

Newsletter of Bio-NEST

**NIPER Guwahati
Incubation Center**

March 2020



From Editors Desk

I would like to offer you to my heartfelt New Year Greetings for 2020. In the second issue of the newsletter of Bio-NEST Incubation Center of NIPER-Guwahati I am delighted to inform you that we will be moving to our new permanent campus with new hopes, new colours and new challenges.

As we discussed in our first issue that the recent changes in National and International laws in healthcare system have opened vast new opportunities for the development of healthcare products. If utilized properly, these developments can be tremendously beneficial for the economic progress of our country and especially for the North-Eastern India, which has a rich biodiversity and traditional knowledge base. Considering increasing life-expectancy and the cost of medications, the indigenous innovations in the healthcare sector can save vast amount of foreign exchange, which India incurs every year.

NIPER- Guwahati, will put all possible efforts to make common platform with the world class facility and dedicated staff for the benefit of the North East Region in particular and Nation in general. It is our strong belief that this facility will encourage and assure the youth of the region in taking

their leap towards start-up in healthcare sector. The ecosystem would include innovators, entrepreneurs, mentors, technologists, policy makers, funding agencies, investors, legal experts, market experts and all other relevant professionals.

NIPER Guwahati is the Center of excellence, both in basic and applied research of Pharma sector and I hope that we continue to maintain these high standards of excellence. It has been at the forefront of societal applications of pharma such as validation of traditional medicine from various traditional healers, and bringing those medicines into main-stream. I am happy to bring to inform that in the last year, NIPER Guwahati received three prestigious national centers from different departments of Government of India, namely National Centre for Pharmacoengineering (Supported by the Department of Science & technology), Bio-NEST Centre (supported by BIRAC-Dept. of Biotechnology), and the Centre of Excellence (Ministry of tribal Affairs), for the benefit of this region. Apart from this NIPER-G also received the 'Quality Assessment & Value Addition Centre for the herbal industry in the North Eastern States of India' under TIES Program, Ministry of Commerce, Government of India.

This issue of the newsletter includes the activities of the center in last few months and also an article on 'scheme/ support available for young entrepreneur in India' from the experts of relevant fields.

I wish one and all a very happy, healthy, peaceful and prosperous New Year 2020. With the advent of the New Year, we welcome new hopes and aspirations to make a better tomorrow. Hope 2020 would see enhanced levels of spirited functioning creations, research, and innovations output coming out from NIPER Guwahati.



Dr. USN Murty
Director, NIPER-Guwahati
CEO, Bio-NEST,
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Greetings from Bio-NEST NIPER Guwahati Incubation Center

Bio-NEST NIPER-Guwahati Incubation center wishes you a successful and productive new year. It's time to be hopeful, have new dreams and make some innovation for the new decade. It's time to connect with each other and build up a successful entrepreneurship ecosystem. It's time to move on and embrace what's new. If you are excited about the new entrepreneurial activity/ health care solution in your mind, it's time to connect with Bio-NEST, NIPER Guwahati because you really need to execute the idea at the ideal place.

NIPER-Guwahati is the first National Institutes in North East Region for pharmaceutical education and research established by Department of Pharmaceuticals, Ministry of Chemicals and Fertilizers, Government of India. This organization is "Institute of National Importance" in the North Eastern Region of India for providing high quality education and research in Pharmaceutical Sciences. It is also a place where knowledge in science and education stimulates technological

innovation to inspire student community to pursue scientific and industrial careers.

Bio-NEST NIPER-Guwahati Incubation center is funded by BIRAC (Biotechnology Industry Research Assistance Council), a not-for-profit Section 8, Schedule B, Public Sector Enterprise set up by Department of Biotechnology (DBT), Government of India under Bio-NEST (Bioincubator Nurturing Entrepreneurship for Scaling Technology) Scheme.

The biotech sector start ups need incubation support of a different kind. They need a place for developing prototype of their products by having access to high end laboratory equipments, and also mentorship and support on technical, regulatory, and financial aspects. Bio-NEST NIPER Guwahati with its state of the art instrument facility and the pool of mentors from different fields is providing the support to the traditional healers, students, startup companies, and qualified citizens with Bio/ Pharma related subjects to incubate their project.



The Value Proposition of Bio-NEST, NIPER-Guwahati

The Bio-NEST NIPER-G incubation center will provide the mentoring and technical advisory to the incubatee by experts from NIPER and other organizations of network. Along with the scientific mentoring the prospective entrepreneurs will also get the help from the professionals for the company formation, technology transfer and regulatory compliances for therapeutic products, pre-incubation commercial assessment, test marketing, branding, developing vendor & distribution channel.

For the up scaling and commercialization of their

products NIPER-G will help the incubatee with upcoming GMP facility and also try to arrange the financial assistance from several schemes of government and seed funds from other organizations.

The incubation centre will provide lab space, office space, conference room, meeting room, central instrumentation facility, animal house, cell culture and microbial culture room and many more facility depending on the requirement of the incubatee and availability at that time point.

Current Developments at Bio-NEST-NIPER-G

1) NIPER-G will shift to the new campus situated at Changsari, Kamrup District of Assam within the first quarter of the present year. Bio-NEST, NIPER-Guwahati is also going to start the facility at the same time.

2) The centre already started to mentor the future incubatees. At least ten prospective incubatee are associated at present with the mentors and getting advice for their future planning on the product development

3) Bio-NEST, NIPER-G is actively working and trying to find out the potential candidate for getting seed funding for incubation under the North East special call for BIRAC-BIG (Biotechnology Ignition Grant) program. Additionally Bio-NEST, NIPER is actively trying to get support for the women entrepreneurs of the North-Eastern region under the BIRAC sponsored WINNER scheme. Till date six applications for BIG and two applications for Winner have been already submitted through Bio-NEST NIPER, under the NER special call.

4) The centre is engaged with the prospective applicant for the 16th BIG call and mentoring them for the preparation of the application and helping them to prepare their team.



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Opportunities in Bio-innovation: North Eastern India

Background

Development, growth & sustainability all depends on how conducive & innovative the ecosystem is. The north eastern region is one of untapped regions in the country which remain unexplored since ages. The natural resources of the region has huge economic value which can be utilized by creating value for improving the socio economic condition of the region especially for its people. The north eastern states comprising the state of Assam, Arunachal Pradesh, Manipur, Meghalaya, Mizoram, Nagaland, Tripura and Sikkim is endowed with a wealth of natural resources and rich cultural among the different ethnic communities. The region has the potential to transform into an industrial hub with the implementation of the Look East Policy. It is the gateway to south East Asian Country. Hon'ble prime minister of India has highlighted that combining rich natural resources with the pool of talented people gives north east region the potential to play a key role in nation development and India cannot develop until North eastern region are also developed. Recently, Dr. Renu Swarup, Secretary, Department of Biotechnology, Govt of India has highlighted the need for transforming the region, which has the most potential for bio-economy and with the country committed to reach the target of \$5 trillion by 2024, accelerating the potential of development and economic potential of the North Eastern region is essential.

Opportunity

When it comes to startup, cities like Bengaluru, Delhi, Mumbai, Hyderabad, etc. are the ones that will be in the top list of preferred startup destinations in India. But an emerging ecosystem comes from the land of beauty – the North east. India's northeastern region is endowed with huge untapped natural resources.

The northeastern region is known for its tea, petroleum resources, muga silk and biodiversity goldmine. Assam is the third – largest producer of natural gas in the country and has ample reserve of limestone. With a vast area under hills & forests, it is a gold mine to variety of medicinal herbs and plants. Manipur is one of India's largest Bamboo producing states and major contributor to country's bamboo

industry. The state of Meghalaya has a diverse range of soil types and supports various agricultural crops like – rice, maize, oilseeds, cotton, jute, etc. Meghalaya has a strong floriculture sector as well. Besides these, the northeastern region is also a reserve for millets, rubber, crude oil, etc. With all these ingredients and support, India's northeast is going to be counted as innovation hub in the country.

Challenges

As the region has huge potential for starting a business, the challenges face by the entrepreneur are also higher due to poor infrastructure and communication facility and lack of startup ecosystem in the region. Out of total 14,565 startups, only 0.144% comes from the northeast as recognized under the Startup India initiative of the Indian government. Various government schemes and support systems were introduced in the northeast to promote bio-innovation, but people are either not aware of it or they do not know how to proceed with it. Also, this region is lacking the presence of some active mentors to translate the innovations to business. But the recent years witness a change in start-up ecosystem in the region. The region is slowly and steadily evolving as the hub of start-up environment with the support of the central and states government encouraging entrepreneurship and providing space for the entrepreneurs to excel in the region. Most of the states government of Assam, Manipur, Meghalaya, Nagaland, Mizoram, Sikkim and Tripura has started their own start up schemes aiming at promoting and empowering the youths to become job creators and pursue their entrepreneurial dreams, thereby transforming the region into a leading startup Hub of India. This initiative has provided opportunities to a number of budding entrepreneurs from the region. To improve the infrastructure and communication in the region, the central government has created a North East special infrastructure development schemes (NESIDS), which is entirely funded by the central government for infrastructure projects on water supply, power and connectivity enhancing tourism, primary and secondary education and health and about 22 project worth 885 crore rupees have been earmarked for funding.

Focus Area

North East regions should not follow the trend in other regions of India rather set their own trends and be a trend setter. Such regions can take leaderships in very

specific areas of bioinnovations: Organic food& beverages, Renewable energy, Agricultural Biotechnology, Horticulture, Forestry, Tissue culture, Animal husbandry, Handloom and handicrafts, Nutraceuticals and Herbal medicine.

Support System

There is a rising need of having a proper & sustainable support system to drive the innovation ecosystem in the northeastern states of the country. A lot of appreciable efforts made by government & private organization. Few of them are stated below:

- BIRAC has supported 3 Bio-incubators, one at Institute of Advanced Study in Science & Technology - Guwahati, the other one at National Institute of Pharmaceutical Education & Research – Guwahati and the last one is at Mizoram University, Aizawl and now extending support to many more in the North eastern regions.
- BIRAC has set up BIRAC Regional Techno-entrepreneurship Promotion Centre (BRTC) at KIIT-Technology Business Incubator, Bhubaneswar which aims to develop the biotech entrepreneurial ecosystem in North eastern states including Assam, Meghalaya, Tripura, Manipur and Sikkim. It also aims to setup few more Bio-incubators in the Northeastern region with the support of BIRAC and KIIT-TBI playing the role of mentor incubator.
- BIRAC recently launched a special call for proposal under the Biotechnology Ignition Grant (BIG) exclusively for the Northeastern region (BIG-NER) of India to support Bio-innovations developing in the Northeastern region of India. Ten selected biotech and allied startups will be given 25.0 lakh each for 18 months period and all handholding support.
- BIRAC launched a special call for Excellence award for women entrepreneurs in Northeast and five selected women entrepreneurs of this region will be given 5.0 lakhs each with access to mentorships and handholding
- Department of Science & Technology, Govt. of Assam established the “Guwahati Biotech Park” in the year 2008 to trap the full potential of Bio-innovations and utilizing it for economic development.
- Institutions like Indian Institute of Entrepreneurship (IIE), Meghalaya Institute of Entrepreneurship (MIE) are also working for developing the innovation ecosystem and capacity building of the people.



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What is needed

Time has come to build a workable and sensible strategy with a team effort for each North East states of India by involving state Govt agencies, startup secretariat, NGOs, Institutions, corporate and individual innovators. Support schemes are available, resources are available, what is needed is conducive ecosystem, team work with mission mode& change in mindset. More corporates house can come and provide necessary CSR support and handholding to the local entrepreneurs. Incubators should come out of their domain and think about a bigger picture and reach out to the community and work very closely for the cause. Many leaders have spoken the potential of North East but it will not happen unless the inhabitants think about it and strategize. One need to come out of the comfort zone and add values to the society. If you don't do it, no body else will do it for you.

Events conducted by Bio-NEST, NIPER Guwahati

1. A one Day Workshop on “The Global Bio-India 2019 Road show” was organized by NIPER Guwahati on 24th October 2019. In this event, Mr Amit Kumar, Legal Officer, the Department of Biotechnology, Govt. of India spoke about the role of BIRAC in the field of entrepreneurship development, innovation ecosystem and the vision towards the \$50 billion economic growth of India. Aspirant start-ups of various localities interacted with him and showed interest for the Global Bio India 2019. Professor (Dr) Bhabesh Das, Principal Govt. of Ayurvedic College and Hospital, Guwahati delivered talk on “Strategic pathways required

to develop commercially viable herbal products”. One more distinguish speaker, Dr. Ramjee Pallela, Chief Operating Officer, Atal Incubation Center, CCMB, Hyderabad had delivered a speech on funding for Ideation to Commercialization Stages. Both these talks encourage the students and the traditional healers. This event was attended by the faculty members, scientific officers, research associates and PhD scholars from NIPER Guwahati, and traditional healers from different parts of North Eastern India, personnel from Ajanta Pharma Ltd., Natco Pharma Ltd. and personnel from Assam Startup etc.



Dr USN Murty, Director NIPER-G Addressing the meeting.



Dr Ramjee Pallela, COO, AIC-CCMB delivering his talk.



Mr Amit Kumar, Legal Officer BIRAC, DBT delivering his talk.



Prof (Dr) Bhabesh Das, Principal, Govt. Ayurvedic College interacting with the participants.

2. NIPER- Guwahati conducted an outreach program at “Banshigopal Natya Mandir, Garmur Satra, Majuli” on 7th December, 2019. Majuli is a river island in the Brahmaputra River, Assam which is currently listed as the world’s largest river island in the Guinness Book of World Records. This spot is the abode of the Assamese neo-Vaishnavite culture and a hub of traditional practice.

On behalf of NIPER – Guwahati, Dr. Sonali Roy (Incubation manager) Dr. Bhaskar Sarmah (Scientific Officer- Incubation Center), Ms. Nayanika Devi, and Mr Datta Maroti Pawde (Research Fellow) organized this program. The event, attended by approximately 100 traditional healers from different districts of Assam and Namsai district of Arunachal Pradesh, started with the hoisting of flag by

the president of Folk Medicine Healers Association of Assam, Shri Jibeswar Barpatra Gohai, subsequently followed the talks by Dr Roy, and Sri Pawde. Through the interactions, the NIPER team tried to get a detailed understanding about the operating mechanism being practiced by the traditional healers in usage of folk medicines. The NIPER team told about the importance and benefits of scientific validation of the traditional healing practices, and the way NIPER-Guwahati and its incubation center could help them in this purpose. The audience took keen interest in the incubation process. Some of the healers came forward even in the event itself to discuss about their technology and the traditional therapy. The event ended with promises from the both sides for further follow-up actions.



Bio-NEST NIPER-G team with officials of Folk Medicine Healers Association, Assam.



Felicitations of the President of FMHA, Assam.



Participants of Majuli outreach program.



Interactive session.

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