



Northeast
Portfolio
Spotlight



www.kiitincubator.in

Content

1	BRTC Overview and Impact	3
2	Statistics	4
Name of Company / Individuals		
3	Waste to Wealth Innovative Pvt Ltd	6
4	RogNidaan Technologies Pvt Ltd	7
5	Symbica Pvt Ltd	8
6	Bio-Dtect Pvt Ltd	9
7	Green Biotech Ecosolutions Pvt Ltd	10
8	Pepthera Laboratories Pvt Ltd	11
9	Generation Net Nutrition's Pvt Ltd	12
10	Nibiaa Devices Pvt. Ltd.	13
11	KNOWLEDGEPIE Pvt. Ltd.	14
12	Medilane HealthTech and Consultancy Services Pvt Ltd	15
13	Ble & Zing Pvt Ltd	16
14	Vedam Agro Enterprises Pvt Ltd	17
15	Poohar Essence Pvt Ltd	18
16	Kumshung Pvt Ltd	19
17	Foundation for Advancement of Essential Diagnostics	20
18	Dr. Chandralekha Ayekpam	21
19	Dr. Deepak Bharadwaj PVP	22
20	Ms. Melinda Nongbet Sohlang	23
21	Dr. Prachurjya Dutta	24
22	Dr. Sanjay Kumar Banerjee	25
23	Dr. Lightson NG	26
24	Primogen Biotech Pvt. Ltd.	27
25	Dr Ajanto Kr Hazarika	28
26	SenzTech Private Ltd.	29
27	Aranyam Innovations Pvt. Ltd	30
28	Other Innovators	31

BRTC OVERVIEW AND IMPACT

Established on 12th July, 2019, over the past three years, BRTC has worked aggressively on reaching out to budding startups, and innovators across all the states of NE and East. Staying true to our mandate to support innovation, through mentoring and handholding of startups and building a stronger incubation ecosystem in NE & E, BRTC has implemented many capacity-building workshops and new initiatives that allow innovators to address their product development, regulatory, IP and commercialization queries.

In this regard, a total of 56 programs are conducted so far with 8 NE: 5 E mandates. To spread awareness about bio entrepreneurship, we have conducted sixteen roadshows across the region, and training programs on various facets of innovation, including IP, grant writing, and regulatory matters have been organized. Design workshops, a two-day extensive mentoring program focused on essential product design and business development for promising early-stage startups to scale up their innovation to a higher TRL level. BRTC also helps in enriching the skills and knowledge of the managers by imparting the necessary skill development through the Incubation practice school. BRTC is committed to supporting and encouraging rural women's entrepreneurship by identifying SHG clusters and providing the skillset to use their traditional knowledge with modern biotechnology interventions.

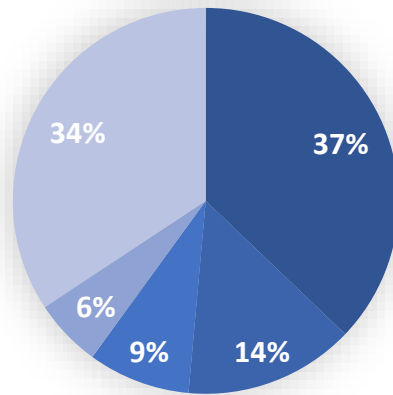
Through these programs, we have supported approximately **4580** innovators across all states of NE and E including Arunachal Pradesh, Assam, Manipur, Meghalaya, Mizoram, Nagaland, Tripura, Sikkim, Bihar, West Bengal, Chhattisgarh, Jharkhand and Odisha.

BRTC Impact in East (E) and Northeast (NE)

56 Total Programs	13 States Covered (8 NE & 5 E)	4.5K+ Innovators Reached	65+ Received further Assistance	15 Institutional Collaborations	2 Mentor Incubator
30+ NE Mentors Onboarded	40+ BRTC Volunteers	30 (13E : 17NE) Innovators from E & NE supported in BIG	9 Under BIG NE	1.5K+ Rural Women Empowered	
5 Clusters under SFURTI	31 Incubation Managers Trained	4.5K+ Beneficiaries Touched			

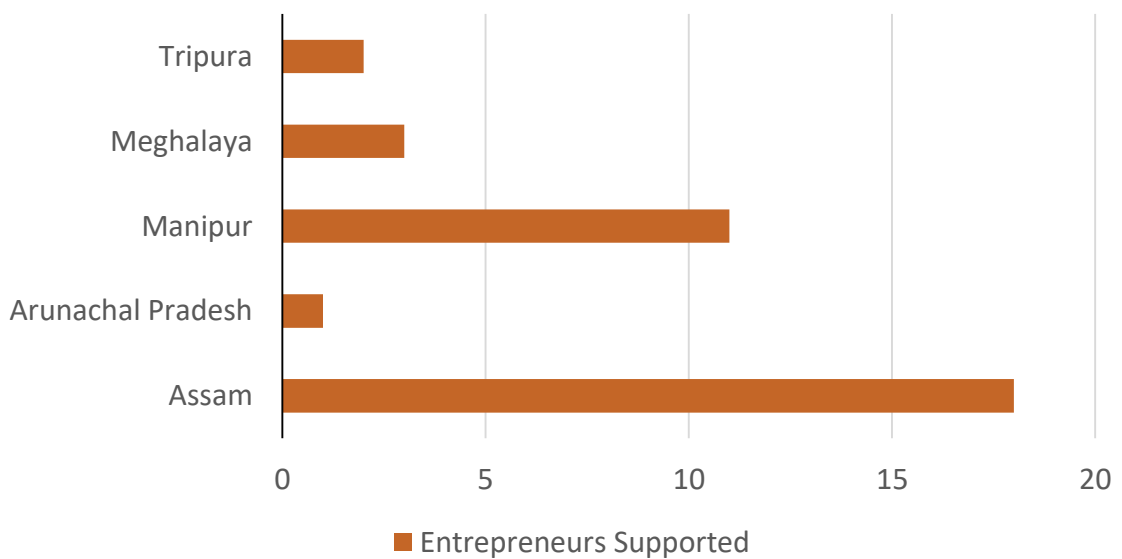
STATISTICS

Sector wise distribution of Entrepreneurs Supported



- Industrial Biotechnology
- Healthcare: Drugs
- Healthcare: Diagnostics
- Healthcare: Devices
- Agriculture

State-wise distribution of Entrepreneurs Supported



Northeast Portfolio



Industrial Biotechnology

Microbial consortium based biofertilizer for increased Ramie Fiber yield

APPLICATION

The innovative process can be deployed as a part of effluent treatment process in various industrial ETPs like – dairy ETPs, fertilizer ETPs, etc.

COMPANY NAME	TECHNOLOGY READINESS LEVEL (TRL)	INTELLECTUAL PROPERTY
Waste to Wealth Innovative Technologies LLP FOUNDERS' NAME Dr. Shaon Ray Chaydhuri Ashoke Ranjan Thakur	TRL: 8 (The process is currently under the pilot scale operations)	1. Bio-fertilizer production from bacterial consortium , Application No: 201731003023 2. Microbial consortium and process for degumming of Ramie fiber , Application No: 201931048663

PROBLEM ADDRESSED

The small and medium-scale dairy installations can afford to treat their effluent with the current technology (generating valuable resources) which was not possible using the existing elaborate technologies in the market. The freshwater could be used for potable purposes instead of wasted for non-potable applications like agriculture. The environment could be protected from the adverse effect of chemical fertilizer leaching while providing nearly free fertilizer (INR 7/1000 lit) for the landowners in the vicinity of the dairy ETP, ensuring round the year fodder and economic crop production in those lands. Adequate agricultural practice will ensure manpower involvement and hence livelihood generation.

ABOUT THE TECHNOLOGY

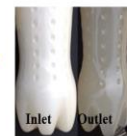
Waste to Wealth has developed a process to convert milk processing plant wastewater into liquid biofertilizer within 16 hours using 70% less space (for effluent treatment plant installation), 89% less energy (for system operation), and about 90% less CO₂ equivalent gas emission. The effluent is converted into a value-added product that can replace the use of fresh water and chemical fertilizer for agriculture, hence preserving freshwater for drinking purposes. In addition, the investment in effluent treatment by the ETP operators can be converted into a revenue-earning proposition during long-term operation. The developed biofertilizer is effective in growth enhancement for 17 types of economic crops ensuring environmental protection

FUNDS RAISED/ACHIEVEMENTS

- Received BIRAC BIG Grant worth INR 50 lakhs
- Received MSME Startup fund worth INR 15 lakhs
- Received Regional Climate Launchpad winner in 2019
- Received Visitor's award in Technology Category 2019
- Received NASI Reliance Industries Platinum Jubilee Award 2020

PRODUCT IMAGE

11 m³/day bioreactor



9 m³/day bioreactor



USP

- Effluent is converted into liquid biofertilizer
- Developed biofertilizer is effective in growth enhancement for 17 types of economic crop
- High efficiency and low running time
- Requires 70% less space for installation
- 89% less energy consumption and about 90% less CO₂ equivalent gas emission
- Low capital and operational cost

END USERS/CUSTOMERS

Effluent treatment plants, Dairy industries, Fertilizer industries, etc.

Healthcare: Drugs

Development and field test of AI – guided software for detection cervix cancer using Pap smear images - PAPSANNER

APPLICATION

An automated cervical dysplasia scanner for early detection and diagnosis. Later on the platform technology can be used to detect other types of cancer

COMPANY NAME	TECHNOLOGY READINESS LEVEL (TRL)	INTELLECTUAL PROPERTY
RogNidaan Technologies Pvt Ltd	TRL: 3 (Software(s)/Systems developed and tested)	IP filing is under progress
FOUNDERS' NAME		
Dr. Lipi B Mahanta, Dr. Kangkana Bora Manish Chowdhury & Anup K Das		
Website: https://rognidaan.co.in/		

PROBLEM ADDRESSED

Cervical cancer is one of the most prevalent cancers among women in North-East India. We construe several reasons, among many, for this high incidence: i) low awareness about the early diagnostic techniques, ii) lack of easy access to the nearest clinic or pathology laboratory, iii) apathy to spend the substantial cost involved for only a screening test, iv) unwillingness for repeated visits to the center as the diagnosis cannot be given on the same day and lastly v) lack of automated software available. Healthcare costs will need to be reduced if we are to treat more people and overcome the reasons mentioned above. Further, accurate and timely diagnosis is the major strategy, as well as a challenge for lowering the incidence of the disease

ABOUT THE TECHNOLOGY

An automated screening solution for early detection of cervical dysplasia from Pap smear images, which we coined "PapScanner". This software device is robust, accurate, and low-cost solution that can be operated even by a simple technician or laboratory assistant. The service of the product is remotely accessible, which makes it more efficient. The algorithm for product development mainly uses current trends of Artificial Intelligence techniques, namely machine learning and deep learning. This unique solution can be used as an early cervical cancer diagnosis test in hospitals, used for regular preventive health check-ups, and large-scale screening in rural and semi-urban areas.

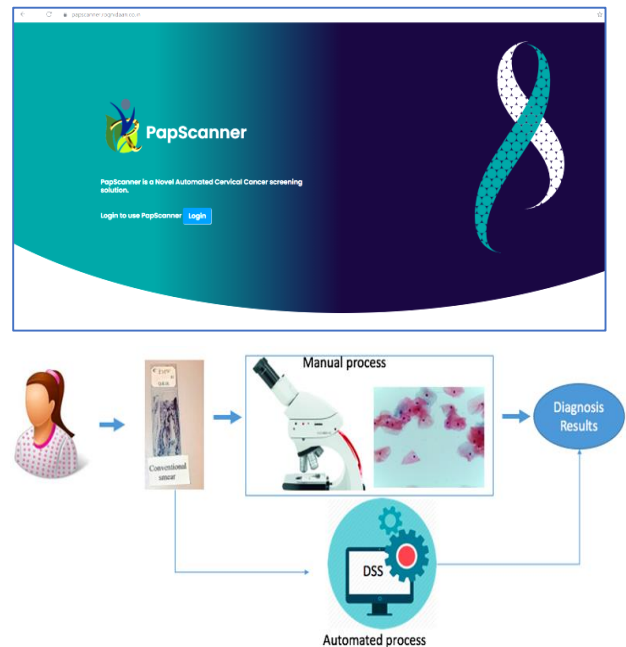
FUNDS RAISED/ACHIEVEMENTS

BIRAC BIG NE for INR 25 Lakhs

HANDHOLDING BY KIIT-TBI

- Technical and Business Mentoring
- IP Filing
- Assistance for follow on funding
- Networking and Market Connect
- Branding and Marketing

PROCESS FLOW



USP

- Automated, fast and user friendly.
- No high-end infrastructure required.
- Reduces the workload of the pathologist
- Cost effective screening tool
- Easy and secure access from remote locations
- Offers binary (suitable for Mass screening) as well as Multi-class classification (for Specialized observation)
- Offers conventional as well as Liquid-based Cytology image analysis

END USERS/CUSTOMERS

Pathologist of Hospitals and Diagnostic Centres

Healthcare: Devices

Development of a market ready multi-articulating adaptive myoelectric hand using sensory feedback

APPLICATION

Functional myoelectric Prosthetic hand for trans-radial amputees that generates a sense of embodiment towards the user

COMPANY NAME	TECHNOLOGY READINESS LEVEL (TRL)	INTELLECTUAL PROPERTY
Symbica Pvt Ltd	TRL: 4 (Functional Prototype developed by integration of different modules)	Indian Patent has been filed App No: 202131002483
FOUNDER'S NAME		
Nilotpal Baruah		
Website: https://www.symbica.in/		

PROBLEM ADDRESSED

Most of the current prosthetic hand manufacturers rely only on the functional aspects of a prosthetic hand like the number of grasps it can make and the number of degrees of freedom it has, etc. and not on generating a sense of ownership towards the amputee.

ABOUT THE TECHNOLOGY

1. A hybrid underactuated mechanism helps to grab any size object with just a single motor.
2. Self adapting socket ensures perfect socket fit with respect to any change in stump geometry/size.

FUNDS RAISED/ACHIEVEMENTS

1. BIRAC BIG NE Call for INR 25 Lakhs
2. Selected for Assam Startup- COHORT 1.0

END USERS/CUSTOMERS

Hospitals, Clinics, Government and Amputees

PRODUCT IMAGE



USP

1. Affordability with no compromise in grasping configurations generally available in the market.
2. Self adapting socket for stress-free operation of the hand irrespective of any changes in weather and stump geometry.

HANDHOLDING BY KIIT-TBI

- Technical and Business Mentoring
- IP Filing
- Company Formation
- Assistance for follow on funding
- Networking and Market Connect
- Branding and Marketing

Healthcare: Diagnostics



A Paper Based Point of Care Test Kit for Detection of Pan Malaria and Plasmodium Falciparum Species in Human Blood Serum

APPLICATION

Bio-Dtect is working on formulating a paper-based malaria biomarker detection kit based on an enzyme-catalyzed reaction. The custom-made dedicated smartphone-based application helps to analyze the data obtained in the test and provides the results in an easily interpretable format to the user.

COMPANY NAME	TECHNOLOGY READINESS LEVEL (TRL)	INTELLECTUAL PROPERTY
Bio-Dtect Pvt Ltd	TRL: 4 (Proof-of-Concept has been established and currently working on prototyping)	IP filing is under progress
FOUNDER'S NAME		
Dr. Sudarshan Gogoi		

PROBLEM ADDRESSED

Current PfHRP-II based RDTs available in the market may sometimes show false negative test because of the deletion/mutation of this particular gene in some of the plasmodium species. To address this issue we have developed a test kit based on P. falciparum glutamate dehydrogenase (PfGDH) and plasmodium lactate dehydrogenase (PLDH) specific to plasmodium falciparum and other pan malaria species. The test kit can detect the biomarkers up to picomolar level in the laboratory settings. Soon, we are going to test the kit with real malaria samples for validation.

ABOUT THE TECHNOLOGY

The developed test kit is based on a dye-based reaction catalyzed by specific malaria biomarkers. The biomarkers are captured from the blood serum using specific aptamers immobilized on gold-coated magnetic beads. On the positive test, the blue-colored reaction mixture containing resazurin is converted into a pink-colored solution (corresponding to resorufin). The dye is then captured on a specially modified paper and the color intensity is determined by a smartphone-based application.

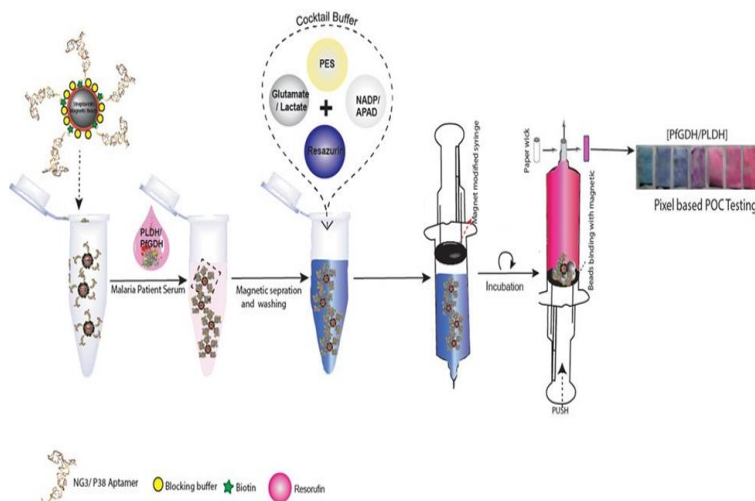
FUNDS RAISED/ACHIEVEMENTS

BIRAC BIG NE Call of INR 25 lakhs

END USERS/CUSTOMERS

Public and Private health workers/Asha Karmi/NGOs

PROCESS FLOW



USP

- The developed test kit does not give false negative result like RDTs.
- Can simultaneously detect plasmodium and other pan malaria species.
- The cost is less than 75 Rupees per kit.

HANDHOLDING BY KIIT-TBI

- Technical and Business Mentoring
- IP Filing
- Company Formation
- Assistance for follow on funding
- Networking and Market Connect
- Branding and Marketing



Agriculture

Industry Scale Development of Probiotic Formulation for Livestock's Management

APPLICATION

Probiotic formulation that can improve animal gut health, growth rate, feed efficiency and food safety. The probiotics also help to increase the resistance or immune system of animal/poultry from diseases thus lowering regular requirements of antibiotics, medicines

COMPANY NAME	TECHNOLOGY READINESS LEVEL (TRL)	INTELLECTUAL PROPERTY
Green Biotech Ecosolutions Pvt. Ltd	TRL:3 (Proof of Concept Established)	IP filing is under progress
FOUNDERS' NAME		
Ms. Geetashori Yumnam Dr. Asem Sundari Website: https://greenbiotechecosolutions.com/		

PROBLEM ADDRESSED

The rapid growth in population has increased the demand for nutritious food. In NE states of India, a large number of the population's livelihoods are based on livestock. Major issues with animal farming were related to disease and the highest number of deaths of animals is due to diarrhea caused by toxigenic E-coli. The other zoonotic pathogens, such as Salmonella, can also cause health problems and loss of farmers' income. To overcome the problem a huge quantity of antibiotics is usually given to live stocks that bio-accumulate in the body of animals and enter the human body while consuming and increasing the expenditure of the farmers.

PRODUCT IMAGE



ABOUT THE TECHNOLOGY

The probiotic formulation would play an important role in Livestock management. It can solve multiple problems of livestock management – diseases, health, foul odor, and the immune system. It helps to increase the resistance or immune system of animal/poultry from diseases, so it lowers regular requirements of antibiotics, medicines, and others and keeps animal/poultry healthy. The probiotic also improves animal/poultry health and reduces the mortality rate.

USP

- Sources is from indigenous black rice and milk.
- An organic and eco friendly product
- Product will boost the immune system and will decrease the mortality rate of the livestock.

FUNDS RAISED/ACHIEVEMENTS

- Winner of the northeast MANAGE Samunati AgriStartup Award 2021
- Selected and visited to show case at Dubai Expo in Indian Pavilion as a startup by Planning Department, Govt. Of Manipur
- ABI Women Power Award 2022 conferred by Agribusiness Incubation Centre, ICAR Research Complex for NEH Region, Umiam, Meghalaya

HANDHOLDING BY KIIT-TBI

- Technical and Business Mentoring
- IP Filing
- Assistance for follow on funding
- Networking and Market Connect
- Branding and Marketing

END USERS/CUSTOMERS

- Ground level farmers
- Livestock producers
- Large suppliers of Food processing industry



Industrial Biotechnology

Biomolecular Surface Disinfectant for Households and Commercial Establishments

APPLICATION

Biomolecules as active and participating ingredients for Disinfectants, Pharmaceuticals, Cosmetics, Processed Foods and Personal Hygiene Products

COMPANY Pepthera Laboratories Pvt. Ltd.	TECHNOLOGY READINESS LEVEL (TRL) TRL: 2 (Proof-of Principle)	INTELLECTUAL PROPERTY Patent Number: To Be Filed
FOUNDERS' NAME Dr. Gaurav Jerath Website: www.pepthera.com		

PROBLEM ADDRESSED

Antimicrobial Resistance (AMR) is a phenomenon responsible for over 1 million annual deaths globally at present. This number is predicted to increase to over 10 Million annual deaths in the next 20 years. The use of antimicrobial chemicals in daily use products adds to the further development of AMR. Additionally, the chemicals have a high ecological half-life of over 150 years along with high toxicity. Therefore, these chemicals have been either banned or highly regulated in western countries.

ABOUT THE TECHNOLOGY

- Our technology has two components:
 - Membrane destabilizing Molecules as Antimicrobials.
 - Membrane Penetrating Molecules for carrier functions in cosmetic and pharmaceutical sectors.
- We have our proprietary biomolecule design platform, which has been validated to design biomolecules with tailored antimicrobial and carrier activity.

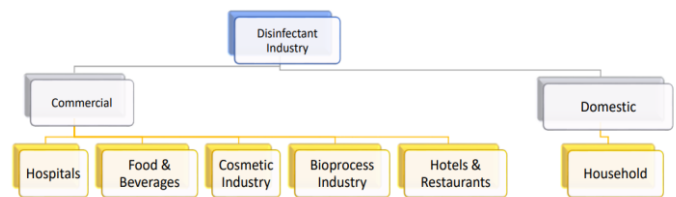
FUNDS RAISED/ACHIEVEMENTS

- Winner of BRTC Changemaker of North East (Startup category)
- National-level Antimicrobial Resistance Quest 2021
- BIRAC Biotechnology Ignition Grant (BIG-18) INR 50L

HANDHOLDING BY KIIT-TBI

- Technical and Business Mentoring
- IP Filing
- Company Formation
- Assistance for follow on funding
- Networking and Market Connect
- Branding and Marketing

PRODUCT USES



USP

- Biomolecular Formulation
- Non-toxic
- Non-hazardous
- Low ecological half-life
- Programmable Technology for developing new formulations within 5 years (antimicrobials).
- Designed Molecules, therefore, Patentable

END USERS/CUSTOMERS

- Surface Disinfection Industry
- Cosmetic Industry
- Personal Hygiene Industry
- Pharmaceutical Industry
- Food Processing Industry
- Other industries requiring the use of antimicrobials (e.g. healthcare, hospitality, bioprocess, etc.)

Industrial Biotech

Cultivated Mushroom and Microalgae Flour for Fortification in Traditional Food

APPLICATION

Base material for Food, nutraceuticals and pharmaceutical applications

COMPANY

Generation Net Nutrition's

TECHNOLOGY READINESS LEVEL (TRL)

TRL: 4 (Proof-of-Concept Established)

INTELLECTUAL PROPERTY

Patent Number: Yet to file

FOUNDERS' NAME

Dr. Thiyam General

PROBLEM ADDRESSED

- Lack of yellow color Chlorella for application in food
- Lack of Alternative cultivation process for medicinal mushroom Cordyceps militaris
- Lack of microbial based functional food materials.

ABOUT THE TECHNOLOGY

High-density Heterotrophic produced microalgae biomass with no off-flavors

- Heterotopic produced medicinal mycelium as an alternative for Cordyceps
- Fermentation technology with a short cultivation period reduce the production cost.

FUNDS RAISED/ACHIEVEMENTS

1. Supported under BRTC NE Changemakers
2. BIRAC Biotechnology Ignition Grant (BIG-18) INR 50L

HANDHOLDING BY KIIT-TBI

- Technical and Business Mentoring
- IP Filing
- Company Formation
- Assistance for follow on funding
- Networking and Market Connect
- Branding and Marketing

PRODUCT



USP

- Heterotrophic cultivation of algal biomass with protein 45%, omega 3 fatty acids, lutein, neutral taste, No Off Flavour, easy to mix with traditional food.
- Heterotrophic cultivation medical mushroom mycelium, no toxic heavy metals, axenic culture, and short cultivation period.

END USERS/CUSTOMERS

- Nutrition and medicine ingredients
- Protein rich diet
- Health and wellness trend
- Vegetarianism
- Alternative protein

Agriculture IoT, AI/ML



To Prototype the utility of LoRaWAN based IoT Protocol and Smart-Contract based Blockchain Technology for quality tea production and systematic supply-chain traceability and Transparency Solution.

APPLICATION

IoT enabled Precision Agriculture Solution

COMPANY

Nibiaa Devices Pvt Ltd

TECHNOLOGY READINESS LEVEL (TRL)

TRL: 4 (Prototype in development)

INTELLECTUAL PROPERTY

Not filled yet

FOUNDERS' NAME

Aeroshil Nameirakpam

Website: <https://www.nibiaadevices.com/>

PROBLEM ADDRESSED

- Existing IoT-based agriculture systems have a centralized format and operate in isolation, leaving room for unresolved issues and major concerns, including data security, manipulation, and single failure points.
- This solution proposes a futuristic IoT with a blockchain model to meet these challenges which can not only transform tea industry but any food industry supply chain traceability and transparency in general.
- The project will try to solve some of the above stated problems with the following innovative solution

ABOUT THE TECHNOLOGY

- Intervention on tea Industry by bringing in Complete traceability and transparency in raw material sourcing, manufacturing and distribution related data through IoT, Blockchain and AI Hardware and Software Solution.
- To Utilize smart-contracts based Blockchain Technology to track & trace the workflow of Tea supply chains, Implement traceability and shareability of Data among various key stakeholders.

HANDHOLDING BY KIIT-TBI

- Grantee of BIG 19 call
- IP support and marketing support and follow on funding

PRODUCT



USP

To build an IoT, AI and Blockchain based Data driven decision support System to increase the quality and yield of produced tea and provide necessary data to the buyers for export purposes.

Our solution will be able to transforming the Package food industry supply-chain by bringing in Complete traceability and transparency in raw material sourcing, manufacturing and distribution related data through IoT, Blockchain and AI Technology

END USERS/CUSTOMERS

Tea industry and consumers

Healthcare: Drugs

Novel Synthesis of Iron-platinum Nanoparticle Composite and Their Multifunctional Applicability as MRI Contrast Agent & Therapeutic Agent

APPLICATION

FePt nanoparticle to be used as MRI contrast agent and therapeutic agent for cancer cells. This efficient in vitro therapeutic effect is exhibited by the nanoparticles as monitored through DCFHDA-DCFH assay for the generation of reactive oxygen species (ROS) to kill tumor cells.

COMPANY

KNOWLEDGEPiE Pvt. Ltd.

TECHNOLOGY READINESS LEVEL (TRL)

TRL: 3 (Prototyping development stage)

INTELLECTUAL PROPERTY

Patent Number:
Indian Patent 351940

FOUNDERS' NAME

Dr. Madhulekha Gogoi

PROBLEM ADDRESSED

The existing MRI contrast agents available in the market are Gd-based. Recent research reports the cases of nephrogenic systemic failure (NSF) in patients with renal impairment or dialysis on multiple exposures to such contrast agents due to Gd-release and tissue retention.

ABOUT THE TECHNOLOGY

FePt nanoparticles are superparamagnetic in nature and hence exhibit negative contrast in alteration to positive contrast property of Gd-based contrast agents. In addition, vitamin C molecules play an important role in capping the nanoparticles and restricting the average particle size to below 5 nm. Whereas catalytic property of the Pt phase is important from the therapeutic point of view as it helps in the generation of hydroxyl radical from H₂O₂ catalytically.

FUNDS RAISED/ACHIEVEMENTS

BIRAC BIG 18TH Call for INR 50 Lakhs

HANDHOLDING BY KIIT-TBI

- Technical and Business Mentoring
- IP Filing
- Company Formation
- Assistance for follow on funding
- Networking and Market Connect
- Branding and Marketing

PRODUCT



USP

- It is a novel, facile, aqueous, thermo-free, green, one-pot process
- Gd³⁺ and Mn²⁺ related toxicity issue can be overcome by using the vit. C capped FePt nanoparticle based contrast agent
- Additional potential theranostic application

END USERS/CUSTOMERS

End users: radiologists operating MRI for diagnosis
Customers: Pharmaceutical companies

Healthcare

India Health Card™ - A digital healthcare loyalty cards

APPLICATION

Medilane Healthcare through Indian health cardholders provides healthcare facilities in different parts of Manipur in different healthcare service providers namely Hospitals, Diagnostic Centers, Optical stores, Dental clinics, Physiotherapy clinics, Pharmacies, salons, and spas.

COMPANY

Medilane HealthTech and Consultancy Services Pvt Ltd

Dr. Dayananda Meitei

Website: <https://medilane.org/>

PROBLEM ADDRESSED

Today, inaccurate diagnosis, medication errors, inappropriate or unnecessary treatment, inadequate or unsafe clinical facilities or practices, or providers who lack adequate training and expertise prevail everywhere. Medilane brings in quality health service and health coverage in Manipur.

USP

- 24x7 service
- Easy access to healthcare
- Benefits to users
- App based easy service provider

ABOUT THE TECHNOLOGY

Medilane, the most trusted home healthcare and Ambulance service provider in the state of Manipur, with an aim towards making affordable and accessible healthcare to the public.

This organization provides 24X7 Ambulance services, Home nursing care services, Doctors/Physiotherapy/Sample collection on call, Medical oxygen and Equipment rental. Covid and post covid care. Medilane also offers health Insurance and Health privilege cards to provide quality healthcare treatment to all.

FUNDS RAISED/ACHIEVEMENTS



- MeiTty NE-Launchpad Accelerator Program Winner

HANDHOLDING BY KIIT-TBI

- Incubation Support
- IP Support
- Assistance In Follow-on Funding – DST NIDHI Prayas grant

PRODUCT

Our Services

 <p>» 24 X 7 Ambulance service » Both ALS and BLS Ambulance service » Free ambulance for Road accident in Manipur</p> <p style="background-color: #e91e63; color: white; padding: 5px; border-radius: 10px; display: inline-block;">Book Ambulance</p>	 <p>» Online Doctor Consultation » Consult with Doctors over Video & Voice calls. » Certified Doctors</p> <p style="background-color: #e91e63; color: white; padding: 5px; border-radius: 10px; display: inline-block;">Online Doctor Consultation</p>	 <p>» Learn First Aid. » Empower the skills and confidence . » Be ready at any medical emergency situation</p> <p style="background-color: #e91e63; color: white; padding: 5px; border-radius: 10px; display: inline-block;">First Aid Training</p>
---	---	--

Manufacturing

Handcrafted, Eco-friendly, Functional Art for Kitchen

APPLICATION

Produce a whole range of organic/eco-friendly homeware that not only works as functional pieces but also as an art piece in itself at home.

COMPANY

Ble & Zing

FOUNDERS' NAME : Ms. Chanreiphi Raising

Website: www.tulahome.in

ABOUT THE TECHNOLOGY

We produce versatile stoneware that is glaze free, 100% biodegradable, Organic, Toxic-free, 100% food-safe. Retain the quality of the food prepared in them, Microwave safe, Can be used on a gas stove and open flames, its stainless, Eco-friendly, Odor-free, Refrigerator safe, easy cleanup, functional and elegance

ADVANTAGES

1. Food grade biodegradable container
2. Toxic free, eco friendly
3. Traditional practices
4. The raw material is unique to Ukhrul district of Manipur
5. High demand in the metros
6. Reduce the use of plastic and environment friendly

USP

1. Eco friendly product
2. Toxic free
3. Odor free
4. One of the best ceramic clay found in the country
5. Serpentinite rock found at Nungbi village is the main raw material.

PRODUCT



HANDHOLDING BY KIIT-TBI

- Incubation Support
- Mentoring support
- Business development

END USERS/CUSTOMERS

Alternative to the plastic dishware

Agriculture & Food

Agro Based Food Manufacturing Enterprise with Value Addition

APPLICATION

Reviving the traditional agri-based industries with value addition for socio economic upliftment .

COMPANY

Vedam Agro Enterprises

FOUNDERS' NAME

Dr. Kh. Vedamani Devi

Website: <https://vedamagro.org/>

PROBLEM ADDRESSED

1. To enhance the agro industries
2. Value addition of the local product
3. Sustainable utilization of the local resources
4. Scaling up the local product to meet regional demand
5. Improve the socio economic condition of local women.
6. Development of rural women cluster model

ABOUT THE TECHNOLOGY

1. Reviving of the traditional knowledge
2. S&T intervention to traditional agro industries.
3. Enhance the shelf life of the product.
4. Value addition to meet the demand of the people
5. Reduce the waste of the local resources thereby converting into agro wealth

FUNDS RAISED/ACHIEVEMENTS

Looking for funding opportunities

HANDHOLDING BY KIIT-TBI

- Incubation Support
- Mentoring support
- Fund mobilization

PRODUCT



USP

1. Local resources with high nutritive values
2. Enhance the shelf life of the product
3. Value addition of the product
4. Alternative livelihood to the women
5. Women based cluster group for improving the socio economic condition

END USERS/CUSTOMERS

For all looking for nutritive natural product



Industrial Biotechnology

Development of Low Cost Microbial Based Wetting Agent: A Mission To Promote Eco- Friendly Blending Agent for Agriculture

APPLICATION

Replace chemical wetting agents with bacteria derived wetting agents for sustainable agriculture.

COMPANY

Poohar Essence Pvt Ltd

FOUNDERS' NAME

Dr. Debajit Kalita

Website: www.poohar.com

PROBLEM ADDRESSED

1. To reduce the use of chemical fertilizer
2. Provide healthy and organic food
3. Development of formulation of microbial based bio fertilizer.
4. Scaling up the bio fertilizer production for commercial purposes
5. Increasing demand for green solutions in food and Agri Sector.
6. Spreading agent Market is growing - USD 52.4 billion by 2026.

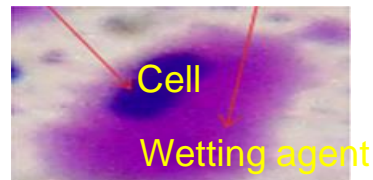
ABOUT THE TECHNOLOGY

1. Microbial derived biomaterial
2. Reducer, Spreader, repellent and compatible.
3. Low cost, affordable, eco friendly, user friendly, effective and efficient.
4. The Preliminary experiments and formulations showed that the proposed idea has high technical feasibility

HANDHOLDING BY KIIT-TBI

- Incubation Support
- Mentoring support
- Fund mobilization

PRODUCT



USP

1. Enhancing spray solution of the pesticide.
2. Lowering the surface tension, allowing more pesticide to reach its target.
3. Also reduce the amount of bounce a droplet
4. Influence interfaces both inside and outside the leaf or the intended target pest
5. Reducing the load and overuse of pesticide
6. Helping in more production using less pesticide

END USERS/CUSTOMERS

Agricultural sector with focus on organic farming



Industrial Biotechnology

Manufactures Herbal Products of Natural Origin and Consultancy

APPLICATION

Herbal products with quality and with less side effect and manufactured with a cost effective technique which is patented.

COMPANY

Kumshung

INTELLECTUAL PROPERTY

Patent Granted No: 327026 on 9/12/2019

FOUNDERS' NAME

Dr Wangkheirakpam Sujata

PROBLEM ADDRESSED

- Synthetic compound causes unwanted ill side effects.
- Products of natural origin do not have side effects.
- Existing synthetic personal health care products have undesired side effects.
- Such products are unfavorable to all.
- Prolong use of synthetic products sometimes may worsen ailments and health.

ABOUT THE TECHNOLOGY

1. Chemical-free personal care products
2. Toxic free, eco friendly
3. Natural based products
4. Scientifically validated
5. Wise use of the natural resources

HANDHOLDING BY KIIT-TBI

- Incubation Support
- Mentoring support
- Business development

PRODUCT



USP

1. Eco friendly beauty product
2. Chemical free
3. Herbal personal care products
4. Good for health and skin
5. Quality Product and with fewer side effect

END USERS/CUSTOMERS

Personal care product with focus on women

Healthcare: Diagnostics

Accessibility of the latest technology driven best practices in the field of diagnostics for vast majority of underserved population in India and South East Asia

APPLICATION

Augment the 'Essential Diagnostics List' of the World Health Organization

COMPANY

Foundation for Advancement of Essential Diagnostics

FOUNDERS' NAME

Anamika Baruah

Website: www.faed.in

PROBLEM ADDRESSED

- FAED is working in the areas of clinical laboratory management, pathology, and laboratory medicine.
- The primary aim is to make accessibility of the latest technology-driven best practices in the field of diagnostics for the vast majority of the underserved populations in India and South East Asia.
- FAED aims to augment the 'Essential Diagnostics List' of the World Health Organization that has been recently adopted by the Indian Council of Medical Research for implementation in the Indian health care system.

SERVICE PROVIDED



RESEARCH



DIAGNOSTICS



HEALTH SYSTEM



DISEASE DYNAMICS

ABOUT THE TECHNOLOGY

1. Promote the practice of advanced laboratory medicine in Government-run civil hospitals and public health dispensaries across India.
2. Continuous Medical Education on advanced laboratory medicine and clinical test utilization for community health workers, nurse practitioners, and physicians.
3. Empower Indian civil hospitals and public health dispensaries in low resource settings to implement best practices in laboratory medicine.
4. Train a new generation of Medical Laboratory Scientists in India so that they can play a consulting roles within those low-resource health centers to utilize modern laboratory medicine in the best way possible even in any remote village in India.
5. Conduct research in disease dynamics and surveillance studies in the Indian subcontinent through the lens of pathology and laboratory medicine.

USP

1. Providing affordable and accessible diagnostic and healthcare services to the people in India.
2. Timely disease diagnosis to the vast majority of underserved populations.

END USERS/CUSTOMERS

Health care sector

HANDHOLDING BY KIIT-TBI

- Incubation
- Mentoring support
- Business development

BIRAC SPARSH Social Innovation Immersion Program(SIIP)

INNOVATOR

Dr. Chandralekha Ayekpam

Brief Profile of the Innovator

As born in an underprivileged state like Manipur in the 1990s, searching for solutions to issues on her own has become our unconscious habit. The urge to contribute to the betterment of society was there from the beginning. The clarity in thoughts and a clear vision of what and how she wants to execute her plans scientifically.

She has worked on the successful completion of a multi-institutional network project entitled “Encapsulated Microorganisms for Environmental Processes” from which she learned the technologies and methodologies involved in encapsulation and application for environmental protection. Later, she completed Ph.D. in Biotechnology from CSIR-CFTRI, Mysuru under the topic entitled “Integrated approach for Extraction, Purification, and Concentration of Bioactives from Selected Algae”.

She believes that her research will only be useful if we could able to solve the issues of society through our scientific knowledge. Her proposals are mostly focused on utilizing the bioresources of Northeast India and at the same exploring the traditional knowledge as well.

Till now she was selected for interstate boot camp, Academy for women entrepreneurs (AWE) startup grant, by the Indo-US collaborative program. Selected for virtual incubation in KIIT-TBI (NE launchpad program), for patent filling and now a SPARSH fellow under the thematic area “Waste to wealth” at KIIT-TBI.

HANDHOLDING BY KIIT-TBI

- Incubation Support
- IP Support
- Company Formation
- Technical and Business Mentoring
- Mentoring under SPARSH-SIIP

FUNDS RAISED/ACHIEVEMENTS

- MeiTy NE – Launchpad Winner
- Shortlisted for Academy for women entrepreneurs (AWE) startup grant
- BIRAC SPARSH-SIIP Waste-to-Value cohort

Healthcare: Drugs

Bioactive Reprogrammed Nano-herbal Formulation for Photothermal Therapy-based Cancer Theranostics

APPLICATION

The product is a ready-to-use and easily injectable nano herbal gel Nano-herbal photos thermal therapy for cancer theranostics. The herbal gel is reprogrammed with the aid of the modern nanotechnology which improves the bioavailability and reduces the high dosages

INNOVATOR

Dr. Deepak Bharadwaj PVP

NIPER Guwahati

TECHNOLOGY READINESS LEVEL (TRL)

TRL: 3 (Hypothesis testing and initial proof of concept)

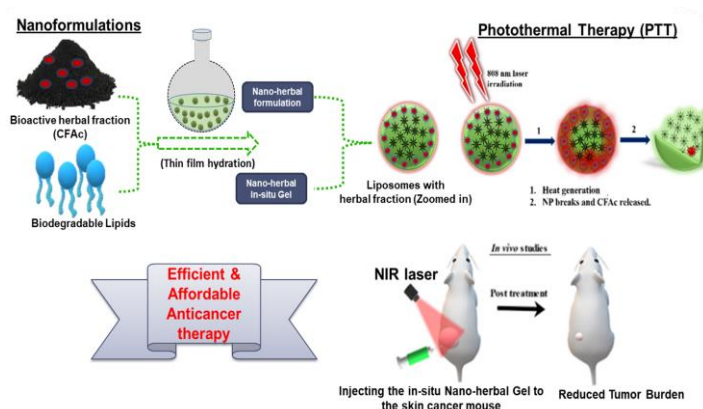
INTELLECTUAL PROPERTY

IP filing process is under progress

PROBLEM ADDRESSED

The current nano-herbal gel-based product addresses a translatable solution for the treatment of accessible superficial tumors in humans and veterinary animals. In India, among all the cancer patients, 60 of them are suffering from superficial cancers skin, breast, and oral. Similarly, the areas of veterinary oncology require new strategies to provide them with efficient treatment regimens. Many of them had already lost their vital organs due to surgeries like glossectomy, mandibulectomy, or neck dissection. Many of these surgeries are due to improper diagnosis or treatment at early stages. The proposed product can be used as a sustainable and efficient therapeutic model for the management of tumors in both humans and veterinary animals.

PROCESS FLOW



USP

- The product is a multi-functional agent which inhibits the growth of cancer cells using light and its inherent anti-cancer properties.
- The nano-herbal gel will be a sustainable, cost-effective, and novel method for the management of tumors of superficial origin.

HANDHOLDING BY KIIT-TBI

- Technical and Business Mentoring
- IP Filing
- Company Formation
- Assistance for follow on funding
- Networking and Market Connect
- Branding and Marketing

END USERS/CUSTOMERS

Ayurvedic practitioner, Clinical and Veterinary Oncologists.

FUNDS RAISED/ACHIEVEMENTS

BIRAC BIG NE grant of INR 25 Lakhs

Industrial Biotechnology

Biodegradable Adult Diaper

APPLICATION

Sustainable diapers made from locally sourced bamboo and wetness sensors for adults with or without disabilities .

INNOVATOR

Ms. Melinda Nongbet Sohlang

TECHNOLOGY READINESS LEVEL (TRL)

TRL: 3 (Individual core components optimized at lab scale)

INTELLECTUAL PROPERTY

IP filing is under progress

CSIR NEIST

PROBLEM ADDRESSED

Cloth has been used since time immemorial as a sanitary pad/diaper which later paved the way for single-use disposable diapers. However, this created an environmental problem as disposable diapers use polythene (which though later are made to be biodegradable) clog the landfills as they do not easily decompose.

ABOUT THE TECHNOLOGY

The project aims at validating a prototype for a bio-based, biodegradable adult diaper equipped with a wetness sensor.

A diaper that is bio-based and biodegradable, liquid permeable, leak-proof top sheet. A layered inner absorbent pad with an impermeable outer sheet, and fiber laminate. The locally grown bamboo is used as an absorbent with a wetness sensor (turmeric patch/smart sensor).

FUNDS RAISED/ACHIEVEMENTS

BIRAC BIG NE Call of INR 25 lakhs

END USERS/CUSTOMERS

1. Bed-ridden adults
2. Working professionals with no access to toilets
3. People with urinary incontinence
4. Care-givers

PRODUCT IMAGE

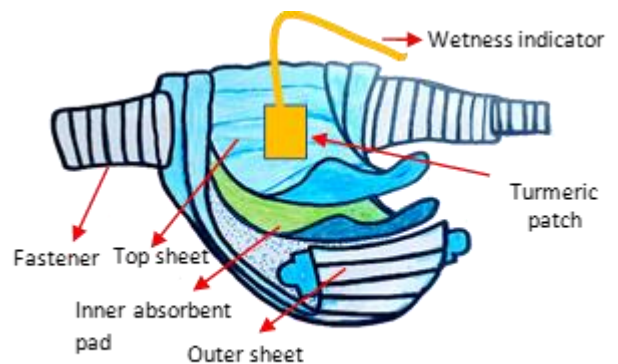


Fig: Proposed prototype

USP

- Bio-based and biodegradable.
- Locally available raw material.
- Wetness sensor

HANDHOLDING BY KIIT-TBI

- Technical and Business Mentoring
- IP Filing
- Company Formation
- Assistance for follow on funding
- Networking and Market Connect
- Branding and Marketing

Industrial Biotechnology

Protein Hydrolysate From Bio-waste of Indian Silk Industry to Fight Malnutrition

APPLICATION

Low cost protein hydrolysate developed from the edible silkworm pupa which is rich in nutrients particularly quality protein and lipid.

INNOVATOR

Dr. Prachurjya Dutta

CSIR - NEIST

TECHNOLOGY READINESS LEVEL (TRL)

TRL: 4 (Concept proven from lab scale)

INTELLECTUAL PROPERTY

IP filing process is under progress

PROBLEM ADDRESSED

Malnutrition in all its forms remains a global concern, particularly affecting highly vulnerable populations in several regions of the world. The Global Nutrition Report, 2016 confirms the urgency of collective action to combat malnutrition cascading. NE India, being an extensive grower of silkworms, our startup is focused on the following aspects:

- Ø Sustainable technology for silkworm pupae processing and value addition as food products.
- Ø Novel pharmaceutical and nutraceutical products (protein hydrolysates; lipids and bioactive compounds).
- Ø Process development for inhibiting/eliminating allergens.

ABOUT THE TECHNOLOGY

Waste silkworm pupae of the Indian silk industry are the primary source for the development of safe processed foods. The functional components are extracted and isolated from waste silkworm pupae for the development of functional food and health supplements. 8 variations of the ready-to-eat food products from waste silk pupae would be available after an extensive in-depth analysis of the shelf-life, packaging, and nutrient content of the protein extract.

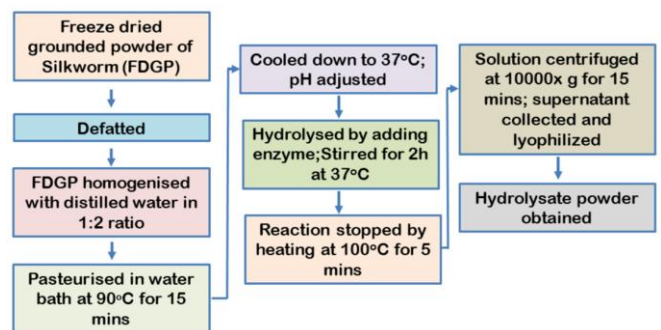
FUNDS RAISED/ACHIEVEMENTS

BIRAC Ignition Grant-NER of INR 25 lakhs

END USERS/CUSTOMERS

1. Consumers
2. Sports Nutrition
3. Raw material for other products such as protein bar
4. Use of by products in other industries

PROCESS FLOW



USP

- Low cost alternative to conventional meat or other protein source
- Rich in protein and other micro nutrients
- Apart from nutritional benefits it also have medicinal values

HANDHOLDING BY KIIT-TBI

- Technical and Business Mentoring
- IP Filing
- Company Formation
- Assistance for follow on funding
- Networking and Market Connect
- Branding and Marketing

Industrial Biotechnology

Developing Nutritional Product from Musa Balbisiana (Family: Musaceae, Genus: Musa) Fruit to Combat Malnutrition

APPLICATION

Creating nutritional supplements from indigenous banana variety that is well proven for its nutraceutical value for infants and mothers.

INNOVATOR	TECHNOLOGY READINESS LEVEL (TRL)	INTELLECTUAL PROPERTY
Dr. Sanjay Kumar Banerjee NIPER Guwahati	TRL: 4 (Proof of Concept Demonstrated)	IP filing is under progress

PROBLEM ADDRESSED

Malnutrition is a serious public health problem and is linked to a substantial increase in the risk of mortality and morbidity. Musa balbisiana is a banana variety that is well-known for its high nutritional value and strong antioxidants available in North-East India but the presence of seed prevents its consumption. This variety of bananas has been utilized in folk medicine for a long time by the tribal people of North-east India especially by children to improve their health and growth rate. However, there is no method to separate the seeds from the pulp and preserve the fruit pulp so that people with malnutrition can use it throughout the year.

ABOUT THE TECHNOLOGY

The primary focus of this company is to develop Musa balbisiana fruit pulp powder, which can be stored at room temperature and supplemented in malnutrition subjects specially child or women to improve their overall health. The primary focus is the development of fruit powder and capsule using two drying techniques -tray drying process and Spray drying process. The finished product will be in the form of powder/capsule with the optimum utilization of fruits that would ensure long term use/storage.

FUNDS RAISED/ACHIEVEMENTS

BIRAC BIG NE for INR 25 Lakhs

END USERS/CUSTOMERS

Children between 6 months to 12 years.

PRODUCT IMAGE



USP

- Stable nutritional product for malnutrition
- Indigenous raw material
- Cost effective nutritional supplements

HANDHOLDING BY KIIT-TBI

- Technical and Business Mentoring
- IP Filing
- Company Formation
- Assistance for follow on funding
- Networking and Market Connect
- Branding and Marketing

Industrial Biotechnology

Paper-based Kits for On-site Detection of Methanol and Formaldehyde

APPLICATION

Simple and affordable detection kit for both methanol and formaldehyde on a single testing platform. The developed kit can be used in the alcohol industry either by large-scale or small-scale industries for rapid quantity and quality assessment.

INNOVATOR

Dr. Lightson NG

RGCB, Thiruvananthapuram

TECHNOLOGY READINESS LEVEL (TRL)

TRL: 5 (Concept proven from lab scale to Bioreactor level experiments under optimized conditions)

INTELLECTUAL PROPERTY

Patent Number:

1. Appl. No. 201831041908
2. Appl. No. 202031004522

PROBLEM ADDRESSED

- Formalin/formaldehyde is used as a preservative for milk & seafood.
- Contamination & adulteration of alcoholic drinks & hand sanitizers with methanol.

Both methanol & formalin have adverse health effects ranging from dizziness, blindness, CNS breakdown, coma, and even death.

The technology can detect either or both methanol and formalin concentrations on a single test kit within 2 min.

ABOUT THE TECHNOLOGY

The user-friendly testing kit uses paper chips & reagents. Drop-cast the sample, and reagents on the paper chip. Purple coloration indicates the presence of either methanol or formaldehyde. The image is captured using a smartphone & quantify with the app.

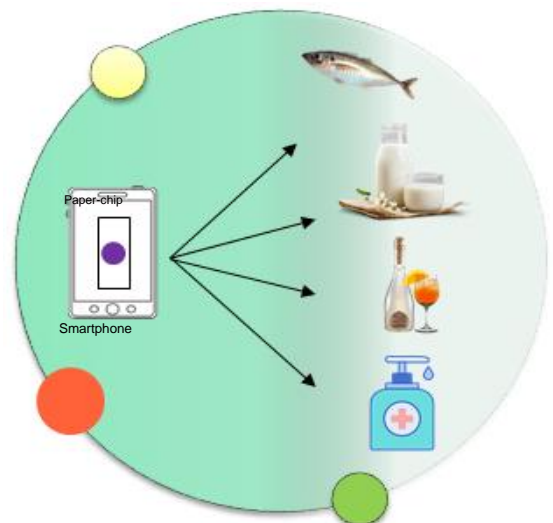
FUNDS RAISED/ACHIEVEMENTS

- BIRAC BIG NE grant-in-aid for INR 25 Lakhs.
- Winner of 6th Edition of GBP's Talent Search Contest on "Innovative Research Ideas Leading to Entrepreneurial Venture in Biotechnology and Allied Areas"

END USERS/CUSTOMERS

- Consumers (Milk, Fish, Seafood, alcohol beverages)
- Producers (Milk, Fish, Seafood, alcohol beverages)
- Retailers (Milk, Fish, Seafood, alcohol beverages)

PROCESS FLOW



USP

- Multiple detection kit
- Affordable and portable
- Require small volume (~ 5µL)
- Both yes/no format & quantitative analysis
- Exploring the application of smartphone app

HANDHOLDING BY KIIT-TBI

- Technical and Business Mentoring
- IP Filing
- Company Formation
- Assistance for follow on funding
- Networking and Market Connect
- Branding and Marketing

Industrial Biotech

Development of an Affordable Kit for Simultaneous and Rapid (3 H) Isolation of DNA & RNA

APPLICATION

1. Simultaneous isolation of DNA, RNA and protein from a single leaf sample
2. Individual isolation of DNA or RNA or protein from leaf sample

COMPANY	TECHNOLOGY READINESS LEVEL (TRL)	INTELLECTUAL PROPERTY
Primogen Biotech Pvt. Ltd.	TRL: 3	Patent Number: 201831000081, Dated 01.01.2018
FOUNDERS' NAME Dr. Pranita Hazarika		

PROBLEM ADDRESSED

1. It is difficult to simultaneously extract DNA, RNA and protein from a single leaf sample for synergistic study of genomics and proteomics
2. The extraction kits are available in the market are (Bioline, Sigma, Qiagen, TRIzol) not economical

ABOUT THE TECHNOLOGY

Establishment of an affordable kit for simultaneously extraction of DNA, RNA and protein from a single leaf sample for synergistic study of genomics and proteomics

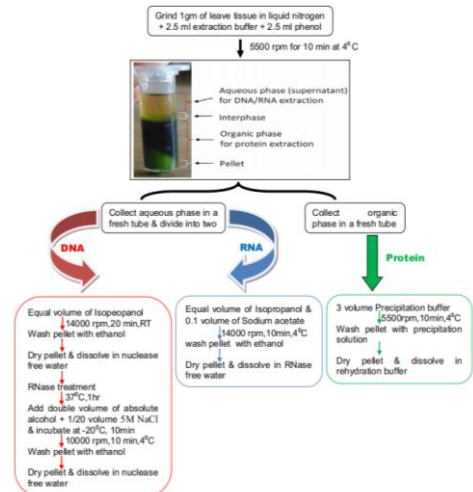
FUNDS RAISED/ACHIEVEMENTS

BIRAC Biotechnology Ignition Grant (BIG-18) INR 50L

HANDHOLDING BY KIIT-TBI

- Technical and Business Mentoring
- IP Filing
- Company Formation
- Assistance for follow on funding
- Networking and Market Connect
- Branding and Marketing

PROCESS IMAGE



USP

1. Economical kit for the simultaneous extraction of DNA, RNA, and protein from a single leaf sample for the synergistic study of genomics and proteomics.
2. Comparative kit performance with the similar available in market

END USERS/CUSTOMERS

Researchers working in the line of molecular biology

Industrial Biotech

Development of Portable Spectroscopic Instrument for Onsite Estimation of Quality Compounds in Tea

APPLICATION

Quality assessment of tea by onsite estimation of key biomarkers contributing towards quality. Quality assurance & process control in tea processing

INNOVATOR

Dr Ajanto Kr Hazarika

Tocklai Tea Research Institute

TECHNOLOGY READINESS LEVEL (TRL)

TRL: 4 (Technology validated in lab)

PROBLEM ADDRESSED

1. Detection of quality biomarkers in tea by using rapid instrumental methods
2. Use of the non-destructive, non-contact method of quality estimation using optical means
3. Indigenously developed & low-cost for routine quality inspections in Agri-based industries

PRODUCT



ABOUT THE TECHNOLOGY

NIR spectroscopy (range 780 to 2500 nm) is dependent upon the existence of vibrational overtone and combination bands due to molecular vibrations. The detector employed here is an InGaAs based on PDA (Hamamatsu, Japan) which possess a very high sensitivity, accuracy, and response speed. Together with high-powered radiation sources (halogen lamps), it can impart a high signal-to-noise ratio for NIR measurements of samples. This fact partially compensates for the lower intensities of NIR absorption bands. The technology will be used to estimate key biomarkers like theaflavin, catechin, and its fractions in tea by correlating their spectral signatures with a reference chemical and organoleptic values.

USP

- Real time quality assessment of finished teas, and fresh tea leaves
- Onsite monitoring & process control
- Low-cost portable NIR systems (with a few bought-out components) & chemometric software
- User-friendly
- Customize beverage industries

FUNDS RAISED/ACHIEVEMENTS

BIRAC Biotechnology Ignition Grant (BIG-18) INR 50L

END USERS/CUSTOMERS

Tea industry, corporate houses, tea factories, auction houses & brokers, analytical labs

HANDHOLDING BY KIIT-TBI

- Technical and Business Mentoring
- IP Filing
- Company Formation
- Assistance for follow on funding
- Networking and Market Connect
- Branding and Marketing

Industrial Biotech

Development of Multimodal Optofluidic Prototype for Sensing Heavy Metal Ions

APPLICATION

The device has a great potential for commercialization due to its unique design, low cost, portability and rapid heavy metal detection. Smartphone-integrated machine learning technology will make the device versatile for various application including the present application such as heavy metal detection

COMPANY	TECHNOLOGY READINESS LEVEL (TRL)	INTELLECTUAL PROPERTY
SenzTech Private Ltd.	TRL: 4 (Technology validated in lab)	Patent Number: Development of multimodal optofluidic system for sensing heavy metal ion Application No. Provisional Filing 202131041315 (14-09-2021)
FOUNDERS' NAME		
Dr. Rajib Biswas		

PROBLEM ADDRESSED

The proliferation of heavy metal ions in aquatic bodies makes them unusable for life sustenance. There is a need for a rapid and inexpensive diagnosis that can sense these ions in limited-resource settings.

The project is going to develop a Prototype that will be cost-effective as well as equipped with multimodal functionalities so that qualitative, as well as quantitative estimations, can be done simultaneously.

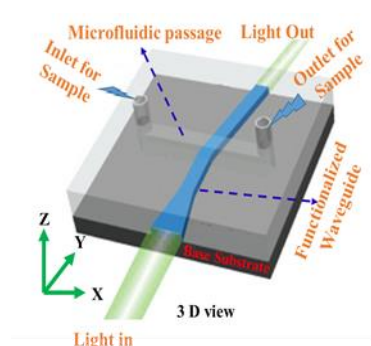
ABOUT THE TECHNOLOGY

The proposed prototype will be a synergetic amalgamation of microfluidic channels and photonics. As shown in the side view, the waveguide for guiding light will be customarily designed so that the interaction of impinging light with microfluidic will be at its optimum, leading to direct sensing and quantification of the analytes. For best performance, the waveguide will be aptly functionalized with suitable receptors for the heavy metal ions. Subsequently, it will be upgraded to an optomechanical part to be assembled for smartphones along with its own running app. This way, this unique prototype will provide valid information on the aquatic pollutants that can be stored in cloud storage for later access and remediation action.

FUNDS RAISED/ACHIEVEMENTS

BIRAC Biotechnology Ignition Grant (BIG-18)
INR 50L

PRODUCT



USP

- Low-cost optics
- Advanced adaptability with Smartphones aided by Machine Learning
- Point-of care
- Multimodal Functionality

END USERS/CUSTOMERS

NGOs, Hospitals

HANDHOLDING BY KIIT-TBI

- Technical and Business Mentoring
- IP Filing
- Company Formation
- Assistance for follow on funding
- Networking and Market Connect
- Branding and Marketing

Agriculture and Allied Areas

Development of microbial bio-formulation/s for Tea *Camellia sinensis* growth promotion and blister blight disease control

APPLICATION

A microbial bioformulation/s that will help in growth promotion of Tea (*Camellia sinensis*) crop and also aid in the control of the devastating blister blight disease of Tea. The developed product will be totally organic, efficient, safe and easy to use and will be devoid of any chemicals or chemical residues. Our product will involve novel indigenous bioactive metabolites producing actinobacterial strains.

COMPANY

Aranyam Innovations Pvt. Ltd

TECHNOLOGY READINESS LEVEL (TRL)

TRL: 3

FOUNDERS' NAME

Dr. Ananya Barman

PROBLEM ADDRESSED

Blister blight is one of the most devastating and damaging diseases of the Tea crop. This disease is highly prevalent in the different Tea estates of India and almost all the major tea-producing countries of the world. For its control different traditional practices are employed along with the use of chemicals and pesticides. Traditional practices are laborious and time-consuming. Whereas chemicals and pesticides cause harm to the environment, decrease soil fertility, and are detrimental to human health. Therefore, we need a chemical-free and efficient product that will not only be effective against blister blight but also cause growth promotion of the Tea crop.

PROCESS IMAGE



ABOUT THE TECHNOLOGY

Our product will consist of novel bioactive secondary metabolites producing actinobacterial strains. These strains are easily culturable and their origin is Tea endophytes themselves. They are varied temperature and agro-climatic adaptable strains. They have broad antifungal and antibacterial activity. They have no harmful effect on the indigenous microbial communities.

USP

- Chemical free product
- Applicable in different agro-climatic conditions across North East and also Southern India
- Easy application; less laborious
- Good quality and quantity of produce
- Will be effective against other fungal and bacterial diseases of tea and other agricultural crops
- Safe to use
- Customers will be able to enjoy residue free tea drink

FUNDS RAISED/ACHIEVEMENTS

- Winner of BRTC NE Changemaker- Category 2 (PhD and Post Doctoral Fellow)
- BIRAC BIG 18TH Call for INR 50 Lakhs
- Best Young Women Innovative Entrepreneur Award at Assam Biotech Conclave

END USERS/CUSTOMERS

Tea industry, tea producing tea estates, small tea growers, organic tea growers

HANDHOLDING BY KIIT-TBI

- Technical and Business Mentoring
- IP Filing
- Company Formation
- Assistance for follow on funding
- Networking and Market Connect
- Branding and Marketing

BRTC NE Changemakers

Innovator: Mr. Ajoy Modak

Proposal: Use of Ramie waste for mushroom cultivation

State: Tripura

Innovator: Ms. Puja Devi Yumnam

Proposal: To identify the most efficient starter culture of traditional fermentation process of soybean (Hawaijar) and to upgrade its nutritional value for commercial production

State: Manipur

Innovator: Mr. Apurba Das

Proposal: Development of hybrid ferroelectric-piezoelectric biocompatible ceramic composite for high performance biological coatings in implantable devices and bio-electronic gadgets

State: Assam

Innovator: Dr. Mrityunjoy Mahato

Proposal: Development of Continuous Mode Hydrothermal Carbonization (CM-HTC) Reactor for Processing of Wet Biomass Waste of North East into Value Added Products

State: Meghalaya

Innovator: Dr. Ananya Barman

Proposal: : Bioprospection of microbial metabolites of a tea rhizobacteria BTA27 for Tea (Camellia sinensis L Kuntze) blister blight control.

State: Assam (Received BIRAC BIG-18)

Startup: Sanajing Sana Thambal

Proposal: Eco-friendly approach to produce garments from lotus fiber

State: Manipur (Received BIRAC BIG-18)

Startup: PepThera Laboratories Pvt. Ltd.

Proposal: Biomolecules for Prevention of Hospital Acquired Infections

State: Assam

(Received BIRAC BIG-18)

Innovator: Mr. Apurba Gohain

Proposal: Investigating the Sustained-Release behavior of cellulose nanofibers embedded urea-formaldehyde resin microcapsules containing a model agrochemical

State: Assam

Innovator: Mr. Sujit Das

Proposal: Impact of "Chubitchi" (fermented rice beverage of Garo Tribes, Meghalaya) in management of Antibiotic Associated Diarrhea

State: Meghalaya

Innovator: Dr. Subham Banerjee

Proposal: Extrusion based customized biofilaments processing for fused-filaments 3D printing pharmaceutical applications

State: Assam

Innovator: Dr. Temin Payum

Proposal: Formulation of a product by utilizing Clerodendrum colebrookianum, a herbal plant

State: Arunachal Pradesh

Startup: Brahmaputra

TechnoPharmaceuticals Pvt. Ltd

Proposal: Herbal product with quality and with less side effect and manufactured with a cost effective technique which is patented

State: Assam

Startup: RogNidaan Pvt. Ltd

Proposal: Oral scanner-An automated system to detect oral dysplasia

State: Assam

(Received BIRAC BIG-NE)

KIIT-Technology Business Incubator

Campus-11, KIIT Deemed to be University
Bhubaneswar, Odisha IN 751024

tbi@kiitincubator.in
www.kiitincubator.in