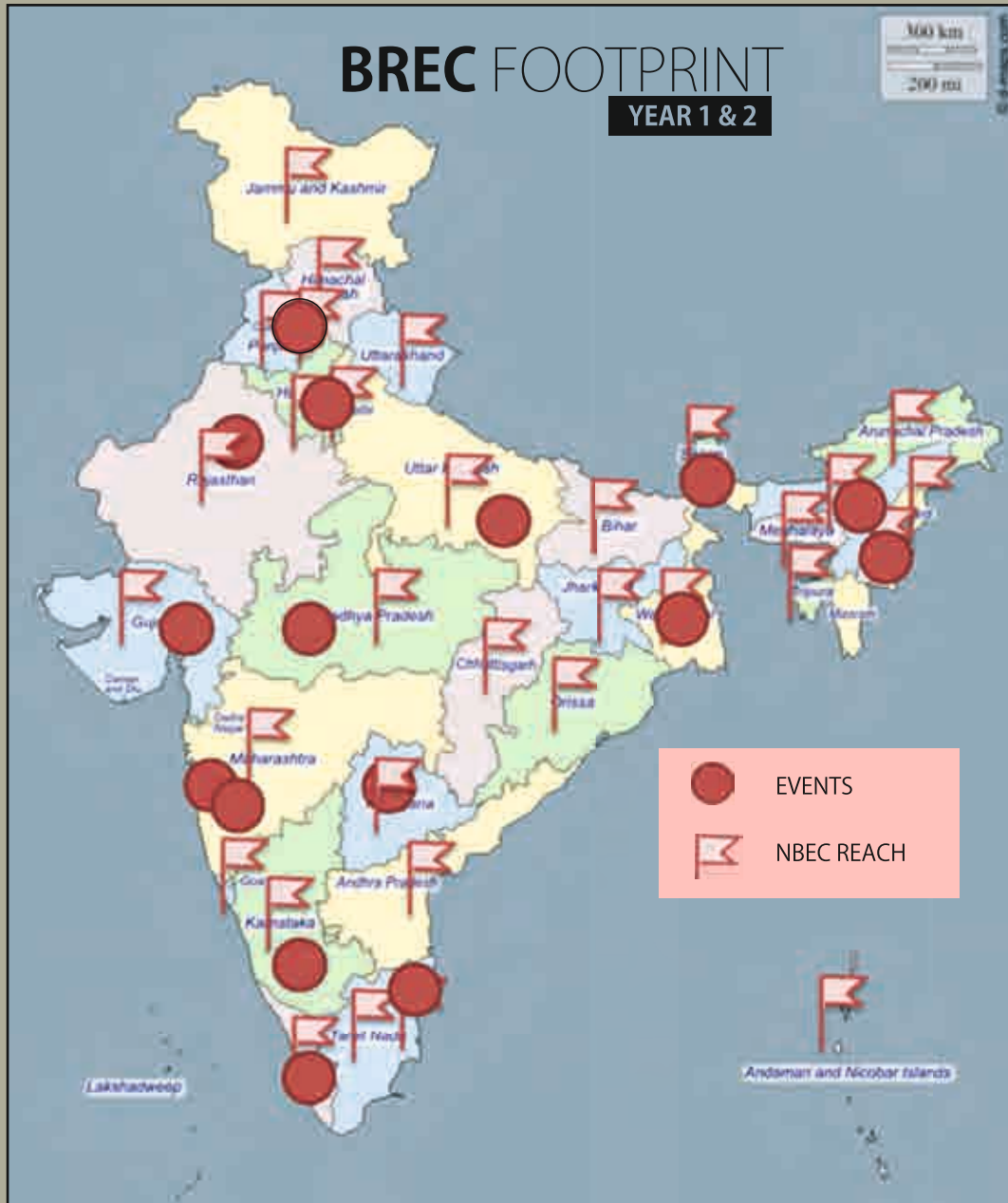


# BREC FOOTPRINT

## YEAR 1 & 2

300 km  
200 mi

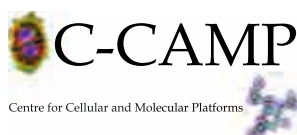
© 2014 mapsofindia.com





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

BIRAC implements its mandate by providing access to risk capital, technology transfer, IP management and mentorship.



Centre for Cellular and Molecular Platforms – C-CAMP ([www.ccamp.res.in](http://www.ccamp.res.in)), a Department of Biotechnology, Government of India initiative, is considered one of the most exciting centres for technology-based innovation in India in the field of life sciences.

C-CAMP was established with the aim of enabling cutting-edge bio-science research and entrepreneurship, by: i) developing and making available state-of-the-art technology platforms and providing training on these technology platforms to academia and industry and ii) building a thriving ecosystem to stimulate innovation and promote bio-tech entrepreneurship in India.

### **Centre for Cellular and Molecular Platforms – C-CAMP**

Bangalore Life Science Cluster,  
GKVK Post, Bellary Road,  
Bangalore - 560 065, India

[www.ccamp.res.in](http://www.ccamp.res.in)