



# NIPER Guwahati NEWSLETTER

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JAN - JUNE, 2022







“ यत भावो-तत भवति । ”  
(You become what you believe)

Dear all,

Belief is a magnificent thing. It is more of a spirit that creates drive in you, makes you work harder, and constantly pushes you towards your goal. It never presents you the pleasure of a sound sleep, yet you get the satisfaction you seek while striding forward consistently. NIPER Guwahati family has believed in the mission of its founding and has constantly worked harder to reach the stage it is in today.

NIPER Guwahati will add another feather to its already star-studded cap when it will complete the set-up of the most prestigious Atal Innovation Mission (AIM)-funded Atal Incubation Centre in the year 2022. The incubation centre will be the ninth of various ministry-funded national centres already established or in the process of completion at the campus.

With the enhanced inflow of faculty, staff as well as students in recent years, NIPERG has shifted its gear on the up once again. Almost all the laboratories being shifted to its designated buildings, the academic as well as administrative buildings getting their final touches, NIPERG has readied itself to take the step to the next level.

It gives immense pleasure to me and my fellow members of the editorial team to present before you the very first issue of the NIPER Guwahati Newsletter. It is a new beginning, and we wholeheartedly call for your support in making this newsletter worthy of its readers.

Thank you!

(Dr. S. Tamilvanan)  
Chairman  
Newsletter Editorial Team

## Editorial Team

### Chairman

Dr. S. Tamilvanan

### Members

Dr. Kalyan K. Sethi

Mr. Dheerendra Patnaik

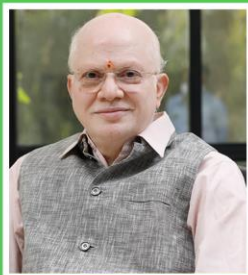
### Member & Convener

Mr. Tapan Nath

Dr. Bidya Dhar Sahu

Dr. Krishna Undela  
Dr. Om Prakash Ranjan

# Director's Note



The world has just gone through an unprecedented period of hardship with the covid pandemic. NIPER Guwahati braved the challenges brought in by the pandemic and was able to keep its head high. Rather than staying low, NIPERG accepted the challenges and developed a 3D-printed antimicrobial face shield and hands-free objects in its own laboratories to combat the coronavirus and its spread. The products were later officially handed over to hon'ble Governor of Assam Prof. Jagdish Mukhi, and then State Health Minister Dr. Himanta Biswa Sarma who appreciated the initiative humbly. In these hard times, NIPERG showed resilience and established two important national centres viz, GMP-accredited Pilot Scale Extraction Facility funded by Dept. of Biotechnology (Govt of India) and Quality Assessment & Value Addition Centre funded by Ministry of Commerce (Govt. of India). Also, we are expecting to complete the establishment of the most significant Atal Incubation Centre (AIC) funded by Atal Innovation Mission (AIM) of NITI Ayog in the year 2022 at the campus.

In the academic sector, NIPERG continues to excel as it achieved the 19th rank in the 2021 National Institutional Ranking Framework (NIRF) and was included under Band Promising category in the Atal Ranking of Institutions on Innovation Achievements (ARIIA) Ranking of 2021. Faculty and students continue to perform in their respective academic fields as they bagged a number of patents & publications, awards and fellowships on different national and international platforms. With the quality of research at the institute taking an incremental step forward, the focus is now on improving on the research outputs for more societal engagements so that the communities can reap the benefits. In the recent past, we have signed MoUs with leading research labs and institutions aimed at earning perpetual dividends for the institute out of mutually beneficial research collaborations in the field of Pharmaceutical and Medical Devices.

The dedicated faculty and staff members aim to strengthen the academic and administrative foundation, which certainly will provide the necessary support to the leadership for steering the ship towards its engraved mission.

Lastly, I express my heartfelt greetings to the Editorial Team for bringing out this very first edition of the institute newsletter. I hope that the newsletter will serve its purpose and will find its way to the heart of its readers.

Best wishes!

A handwritten signature in black ink, appearing to be 'Dr. USN Murty'.

Dr. USN Murty



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# The 5<sup>th</sup> Convocation Ceremony

The 5<sup>th</sup> Convocation of National Institute of Pharmaceutical Education and Research (NIPER), Guwahati was held on 26th June 2022 at its permanent campus at Changsari. A total of 109 students, including 100 PG students from the 2020-22 batch and 09 PhD students, were awarded degrees during the ceremony. Shri Lok Ranjan, IAS, Secretary, Ministry of DoNER, graced the programme as a Chief Guest. Ms. S. Aparna, IAS, Secretary, Department of Pharmaceuticals (Govt. of India), and Prof. V. Ravichandiran, Director NIPER Kolkata, attended as the Guest of Eminence and Guest of Honour, respectively.

In his convocation address, Chief Guest Shri Lok Ranjan congratulated the passing out students and urged them to continue with their passion, live up to their potential and serve the nation through their learning exploits. He said, "you must be driven by this spirit all through your life. With your training at NIPER Guwahati, I am sure that you will succeed in overcoming those challenges with full confidence. Many of you would be entering the real world with an aspiration of becoming the next generation scientists, academicians, pharmacists, and leaders in the pharmaceutical industry. You must understand that the world has transformed quite dramatically between the time you joined this institute and today. It continues to change, at an incredibly rapid pace.

He further urged the students to hone their skills, use the learning and experience at NIPER Guwahati and make their contributions to the potential fields of pharmaceuticals sciences like drug designing, biopharmaceuticals, personalized medicine, nanotheranostics, robotics in healthcare, artificial intelligence in medicines, 3D & 4D printing technology in making next-generation medicines.

Guest of Honour Prof. V Ravichandiran, in his address, expressed his gratitude to Dr. USN Murty, Director NIPER Guwahati, for leading the institute in the right possible way and making the batches of students ready for the course of nation-building.





He said that NIPER Guwahati has been braving various challenges successfully over the years and has demonstrated its presence as one of the leading institutes in pharmaceutical research in the country as well as the world.

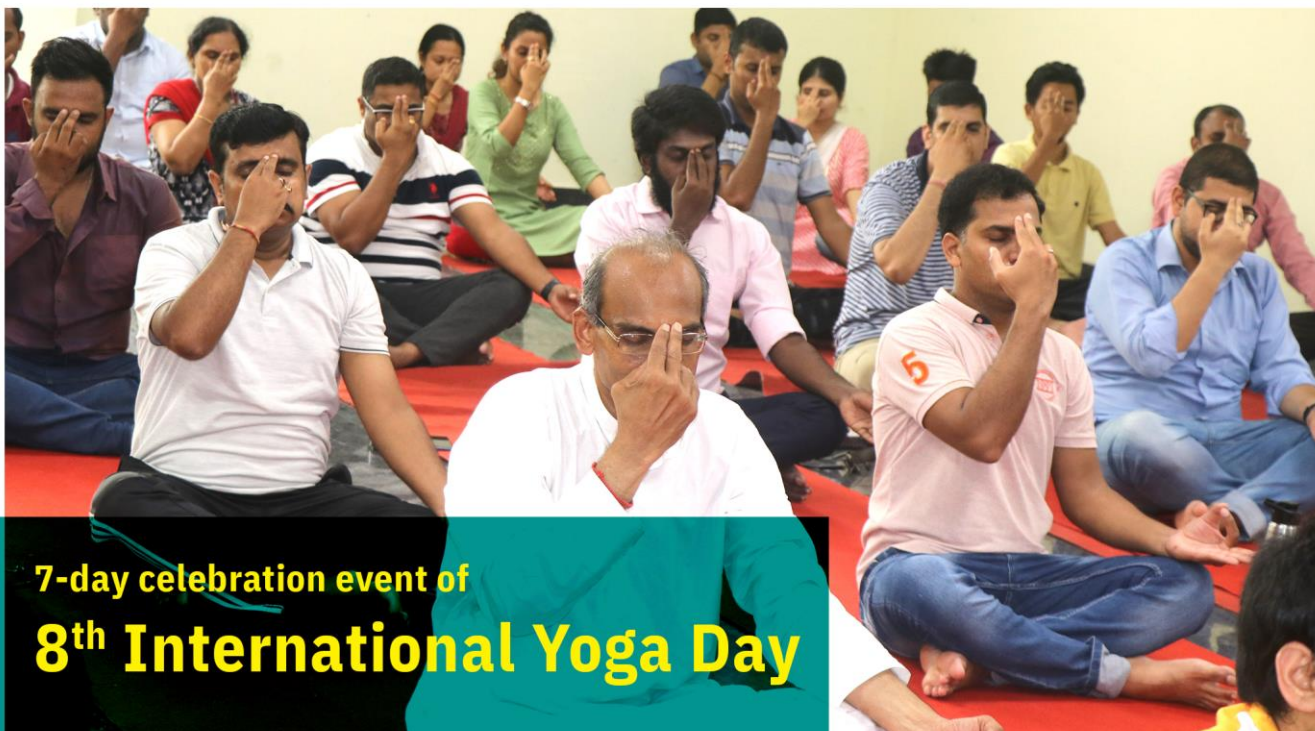
Dr. USN Murty, Director, NIPER Guwahati, also presented a report on the institute to the dignitaries, students and parents. The ceremony was also broadcasted live on the official youtube channel of NIPER Guwahati.



### International Women's Day observed

International Women's Day was observed on 8<sup>th</sup> March 2022 through a cake-cutting ceremony at Reception area. Dr. USN Murty, Director, extended greetings to all on the occasion and reiterated his confidence on the womenfolk of NIPERG for their sheer passion and dedication. The ladies of NIPERG displayed their commitment to #BreakTheBias.





### 7-day celebration event of 8<sup>th</sup> International Yoga Day

Adhering to the guidelines issued from the Ministry of Ayush, subsequently forwarded by Ministry of Chemicals and Fertilizers, NIPER Guwahati observed the 8<sup>th</sup> International Day of Yoga through a 7-day event from 13<sup>th</sup> June to 21<sup>st</sup> June, 2022.

The event included awareness camps on embracing yoga into human lives conducted at local schools as well as among faculty, staff and students of NIPER Guwahati. Yoga experts from Art of Living Foundation Shri Debo Kumar Baruah and Shri Laii Madhookalya gave yoga practice lessons in these camps. Quiz competitions on yoga among faculty, staff and students were also conducted to spread awareness on yoga.

During the valedictory session, Dr. USN Murty, handed over prizes to the winning participants of the competitions. In his speech, he expressed gratitude to Art of Living foundation for their support and service to the society and urged the faculty staff and students of NIPER Guwahati to embrace yoga with an aim to find work-life balance.



### Visit of Kamrup DC

Kamrup Deputy Commissioner Shri Kailash Karthik N, IAS, visited NIPER Guwahati along with his team on 21<sup>st</sup> April 2022. Shri Karthik and his team members were felicitated with traditional gamosa by Dr. P. Radhakrishnanand, Registrar i/c, in his office. The officials discussed a number of important matters which were aimed at further development of NIPER Guwahati.



# National Girl Child Day celebration

11 young female achievers from Northeast were felicitated by NIPER Guwahati on 24<sup>th</sup> January 2022 during a program that celebrated National Girl Child Day at its campus in Changsari, Kamrup. Rafiya Yasmin Saikia (Sivsagar), Garima Sharma (Guwahati), Sharmina Begum (Karimganj), Betshwadaphi Warkhyllaw (Meghalaya), Gitanjali Mushahary (Gohpur), Noloshri Narzary (Gohpur), Sumshri Narzary (Gohpur), Debangona Tanti (Biswanath Chariali), Bilkis Hussain (Barpeta), Fateha Yasmin (Hojai) and Tribeni Borgohain (Dhakuakhana) were felicitated by Dr. USN Murty, Director NIPER Guwahati, with a citation and a trophy for the achievements they have shown in the field of literature, sports, art & culture. These girls have won medals in several competitions in the national and international circuit. The programme was conducted under the umbrella of central government's Azadi Ka Amrit Mahotsav.

In his address as the Chief Guest, Dr. Murty congratulated the young female achievers for choosing the unconventional path to find success. He said that their strong will to succeed will motivate the other young girls from Northeast to follow their dreams. He further mentioned that NIPER Guwahati will continue to recognize such talents from Northeast in the future.



In their acceptance speeches, the young girls expressed gratitude to NIPER Guwahati for recognising their accomplishments and honouring them. They shared that such efforts would inspire them to achieve more in their lives and contribute to society. Shri Pinku Baruah, a martial arts instructor who coached three of these awarded girls, spoke highly of the need of support from various sections of the society. He shared that such support would improve the facilities in the coaching institutes where more such young girls could be trained.

In the programme, Dr. Sanjay Banerjee, Associate Dean, delivered the welcome address while Dr. P. Radhakrishnanand, Registrar i/c, delivered the vote of thanks. Dr. Krishna Undela, Assistant Professor, Dept. of Pharmacy Practice, compeered the proceedings of the programme.



## World Environment Day 2022 observed

On the occasion of World Environment Day, a mass plantation drive was organised on 5<sup>th</sup> June 2022 at NIPERG campus. Faculty members and their family, staff as well as students planted saplings in various locations of the campus. Dr. USN Murty, Director, also handed over First-Aid kit boxes to the respective departments and sections.





# NIPERG shines at NERC 2022



NIPERG gathered laurels at the North East Research Conclave (NERC) 2022 hosted by IIT Guwahati when it won Exhibition Committee Award as Best Categories Exhibitors under the category Innovation for Future. NIPERG, along with its BioNEST team, participated in the exhibition which witnessed a huge footfall of innovators, entrepreneurs, technology enthusiasts, researchers, policy makers as well as students over the course of three days.

The event was conducted from 20<sup>th</sup> to 22<sup>nd</sup> May 2022 jointly with the Science, Technology and Climate Change Department and the Department of Education, Government of Assam which was aimed to boost collaboration between Industry and Academic in the Region. Union Minister of Education Shri Dharmendra Pradhan, in presence of Assam Chief Minister Dr. Himanta Biswa Sarma, had inaugurated the event.



## Director addresses MS students

Dr. USN Murty, Director, addressed the incoming MS students on 9<sup>th</sup> March 2022 who came to the institute physically after a long spell of pandemic-hit academic session. The orientation programme for these students was conducted online a year before. During his address, the director reiterated the mission and vision of the institute and the potential it boasts. He urged the students to do their best in their studies, become leaders and entrepreneurs while realizing the dream of *Atmanirbhar Bharat*. Later, the respective department in-charges took sessions with the students and familiarized them with the departments, their research avenues, and the future opportunities they offer.





## The 73<sup>rd</sup> Republic Day celebrated

The 73<sup>rd</sup> Republic Day was celebrated at NIPER Guwahati through a set of programmes. Dr. USN Murty, Director, NIPER Guwahati, hoisted the tricolour to mark the occasion. BoG members Mr. Nabajit Boro and Mr. Gopal Das were the notable attendees.

In his address, Dr. Murty spoke on the significance of the day and shared that institutes like NIPER Guwahati has the potential to contribute to upheld the integrity of this nation through its wide range of activities. Mr. Boro and Mr. Das too shared their views.

At the programme, students from different academic departments were felicitated by the dignitaries as a mark of honour to their various academic accomplishments achieved during the previous year. Students involved in the prestigious NDTL project were also felicitated. The students securing positions in the Vigilance Awareness Week in 2021 were also handed over cash prizes and certificates by the Director and the other dignitaries.

To mark the occasion, students performed poem recitation as well as patriotic group song. The security staff of the institute performed march past and offered guard of honour to the Director. Later, light refreshments were served to all the attendees. The programme was also attended by faculty, staff with their family members and students of the institute.





# विश्व हिंदी दिवस के अवसर पर हिंदी कार्यशाला का आयोजन

औषध विभाग, रसायन एवं उर्वरक मंत्रालय के दिशानिर्देशों के अनुरूप, कोविड-19 महामारी के परिपेक्ष्य में, हिंदी अनुभाग, नाईपर गुवाहाटी की विश्व हिंदी दिवस के शुभ अवसर पर हिंदी कार्यशाला का आयोजन 10 जनवरी, 2022 (सोमवार अपराह्न 2:30) को आभाषी माध्यम से किया गया।

इस कार्यशाला में नाईपर गुवाहाटी के शिक्षकगण एवं कर्मचारियों ने भाग लिया। इस कार्यक्रम का संचालन श्री रोहित कुमार साव, कनिष्ठ हिंदी अनुवादक द्वारा किया गया। इस कार्यक्रम का शुभआरंभ सरस्वती वंदना के साथ किया गया। इस कार्यक्रम के मुख्य अतिथि श्री मोहन कोइराला, हिंदी अधिकारी का

अतिथि सत्कार नाईपर गुवाहाटी, डॉ. संजय बनर्जी, अधिष्ठाता (डीन) एवं सह-आचार्य द्वारा किया गया। डॉ. एस तमिलवानन, सह-आचार्य द्वारा विश्व हिंदी दिवस पर संदेश दिया गया जिनमें महोदय ने नाईपर गुवाहाटी के गुरुजनों एवं कर्मचारियों को विश्व हिंदी दिवस की हार्दिक शुभकामनाएं देते हुए विश्व हिंदी के उद्देश्य को बताया। श्री रोहित कुमार साव, कनिष्ठ हिंदी अनुवादक द्वारा विश्व हिंदी दिवस का संक्षिप्त विशेषता बताया गया। इसके पश्चात मुख्य अतिथि, श्री मोहन कोइराला जी ने कार्यक्रम में शामिल सभी शिक्षकगण एवं कर्मचारियों को विश्व हिंदी दिवस की हार्दिक शुभकामनाएं देते हुए कार्यशाला का शुभारंभ किया जिनमें महोदय ने यूनिकोड एवं फाइलों पर हिंदी में टिप्पण की जानकारी दिया गया। डॉ. अवनीश मिश्र, सहायक आचार्य एवं राजभाषा समिति के सदस्य ने कार्यक्रम को सफल बनाने के लिए सभी शिक्षकगण एवं कर्मचारियों का धन्यवाद दिया। इसके पश्चात राष्ट्रीय गान के साथ कार्यक्रम का औपचारिक समापन किया गया।



## In Pictures



### Nature's Fury

*Incessant rain all across the state of Assam caused severe flood and landslides. NIPERG's developing green campus too face the wrath of it as landslides cut-off the main road to the campus for over a fortnight.*





## Seminars & Workshops

### A 3-day workshop on Advanced Drug Design and Medicinal Chemistry 2022 (ADDMC-22) held

A 3-day virtual workshop on 'Advanced Drug Design and Medicinal Chemistry 2022 (ADDMC-22)' was conducted at National Institute of Pharmaceutical Education and Research Guwahati (NIPER Guwahati) during the 2nd to 4th February 2022. Prof. E. D. Jemmis, IPC, IISc Bangalore (Padma Shri 2014), attended the programme as the chief guest.

In his address the chief guest, Prof. Jemmis upraised the audience and young students about historical developments in the field of Computational Sciences and how the modern age of Artificial Intelligence and exascale computations was possible by seminal contributions of many great national and international leaders in the field. He explained the role of quantum chemical methods in the emergence of semi-empirical parameters and force fields which are extensively used in modern molecular dynamics (MD) simulations to get insights into drug-receptor interactions. These methods are the bedrock of drug discovery concepts, software and the pharma industry at large. He also encouraged and urged young faculty and students to develop a habit of critical thinking, reading, reasoning and to gradually acquire newer skills sets to find innovative solutions for the pressing problems of the country and the world.

The welcome address was delivered by Prof. USN Murty, Director NIPER Guwahati. In his address, he



expressed gratitude to the chief guest and the resource persons for participating at the event. He also welcomed the participants which included students, faculty members and industry professionals who logged in to the conference from various parts of the country and the globe. Dr. Vaibhav A. Dixit, convener of the workshop, shared a detailed 3-day schedule with the audience.

A total of 612 participants registered presence for the virtual conference who were issued e-certificates of participation.

A blue banner for a 'KNOW MORE SERIES' event titled 'UNDERSTANDING BIRAC'S BIG SCHEME'. It mentions collaboration with Biopharma Incubation Centre (BIC) - NIPER AHMEDABAD, NIPER, Guwahati and BioNEST - Panjab University, Chandigarh. The date is 06 Jan 2022, from 11.00 AM to 12.00 PM. Three speakers are listed with their names and photos: Rohit Sharma, Sachin Dattar, and another speaker whose name is partially obscured.



### Meeting on Biotechnology Ignition Grant-Awareness session

BioNEST NIPERG Incubation Center conducted 'BIG-Awareness session' in collaboration with Venture Centre CSIR-NCL, Pune on 6<sup>th</sup> of January and IITM HTIC MedTech Incubator on 25<sup>th</sup> January. Biotech Ignition Grant (BIG) Scheme is a flagship program of BIRAC which provides the right admixture of fuel and support to young startups and entrepreneurial individuals. BIG is the largest early stage biotech funding programme in India.



## Conferences, Seminars, Workshops, Guest Lectures organized under Azadi Ka Amrit Mahotsav

Title of the Event	Date	Speakers
Biotechnology Ignition Grant (BIG)s 20th Call	1 <sup>st</sup> February 2022	<b>Dr. Pranita Phatak</b> Asst. Manager, Program, SINE BIG Team, IIT Bombay <b>Dr. Bratati Mukherjee</b> Executive, Programs, SINE BIG Team, IIT Bombay
Intellectual Property & its Significance in Academia	26 <sup>th</sup> February 2022	<b>Dr. Alok Kulshreshtha</b> Sr. IP Professional, Glenmark Pharma (Mumbai)
Drugs-Discovery to Delivery (DDD-2022)	4 <sup>th</sup> March 2022	<b>Dr. USN Murty</b> Director, NIPER Guwahati <b>Dr. Parimal Misra</b> Professor, Chief Scientist, Centre for Innovation in Molecular and Pharmaceutical Sciences Dr Reddys Institute of Life sciences <b>Dr. MV Narendra Kumar</b> Head, ARD and Knowledge Management, Daicel Chiral Technologies India Pvt. Ltd., Hyderabad
Funding Opportunities at BIRAC	8 <sup>th</sup> March 2022	<b>Dr. Sonali Tandon</b> Senior Manager, Investment- BIRAC
Forstoring Research Culture in North-East Region of India (under Ministry of Science & Technology, Govt. of India Science and Engineering Research Board (SERB)-Scientific Social Responsibility Policy	16 <sup>th</sup> March 2022	<b>Dr. Tamilvanan</b> Professor, NIPER Guwahati <b>Dr. Sanjay Banerjee</b> Associate Professor, NIPER Guwahati <b>Dr. P Radhakrishananad</b> Professor, NIPER Guwahati
Intellectual Property Rights and its Importance in Academia (from IP Generation to Protection)	28 <sup>th</sup> April 2022	<b>Mr. Dhiren Pattanayak</b> Examiner of Patents & Designs Examination & Grants Section Indian Patent Office, Kolkata

## PhDs Awarded

<b>Mr. Kalyan Kumar Raju</b> Guide: Dr. VGM Naidu	<b>Thesis Title:</b> Phytochemical Investigation & Pharmacological Screening Of Zanthoxylum Alatum Seed And Garcinia Pedunculata Leaf Extracts Against Oxidative Stress And Inflammation Mediated Diseases.
<b>Mr. G Surender</b> Guide: Dr. USN Murty	<b>Thesis Title:</b> Finding The Impact Of Pre-Existing Co-Morbidities And Betel Quid Consumption On Therapeutic Management Of Breast Cancer
<b>Mr. Basveshwar Y. Gawali</b> Guide: Dr. VGM Naidu	<b>Thesis Title:</b> IITZ-01 Potent Lysosomotropic Agent for Therapeutic Intervention of Colon Cancer & Malaria
<b>Mr. Datta Maroti Pawde</b> Guide: Dr. S. Tamilvanan	<b>Thesis Title:</b> Systematic Development of-and Synergistic Anti-inflammatory Activity Assessment from-oil-in-water Nanosized Emulsions Entrapped with Two Different Drugs
<b>Mr. U Shravan Kumar</b> Guide: Dr. Sanjay Banerjee	<b>Thesis Title:</b> Evaluating the Effect of Pre-gestational Diabetes on Reprogramming of Neonatal Heart
<b>Mr. Ebin Johny</b> Guide: Dr. Ramu Adela	<b>Thesis Title:</b> Evaluating the status of Immune cells and platelet mediated inflammation in type 2diabetes with coronary artery diseases: An Interventional study with Vitamin D



## Awards & Achievements

### 2 PhD scholars won AWSAR awards for science writing



Two young research students from NIPER Guwahati have brought laurels to the institute after they bagged prestigious national-level awards named Augmenting Writing Skills for Articulating Research (AWSAR) for their science writing skills.

The awards are presented by the Department of Science and Technology (DST) of Govt. of India on the occasion of National Science Day on 28th February 2022.

The awardees were Mr Eswara Rao Puppala and Ms Poonam Kumari, both PhD scholars from NIPER Guwahati, who have won prizes (Best Popular Science Stories under PhD student category) for their science stories on bowel-related diseases and diseases related to bacterial infections respectively. The two winners will be awarded certificates of appreciation and cash prizes worth Rs. 10,000 each.

### 4 students awarded at NIPER e-Symposium held at NIPER Kolkata



The listed 4 nos. of PhD students from NIPER-G won prizes for their poster and abstract presentation at the NIPER e-symposium organised as part of 'NIPER Research Symposium – Trends in Pharmaceutical Research' organised by NIPER Kolkata on 15th February 2022.

Student name	Division	Category	Award position	Cash amount won
Daya Raju Ade (Ph.D., 3 <sup>rd</sup> year)	Pharmaceutical Sciences	Advanced	First	25,000/-
Syed Nazrin Ruhina Rahman (Ph.D., 2 <sup>nd</sup> year)	Pharmaceutical Sciences	Beginner	Second	15,000/-
Sourav Kundu (Ph.D., 1 <sup>st</sup> year)	Biological Sciences	Beginner	Second	15,000/-
Malladi Navya (Ph.D., 1 <sup>st</sup> year)	Biological Sciences	Beginner	Third	10,000/-



# Other Achievements

Department of Pharmaceuticals  
NIPER Guwahati

ARIIA  
ATAL BANKING OF INSTITUTIONS  
ON INNOVATION ACHIEVEMENTS

NIPER-G secured  
**ARIIA RANKING 2021**

Proud occasion for  
**National Institute of Pharmaceutical Education and Research (NIPER) Guwahati**

For achieving **ARIIA Ranking 2021** under **Band Promising** category

Dr. USN Murty  
Director, NIPER-G

**ARIIA Ranking 2021 under Band Promising Category**

AD Scientific Index 2022  
Top Scientists 2022 Ranked

**10 Faculty Members from NIPERG** have been ranked in AD Scientific Index 2022

Dr. S Tamilvanan	Dr. Roshan Borkar
Dr. Amit Alexander <i>Ranked as Best Scientist in University</i>	Dr. Krishna Undela
Dr. Subham Banerjee	Dr. Naveen Chella
Dr. Bidya Dhar Sahu	Dr. Kalyan K Sethi
Dr. Pramod Kumar	Dr. S Sudhagar

NATIONAL INSTITUTE OF PHARMACEUTICAL EDUCATION AND RESEARCH, GUWAHATI

Happy to share that  
**Ms. Ulkti Bhatt**,  
Ph.D. Scholar, Dept. of Pharmaceutics, bagged **1<sup>st</sup> Prize** for her poster presentation on **Pharmaceutical 3D Printing Research** at **Controlled Release Society-Indian Chapter (CRS-IC) 2022 International Symposium**

The award comprising of **Rs. 25K, Citation & International Travel Grant** to participate **CRS-2022 Annual Meeting & Expo, Montreal, Canada**

#HATRICK ...!!  
#03 Years  
#3D Printing Research

Mr. Dinesh Choudhury  
3<sup>rd</sup> Prize, CRS-IC 2021

Ms. Ulkti Bhatt  
1<sup>st</sup> Prize, CRS-IC 2022

Mr. Tushar K Malakar  
3<sup>rd</sup> Prize, CRS-IC 2020

NATIONAL INSTITUTE OF PHARMACEUTICAL EDUCATION AND RESEARCH, GUWAHATI (NIPER-Guwahati)

**Hearty Congratulations!**

Happy to share that **NIPER-G, Ph.D. Scholar Miss. Aishwarya Jala**, Dept. of Pharmaceutical Analysis Received an **International Award "Females in Mass Spectrometry Empowerment Awards (2022)"** and **Prize money of \$300 USD** Sponsored by **SCIEX, MA-USA**

Miss Aishwarya Jala  
Research Scholar  
Dept. of Ph. Analysis

Dr. Roshan M. Borkar,  
Assistant Professor,  
Dept. of Ph. Analysis  
Project PI

NATIONAL INSTITUTE OF PHARMACEUTICAL EDUCATION AND RESEARCH, GUWAHATI

Nominated as a Member in **Governing Body of Technology Information Forecasting Assessment Council (TIFAC), Govt. of India**

**Congratulations** to the **Director, NIPER-Guwahati Dr USN Murty**

Dr USN Murty

NATIONAL INSTITUTE OF PHARMACEUTICAL EDUCATION AND RESEARCH-GUWAHATI (NIPER-Guwahati)

**CONGRATULATIONS !!**

Happy to share that **Mr. Ebin Johny**, Ph.D. scholar, under the supervision of **Dr. Ramu Adela, Asst. Professor, Dept. of Pharmacy Practice** awarded with **1<sup>st</sup> Prize** for his oral presentation at **HFAI 2022 8<sup>th</sup> Annual Conference of Heart Failure Association of India** held from **11-13<sup>th</sup> February 2022**

Dr. Ebin Johny Ph.D.  
Research Scholar

Dr. Ramu Adela  
Assistant Professor

National Institute of Pharmaceutical Education And Research-Guwahati  
Department of Pharmaceuticals, Ministry of Chemicals and Fertilizers, Govt. of India

**CONGRATULATIONS...**

Happy to share that our Master's student, **Ankush Kumar Jha**, received prestigious **DAAD Fellowship** to pursue his PhD from the **Technical University Munich / Helmholtz Zentrum Munchen, Germany**. Also, he received PhD offer from the **University of South Florida, USA**.

We wish him best for his future endeavor's !!

Mr. Ankush Kumar Jha  
MS Pharm (Pharmacology & Toxicology)  
Mentor: Dr. Bidya Dhar Sahu  
Batch: 2019-2021

DAAD  
TUM  
UNIVERSITY OF SOUTH FLORIDA

NATIONAL INSTITUTE OF PHARMACEUTICAL EDUCATION AND RESEARCH, GUWAHATI (NIPER-Guwahati)

**CONGRATULATIONS !!**

Happy to share that **NIPER-Guwahati** incorporated a Section 8 Company named as **AIC NIPER-GUWAHATI FOUNDATION** for the establishment of **ATAL INCUBATION CENTRE** supported by **Atal Innovation Mission, NITI Aayog, Govt. of India**



**National Institute of Pharmaceutical Education and Research, (NIPER)-Guwahati**

Happy to Share that Dr. Subham Banerjee selected for the **SERB International Research Experience (SIRE) Fellow** for the project entitled **"Responsive Self-folding Feedstock for Pharmaceutical 4D Printing Applications"** for 03 months at the University of Texas at Austin, USA.

SIRE includes:

- Monthly Fellowship equivalent to USD 3000.
- To & Fro Airfare in Economy Class.
- Preparatory Allowance up to Rs. 75,000/- to cover expenses for Visa and airport transfers.
- Overseas Medical Insurance.

**Subham Banerjee, Ph.D.**  
Associate Professor

**NATIONAL INSTITUTE OF PHARMACEUTICAL EDUCATION AND RESEARCH (NIPER-Guwahati)**

**Hearty Congratulations..!!**

NIPER Guwahati is awarded **Advanced Level Institutional Biotech Hub** funded by **Department of Biotechnology, Government of India** for **Human Resource Development Program**

**Rs. 59.35 Lakhs**

Department of Biotechnology  
Ministry of Science and Technology  
Government of India

Dr. S. Sidhagar, Assistant Prof. Dept. of Biotechnology  
Dr. Purusottam Mohapatra, Ramalingarawani Fellow, DIPS, Govt. Dept. of Biotechnology  
Dr. Sanjay K Banerjee, Associate Dean & Associate Prof. Dept. of Biotechnology  
Dr. USN Murty, Director & Dean NIPER Guwahati

**NATIONAL INSTITUTE OF PHARMACEUTICAL EDUCATION AND RESEARCH GUWAHATI**

**CONGRATULATIONS**

Happy to share that **NIPER Guwahati** played a key role to strengthen the National Dope Testing Laboratory (NDTL), Govt India R&D activities that helped in getting the reinstatement of accreditation to **NDTL** from "World Anti-Doping Agency" (WADA), Canada which appreciated **NIPER-G** for synthesizing the **Reference Materials (RMs)** that are used in dope analysis world over.

**WORLD ANTI-DOPING AGENCY play true**

Dr. USN Murty, Director, NIPER-G (PI)  
Dr. P. Radhakrishnanand, Asso. Prof. Dept. of Ph Analysis  
Dr. Pramod Kumar, Asst. Prof. Dept. of Ph Analysis  
Dr. Kalyan Sethi, Asst. Prof. Dept. of Medicinal Ch.  
Dr. Kapilchander Sethi, Asst. Prof. Dept. of Medicinal Ch.  
Dr. Jagadeesh Kumar, Research Associate Dept. of Medicinal Ch.  
Dr. S. Kallia, Research Associate Dept. of Medicinal Ch.  
Mr. Sachin D. Pawar, JRF and PhD Scholar Dept. of Ph Analysis

**NIPER - Guwahati**  
6 Jan · 🌐

**BIG ACHIEVEMENT!!**  
Dept. of Medicinal Chemistry and Dept. of Pharma Analysis, NIPER Guwahati, have synthesized, characterized and purified 4 nos. of Reference Materials (viz. para hydroxy prenylamine, nor-ethylmorphine, carboxy toremifene, & octopamine sulfate) at highest quality. The RMs are currently in use to curb doping in world sports.

**Department of Pharmaceuticals Mansukh Mandaviya Bhagwant Khuba**  
#Antidoping #cleansport #AtmanirbharBharat

**NATIONAL INSTITUTE OF PHARMACEUTICAL EDUCATION AND RESEARCH, GUWAHATI (NIPER-Guwahati)**

**CONGRATULATIONS !!**

Awarded a **Scholarship** by the **International Society for Pharmacoepidemiology (ISPE), USA** to attend and present the research work at the **International Conference on Pharmacoepidemiology (ICPE 2022)** to be held in Copenhagen, Denmark in August 2022

**USD 2310 + Complimentary Registration**

**Complimentary Registration**

Chaitany Thomas, Ph.D. Scholar, Dept. Pharmacy Practice  
G. Nithinraj, Final Year, M.Pharm, Dept. Pharmacy Practice  
Ajit Radhakrishnan, Final Year, M.Pharm, Dept. Pharmacy Practice  
Karanj Dhanraj, Final Year, M.Pharm, Dept. Pharmacy Practice  
Dr. Krishna Umedra, Assistant Professor, Dept. Pharmacy Practice (Supervisor)  
G. Gitya Srinivas, Final Year, M.Pharm, Dept. Pharmacy Practice  
Amit Bhandari, Final Year, M.Pharm, Dept. Pharmacy Practice



## Other Notable Achievements

- Mr. Sourav Kundu, Ph.D. Scholar, Dept. of Pharmacology and Toxicology, secured 3rd position in Pharmaceutical Sciences (organized by Royal Society of Chemistry (RSC)- NIPER Guwahati symposium) held on 04th March 2022.
- Mr. Aditya Sharma, Ph.D. scholar, Dept. of Pharmaceutical Analysis, second prize in an oral presentation at the 10th National Symposium for Young Researchers jointly organized by the Royal Society of Chemistry, Local Section Deccan (RSC-LSD), and National Institute of Pharmaceutical Education and Research Guwahati, 4th march 2022.
- Ms. Sri Laxmi Ramya Kotha, Dept. of Pharmaceutics, got the 1st prize in 10th National Symposium for Young Researchers On "Drugs- Discovery to Delivery-(2022)" by the Royal Society of Chemistry (RSC)-Local Section Deccan (LSD) Chapter.
- Ms. KM Abha Mishra, Department of Medicinal Chemistry, NIPER G received a poster award at the 3 Day Workshop on Advanced Drug Design and Medicinal Chemistry 2022 (ADDMC-2022), NIPER G.
- Ms. Bhakti Hirlekar, Department of Medicinal Chemistry, NIPER G received a poster award at the 3 Day Workshop on Advanced Drug Design and Medicinal Chemistry 2022 (ADDMC-2022), NIPER G.
- Ms. Sanjana Roychoudhary, Department of Medicinal Chemistry, NIPER G received a poster award at the 3 Day Workshop on Advanced Drug Design and Medicinal Chemistry 2022 (ADDMC-2022), NIPER G.
- Ms. Monika Verma, Department of Medicinal Chemistry, NIPER G received poster award at the One-day RSC 10th National Symposium for Young Researchers On "Drugs- Discovery to Delivery-(DDD 2022)" jointly conducted by RSC and NIPER G.



## NIPER 5th convocation held

CITY CORRESPONDENT

GUWAHATI, June 26: The 5th convocation of the National Institute of Pharmaceutical Education and Research (NIPER), Guwahati was held at its Changsari campus today.

A total of 109 students, including 100 postgraduate students from the 2020-22 batch and nine PhD students, were awarded degrees during the ceremony.

Lok Ranjan, Secretary, Ministry of Development of North Eastern Region (DoNER) attended the convocation ceremony as the chief guest.

S Aparna, Secretary in the Department of Pharmaceuticals, Ministry of Chemicals and Fertilizers, Government of

India and Prof V Ravichandran, Director, NIPER Kolkata, were also present at the convocation ceremony.

Chief guest Ranjan urged the students to hone their skills, use the learning and experience at NIPER Guwahati and make their contributions to the potential fields of pharmaceutical sciences like drug designing, biopharmaceuticals, personalized medicine, nanotherapeutics, robotics in healthcare, artificial intelligence in medicines, 3D and 4D printing technology in making next-generation medicines.

Dr USN Murty, director of NIPER Guwahati, presented a report on the institute to the dignitaries, students and parents.

## নাইপাৰ গুৱাহাটীৰ ৫ম দীক্ষান্ত সমাৰোহ সম্পন্ন

১০০ গৰাকীক স্নাতকোত্তৰ, ৯ গৰাকীক পিএইচডি প্ৰদান



আমিনাও, ১ জুলাই : ৰাষ্ট্ৰীয় ঔষধীয় শিক্ষা আৰু গৱেষণা অভিযন্ত্ৰ চমুৰে নাইপাৰ, গুৱাহাটীৰ ৫ম দীক্ষান্ত সমাৰোহে বুধসপ্তাহিবাৰে চাংসাৰিৰ নাইপাৰ চৌহদত সন্মোক্ষসূহত অনুষ্ঠিত হৈ যায়। সমাৰোহত ২০২০-২২ বৰ্ষৰ ১০০ গৰাকী ছাত্ৰ-ছাত্ৰীক স্নাতকোত্তৰ আৰু ৯ গৰাকী ছাত্ৰ-ছাত্ৰীক ডক্টৰেট ডিগ্ৰী প্ৰদান কৰা হয়। উল্লেখ্য যে, চাংসাৰিৰ নব নিৰ্মিত এই চৌহদত পোনপ্ৰথমবাৰৰ বাবে এই দীক্ষান্ত সমাৰোহ অনুষ্ঠিত হয়। ইয়াৰ আশংকা সমাৰোহেইহীন গুৱাহাটী চিকিৎসা মহাবিদ্যালয়ত অনুষ্ঠিত হৈছিল। অনুষ্ঠিতত ডাৰনাৰ

UNE, GUWAHATI 5

## Young female achievers feted

GUWAHATI, Jan 25: The National Institute of Pharmaceutical Education and Research Guwahati (NIPER-G) felicitated 11 young female achievers from the North East during a programme held on the occasion of National Girl Child Day at its campus at Changsari of Kamrup district on Monday.

Director NIPER Guwahati Dr USN Murty felicitated Rafiya Yasmin Saikia (Sivsagar), Garima Sharma (Guwahati), Sharmina Begum (Karimganj), Betswadaphi Warkhyllew (Meghalaya), Gitanjali Mushahary (Gohpur), Noloshrī Narzary (Gohpur), Sumshri Narzary

## ৰাষ্ট্ৰীয় ঔষধীয় শিক্ষা-গৱেষণা সংস্থানৰ সমাৰ্ত্তন

সামৰ্থ্যৰ সৈতে জীয়াই থাকিবলৈ আৰু শিক্ষণ কাৰ্যকলাপৰ জৰিয়তে অতিৰিক্ত সেৱা কৰিবলৈ তেওঁ আহ্বান জনায়। ক'ভিডৰ পৰৱৰ্তী পৰ্যায়ৰ জগতখনৰ প্ৰত্যাহ্বানসমূহৰ সন্মুখীন হ'বলৈ আৰু ফাৰ্মাচিউটিকেল ছায়েন্সৰ ক্ষেত্ৰত বিশেষজ্ঞ হিচাপে সমাজখনক ইয়াৰ অৰিহণা কঢ়িয়াবলৈ তেওঁ আহ্বান জনায়। সমাৰ্ত্তনত সন্মুখীন অতিথি হিচাপে অংশগ্ৰহণ কৰি কলকাতা নাইপাৰৰ সন্মুখীন

নাইপাৰ, গুৱাহাটীৰ পঞ্চম সমাৰ্ত্তন  
১০৯গৰাকী শিক্ষাৰ্থীক ডিগ্ৰী প্ৰদান

Assam: Two NIPER Guwahati researchers win awards for science writing

নাইপাৰ, গুৱাহাটীৰ...  
১০৯গৰাকী শিক্ষাৰ্থীক ডিগ্ৰী প্ৰদান

# Traditional Healers from North East associated with NIPER Guwahati BioNEST Incubation Centre

- Deba Kanta Konch, Assam
- Ajit Borboruah, Assam
- Chowlikham Pomong, Arunachal Pradesh
- Hiranya Dev Goswami, Assam
- Sarat Chandra Patgiri, Assam
- Amulya Choudhury, Assam
- Mulan Buragohain, Assam
- Thanu Gogoi, Assam



## Campus Visits



**Dr. JS Yadav**, CSIR Bhatnagar Fellow, Former Director of CSIR-IICT, visited NIPERG campus on 25<sup>th</sup> March 2022.

**Dr. Balagopalan Unni**, Advisor (Research), Assam Down Town University, visited the campus on 15<sup>th</sup> March 2022.



**Dr. Manish Diwan**, DGM & HoD - SPED, BIRAC, visited NIPERG on 21<sup>st</sup> May 2022 to review the progress of the BioNEST Incubation Centre.

**Mr. HK Hajong**, Economic Advisor, Department of Pharmaceuticals, visited the campus on 4<sup>th</sup> June 2022. He visited the labs and provided some valuable suggestions for development of the institute.



**Prof. Sanjay Jachak** from NIPER Mohali, visited NIPERG on 10<sup>th</sup> June 2022. He was accorded a traditional welcome by Dr. USN Murty, Director, at his office.

**Dr. AK Chakraborti**, Retd. Professor from NIPER SAS Nagar, visited the campus on 26<sup>th</sup> March 2022. He interacted with the faculty members and students during his visit.





## Patents

**Vishal Sharad Chaudhari, Tushar Kanti Malakar, USN Murty, Subham Banerjee.** "Mouth Dissolving Wafers" Application No. 342624-001. Cbr No. 202856, Date of Grant: 28 April 2022.

**Subham Banerjee, Tushar Kanti Malakar, VGM Naidu, Santosha Kumar Dwivedy, USN Murty.** "Drug delivery system for anti-tubercular drugs, uses and method of fabricating thereof." Application No. 201931029526. Patent Number: 397698. Date of Grant: 26 May, 2022.

**VGM Naidu, USN Murty, Eswar Puppala, Deepak Bharadwaj PVP, Jagadeesh Kumar G.** "Therapeutic formulations for the treatment and management of inflammatory bowel disease", Date of Filing: 20-06-2020, Date of Grant: 10-01-2022, Patent grant no:386296.

**Laxmi Ramya Kotha, USN Murty, Subham Banerjee.** "Customized consumable drug delivery device" Application No. 361567-001. Cbr No. 215398, Date of Filing: 30 March, 2022.

**Purushottam Suryavanshi, Subham Banerjee,** "Customized 3D Printed Hollow Capsular Device, Uses and Method of Fabricating Thereof". Application No. 202211027762. Date of Filing: 13 May, 2022.

**Subarna Jyoti Kalita, Sachin Datram Pawar, Prachi Vernekar, Mayur Arun Pawar, Veena K. S., Km Abha Misra, Kalyan Kumar Sethi, Pullapanthula Radhakrishnanand, Upadhyayula Suryanarayana Murty, Puran Lal Sahu, Sachin Dubey, Kapendra Sahu, Awanish Upadhyay, Pramod Kumar,** Process to prepare octopamine sulfate. 2022. Application No.: 202231000058 and filing date: January 01, 2022.

**Tamilvanan Shunmugaperumal,** Hydrophilic polymer based microparticles and preparation methods thereof. Date of Grant: 8th February 2022, Patent Grant no.: 388750.

## Publications

**K. Seth,** "Recent progress in rare-earth metal-catalyzed sp<sup>2</sup> and sp<sup>3</sup> C–H functionalization to construct C–C and C–heteroelement bonds." *Org. Chem. Front.* 2022, 9, 3102-3141.

**Suryavanshi, P., Chaudhari, V.S. & Banerjee, S.** Customized 3D-printed hollow capsular device filled with norfloxacin-loaded micropellets for controlled-release delivery. *Drug Deliv. and Transl. Res.* (2022). <https://doi.org/10.1007/s13346-022-01198-3>.

**Lalchandani, D.S., Chenkual, L., Mariappayan, M. et al.** Significance of stressor media on the stability of statins: a critical assessment. *Chem. Pap.* (2022). <https://doi.org/10.1007/s11696-022-02306-w>.

**Gangipangi Vijayakumar, Uppalapati S. Swetha, Selvaraju Sudhagar.** Tamoxifen modulates mitochondrial dynamics through AMPK and MAPK during nutrition deprivation. *Cell Biology International.* <https://doi.org/10.1002/cbin.11853>.

**Paramesha Bugga, Md Jahangir Alam, Roshan Kumar, Subhashis Pal, Naibedya Chattopadyay, Sanjay Kumar Banerjee,** Sirt3 ameliorates mitochondrial dysfunction and oxidative stress through regulating mitochondrial biogenesis and dynamics in cardiomyoblast., *Cellular Signalling*, Volume 94, 2022, 110309.

**P. Radhakrishnanand,** Development of polar organic mode chromatographic method by polysaccharide-based immobilized chiral selector and validation for the determination of the enantiopurity of novel mineralocorticoid receptor antagonist atropisomer-Esaxerenone., *Journal of Chromatographia*, Accepted on April 2022 (In press).

**N. Kumar,** "Modulating the Antioxidant Response for Better Oxidative Stress-Inducing Therapies: How to Take Advantage of Two Sides of the Same Medal? *Biomedicines* 10, 823 (2022).

**Mukta Agrawal, Madhulika Pradhan, Gautam Singhvi, Ravish Patel, Ajazuddin, Amit Alexander\*.** Thermoresponsive in situ gel of curcumin loaded solid lipid nanoparticle: Design, optimization and in vitro characterization. *Journal of Drug Delivery Science and Technology.* 2022, 103376.



**V. S. Verma, H. R. Badwaik, Y. Vaishnav, A. Alexander and Ajazuddin.** Synthesis, Characterization, Molecular Modelling and Biological Evaluation of Substituted Benzo (h) Chromene-3-Carboxylate Derivatives as a Potential Agent for the Treatment of Hyperlipidemia. *Indian Journal of Pharmaceutical Sciences.* 2022; 84(2): 453-464.

**Abu Syed, Vishal Chaudhari, USN Murty, Bidya Dhar Sahu, Subham Banerjee\*.** Nootkatone essential oil-encapsulated lipid nanoparticles interaction with rat cardiomyoblast (H9c2) cells. *Applied In Vitro Toxicology.* 8(1), 14-23, 2022.

**Dinesh Choudhury, Aishwarya Jala, USN Murty, Roshan M Borkar, Subham Banerjee\*.** In vitro and in vivo evaluations of berberine-loaded microparticles filled in-house 3D printed hollow capsular device for improved oral bioavailability. Theme: Novel Advances in 3-D Printing Technology in Drug Delivery, *AAPS PharmSciTech.* 23,89, 2022. (IF-3.246).

**Srushti Lekurwale, Tukaram Karanwad, Subham Banerjee\*.** Selective Laser Sintering (SLS) of 3D Printlets using a 3D Printer comprised of IR/red-diode Laser. *Annals of 3D Printed Medicine.* 6, 100054, 2022.

**Vishal Chaudhari, Aishwarya Jala, USN Murty, Roshan M Borkar, Subham Banerjee\*.** Sensitive UPLC/ESI/MS/MS method for concomitant quantification of active plant constituent combinations in rat plasma after single oral administration. *RSC Analytical Methods.* 14, 834-842, 2022.

**Syed AM, Kundu S, Ram C, Kulhari U, Kumar A, Mugale MN, Mohapatra M, Murty US, Sahu BD.** Up-regulation of Nrf2/HO-1 and inhibition of TGF- $\beta$ 1/Smad2/3 signaling axis by daphnetin alleviates transverse aortic constriction-induced cardiac remodeling in mice. *Free Radical Biology and Medicine* 186 (2022) 17–30.

**Monika K. Verma, Sanjana Roychowdhury, Bidya Dhar Sahu, Awanish Mishra, and Kalyan K. Sethi,** "CRISPR-based point-of-care diagnostics incorporating Cas9, Cas12, and Cas13 enzymes advanced for SARS-CoV-2 detection" *Journal of Biochemical and Molecular Toxicology*, 2022, In Press.

**Srividya Gorantla, Unnati Batra, RN Samsritha, Eswara Rao Puppala, Tejashree Waghule, VGM Naidu, Gautam Singhvi** Emerging trends in microneedle-based drug delivery strategies for the treatment of rheumatoid arthritis. 2022, 395-407. *Expert Opinion on Drug Delivery.*

**Ram C, Gairola S, Syed AM, Kulhari U, Kundu S, Mugale MN, Murty US, Sahu BD.** Biochanin A alleviates unilateral ureteral obstruction-induced renal interstitial fibrosis and inflammation by inhibiting the TGF- $\beta$ 1/Smad2/3 and NF- $\kappa$ B/NLRP3 signaling axis in mice. *Life Sciences*, 2022, 120527.

**Om Prakash Ranjan\*, Nitesh Kumar, Vivek Dave.** Cross-linked Alginate Beads of Montelukast Sodium Coated with Eudragit for Chronotherapy: Statistical Optimization, In vitro and In vivo Evaluation. *Current Drug Delivery.* In press.

**Ashok Kumar Jangid, Raghu Solanki, Sunita Patel, Kanakaraju Medicherla, Deep Pooja, and Hitesh Kulhari,** Improving Anticancer Activity of Chrysin using Tumor Microenvironment pH-Responsive and Self-Assembled Nanoparticles. *ACS Omega* 2022 7 (18), 15919-15928.

**Ukti Bhatt, Peeyush Kumar Sharma, USN Murty, Subham Banerjee\*.** Systematic evaluations of melt-extruded filament for fused deposition modeling mediated three-dimensional printing. *Journal of 3D Printing in Medicine.* 6(2),77-94, 2022.

**Uppala Sravya Chowdhary, Sai Krishna Anand Vullendula, Dani Lakshman Yarlagadda, Swapnil J Dengale,** Exploring the utility of co-amorphous materials to concurrently improve the solubility and permeability of Fexofenadine, *Journal of Drug Delivery Science and Technology*, 03431, May 2022.

**A. Malaiya, M. Singhai, M. Singh, K.S. Prajapati, H. Choudhury, M. Fatima, A. Alexander, K.S. Dubey, K. Greish, P. Kesharwani,** Recent Update on the Alzheimer's Disease Progression, Diagnosis and Treatment Approaches, *Current Drug Targets*, 23 (2022) 1-24.



**Johny E, Jala A, Nath B, Borkar RM, Kuladhipati I, Das R and Adela R\***. Vitamin D supplementation modulates platelet mediated inflammation in subjects with type 2 diabetes: A randomized, double blind, placebo controlled trial. *Frontiers in Immunology* 2022.

**Nizami HL, Katare P, Prabhakar P, Adela R, Sarkar S, Arava S, Chakraborty P, Maulik S, Banerjee SK.** Paricalcitol attenuates metabolic syndrome-associated heart failure through enhanced mitochondrial fusion. *Oxidative Medicine and Cellular Longevity* 2022.

**Soma Das, Om Prakash Ranjan, Vanishree Rao, V. Ravichandiran, Nitesh Kumar.** Book chapter "Multifunctional liposome-quantum dot hybrid nanocarriers for drug targeting brain tumors". In book *Nanocarriers for Drug Targeting to Brain Tumors*, Editors: Lalit Kumar, Yashwant Pathak, Elsevier 2022, Page No: 649-667. (doi.org/10.1016/B978-0-323-90773-6.00020-8).

**V. V. S. Prasanna Kumari Rayala, Kashyap Ajaybhai Trivedi, Suryanarayana Murthy Upadhyayula, Srinivasu Gunnam, Roshan M. Borkar, Radhakrishnanand** A validated chiral chromatographic method for the enantiomeric separation of acalabrutinib., DOI: 10.1002/chir.23485, *Chirality*. 2022;1-10,(wileyonlinelibrary.com/journal/chir).

**Jupally Prashanthab Sridhar Balasubramanianab VVS Prasanna Kumari Rayalac Pramod Kumar P. Radhakrishnanand** Two stereoisomers of 4-hydroxy prenylamine and its hydrochloride salts. *Journal of Molecular Structure* 1265 (2022) 133428.

**Jala, A., Varghese, B., Kaur, G. et al.** Implications of endocrine-disrupting chemicals on polycystic ovarian syndrome: A comprehensive review. *Environ Sci Pollut Res* (2022). <https://doi.org/10.1007/s11356-022-21612-0>.

**Maharshi Thalla, Vijay Gangipangi, Sudhagar S, Subham Banerjee\***. Pharmacoengineered lipid core-shell nanoarchitectonics to influence human alveolar macrophages uptake for drug targeting against tuberculosis. VSI: Hybrid/Composite Nanoarchitectonics for Energy/Environmental/Bio-Applications. *Journal of Inorganic and Organometallic Polymers and Materials*. In Press. 2022. (IF-3.543).

**Sunil Kumar Dubey, Shraddha Parab, Amit Alexander, Mukta Agrawal, Vaishnav Pavan Kumar Achalla, Udit Narayan Pal, Murali Monohar Pandey, Prashant Kesharwani.** Cold atmospheric plasma therapy in wound healing. *Process Biochemistry*. 112, 112-123, 2022.

**Sunil Kumar Dubey, Tanya Bhatt, Mukta Agrawal, Ranendra Narayan Saha, Swarnlata Saraf, Shailendra Saraf, Amit Alexander.** Application of chitosan modified nanocarriers in breast cancer. *International Journal of Biological Macromolecules*, 194, 521-538, 2022.

**Madhulika Pradhan, Kamal Shah, Amit Alexander, Ajazuddin, Sunita Minz, Manju Rawat Singh, Deependra Singh, Krishna Yadav, Nagendra Singh Chauhan.** COVID-19: clinical presentation and detection methods. *Journal of Immunoassay and Immunochemistry*. 43, 1951291,2022.

**P R Hemanth Vikram, Beeraka Narasimha M, Kumar Pramod, Patel Hitesh B., Gurupadayya B.M.** UPLC-MS based Method Development, Validation and Optimization of Dissolution using Quality by Design Approach for Low dose Digoxin: A Novel Strategy. *Current Pharmaceutical Analysis*. IN PRESS, 2022

**Athira Joseph, Gangasani Jagadeesh Kumar, Sachin Dattram Pawar, Bhakti Umesh Hirlekar, Prasad V Bharatam, Satyanand Konda, Mohana Krishna Reddy Mudiam, Upadhyayula Suryanarayana Murthy, PL Sahu, Sachin Dubey, P Radhakrishnanand, Daya Raju Adye, Roshan M Borkar, Choppari Thirupathi, Pramod Kumar.** Analytical developments of p-hydroxy prenylamine reference material for dope control research: Characterization and purity assessment. *14, Drug Testing and Analysis*, 14, 224-232.

**Shaw, Priyanka, Kumar, Naresh, Sahun, Maxime, Smits, Evelien, Bogaerts, Annemie, Privat-Maldonado, Angela.** Modulating the Antioxidant Response for Better Oxidative Stress-Inducing Therapies: How to Take Advantage of Two Sides of the Same Medal? *Biomedicines* 10, 823 (2022).

**Sushma Venkata Mudigunda, Deepak B. Pemmaraju, Shivangi Paradkar, Eswara Rao Puppala, Basveshwar Gawali, Suryanarayana Murthy Upadhyayula, Naidu Vegi Gangamodi, and Aravind Kumar Rengan,** Multifunctional Polymeric Nanoparticles for Chemo/Phototheranostics of Retinoblastoma. *ACS Biomaterials Science & Engineering* 2022 8 (1), 151-160





**AK Jangid, R Solanki, S Patel, D Pooja, H Kulhari.** Genistein encapsulated inulin-stearic acid bioconjugate nanoparticles: Formulation development, characterization and anticancer activity. *International Journal of Biological Macromolecules* 2022, 206, 213-221.

**Vaishakh Kedambaimoole, Kajol H, Konandur Rajanna, Prosenjit Sen, MM Nayak, Saurabh Kumar\*** MXene Wearables: Properties, Fabrication Strategies, Sensing Mechanism and Applications. *Material Advances*. In Press.

**Soumya Meka, Bala Ganesh Geddaturi, Bincy Varghese, Bishamber Nath, Gayatri Vishwakarma and Ramu Adela.** Circulatory hepcidin levels association with gestational diabetes mellitus: a meta-analysis of observational studies. *International Journal of Pharmacy Practice*, 2022, Vol XX, 1–9.

**Anoop Tiwari, Surendra G, Soumya Meka, Bincy Varghese, Gayatri Vishwakarma, Ramu Adela.** The effect of *Nigella sativa* on non-alcoholic fatty liver disease: A systematic review and meta-analysis. *Human Nutrition & Metabolism*. 2022; 28: 200146.

**Bandopadhyay R, Mishra N, Rana R, Kaur G, Ghoneim MM, Alshehri S, Mustafa G, Ahmad J, Alhakamy NA, Mishra A.** Molecular Mechanisms and Therapeutic Strategies for Levodopa-induced Dyskinesia in Parkinson's Disease: A Perspective through Preclinical and Clinical Evidences. *Frontiers in Pharmacology* 2022.

**K. Jony Susanna, Rahul Gajbhiye, Bhaskar Sarmah, Sachin Dattram Pawar, Pakhuri Mehta, Upadhyayula Suryanarayana Murty, V. Ravichandiran, Amit Alexander, Pramod Kumar.** Simultaneous Method Development and Validation of Anastrozole along with Piperine: Degradation Studies and Degradants Characterization using LC-QTOF-ESIMS along with Degradants In-silico ADMET Predictions. *Current Drug Metabolism*. In Press, 2022.

**Aishwarya Jala, Bincy Varghese, Ratul Dutta, Ramu Adela, and Roshan M Borkar\*.** Levels of parabens and bisphenols in personal care products and urinary concentrations in Indian young adult women: Implications for human exposure and health risk assessment *Chemosphere*, In Press, 2022.

**Sachin Jorvekar, Aishwarya Jala and Roshan M Borkar\*** Determination of bisphenols and parabens in cow urine distillate from India: Implication of human exposure and risk assessment *Environmental Science and Pollution Research*, In Press, 2022.

**Ankush Kumar Jha, Shobhit Gairola, Sourav Kundu, Pakpi Doye, Abu Mohammad Syed, Chetan Ram, Uttam Kulhari, Naresh Kumar, Upadhyayula Suryanarayana Murty and Bidya Dhar Sahu\*.** Biological Activities, Pharmacokinetics and Toxicity of Nootkatone: A Review. *Mini-Reviews in Medicinal Chemistry*, 2022, DOI: 10.2174/1389557522666220214092005.

**M.R. Dethe, P. A, H. Ahmed, M. Agrawal, U. Roy, A. Alexander;** PCL-PEG copolymer based injectable thermosensitive hydrogels, *Journal of Controlled Release*, 343 (2022) 217-236.

**Kaur G, Rathod SSS, Ghoneim MM, Alshehri S, Ahmad J, Mishra A, Alhakamy NA.** DNA Methylation: A Promising Approach in Management of Alzheimer's Disease and Other Neurodegenerative Disorders. *Biology (Basel)*. 2022 Jan 7;11(1):90. doi: 10.3390/biology11010090. PMID: 35053088, 2022.

**Singh T, Thapliyal S, Bhatia S, Singh V, Singh M, Singh H, Kumar A, Mishra A,** Reconnoitering the transformative journey of minocycline from an antibiotic to an antiepileptic drug. *Life Sciences*, 2022, 120346, 2022.

**Prabakaran A, Mukta Agrawal, Mithun Rajendra Dathe, Hafiz Ahmed, Awesh Yadav, Umesh Gupta, Amit Alexander.** Nose-to-brain drug delivery for the treatment of Alzheimer's Disease: Current Advancements and Challenges. *Expert Opinion on Drug Delivery*. 2022.

**Abu Mohammad Syed, Sourav Kundu, Chetan Ram, Uttam Kulhari, Akhilesh Kumar, Madhav Nilakanth Mugale, Upadhyayula Suryanarayana Murty, Bidya Dhar Sahu.** Aoin alleviates pathological cardiac hypertrophy via modulation of the oxidative and fibrotic response. *Life Sciences*. 288, 120159, 2022.

**Sushant Shete, Sai Charan Reddy, Yarlagadda Dani Lakshman, Sai Krishna Anand Vullendula, Chetan Hasmukh Mehta, Usha Yogendra Nayak, Swapnil Dengale.** Implications of phase solubility/miscibility and drug-rich phase formation on the performance of co-amorphous materials: The case of Darunavir co-amorphous materials with Ritonavir and Indomethacin as co-formers. 608, 12119, 2022.



**Preety Ghanghas, Monika Sharma, Dhimant Desai, Kaisar Raza, Aman Bhalla, Pramod Kumar, Dipika Narula, Shantu Amin, Sankar Nath Sanyal, Naveen Kaushal.** Selenium-Based Novel Epigenetic Regulators Offer Effective Chemotherapeutic Alternative with Wider Safety Margins in Experimental Colorectal Cancer. *Biological Trace Element Research*, 200, 2022.

**Dutta N, Pemmaraju Deepak B, Ghosh S, Ali A, Mondal A, Majumder C, Nelson VK, Mandal SC, Misra AK, Rengan AK, Ravichandran V.** Alkaloid-rich fraction of *Ervatamia coronaria* sensitizes colorectal cancer through modulating AMPK and mTOR signaling pathways. *Journal of Ethnopharmacology*. 2022, 283:114666.

**Sai Sudha Yalamarthy, Eswara Rao Puppala, Md Abubakar, Pritam Saha, Veerabhadra Swamy Challa, NP Syamprasad, USN Murty, Jagadeesh Kumar Gangasani, VGM Naidu,** Perillyl alcohol inhibits keratinocyte proliferation and attenuates imiquimod-induced psoriasis like skin-inflammation by modulating NF- $\kappa$ B and STAT3 signaling pathways, *International immunopharmacology*. 103, 108436.

**Jagdish Chand, Samir Ranjan Panda, Siddhi Jain, USN Murty, Archana Moni Das, Gangasani Jagadeesh Kumar, VGM Naidu.** Phytochemistry and polypharmacology of cleome species: A comprehensive Ethnopharmacological review of the medicinal plants. *Journal of Ethnopharmacology*. 282, 114600.

**Peeyush Kumar Sharma, Dinesh Choudhury, Vivek Yadav, USN Murty, Subham Banerjee\*.** 3D Printing of Nanocomposite Pills through Desktop Vat Polymerization (Stereolithography) for Drug Delivery Reasons. Thematic series: Desktop Vat Polymerization (Stereolithography). *3D Printing in Medicines*. In Press. 2022.

**Tushar K Malakar, Vishal S Chaudhari, Santosha K Dwivedy, USN Murty, Subham Banerjee\*.** 3D printed housing devices for segregated compartmental delivery of oral fixed dose anti-tubercular drugs adopting print & fill strategy. *3D Printing & Additive Manufacturing*. In Press. 2022.

**Purushottam Suryavanshi, Subham Banerjee\*.** Exploration of theoretical and practical evaluation on Kollidon®SR matrix mediated amorphous filament extrusion of norfloxacin by melt extrusion. *Journal of Drug Delivery Science and Technology*. In Press. 2022.

**Maharshi Thalla, Aishwarya Jala, Roshan M. Borkar, Subham Banerjee.** Development & validation of LC-MS/MS method for pyrazinamide estimations from pharmacoengineered lipid core-shell nanoarchitectonics. *Acta Chromatographica*. In Press. 2022.

**Amit Kumar Yadav, Sanjay Kumar Banerjee, Bhabatosh Das, Kumardeep Chaudhary.** Systems Biology and Omics Approaches for Understanding Complex Disease Biology. *Systems Biology and Omics Approaches to Understand Complex Diseases Biology*, 4, 2022.

**Maharshi Thalla, USN Murty, Subham Banerjee\*.** Pharmacoengineering: A New Frontier in Cutting-Edge Translational Pharmaceutical Research in India. *Proceedings of the National Academy of Sciences, Biological Sciences (NASB)*. In Press. 2022.

**Dinesh Choudhury, Peeyush Kumar Sharma, USN Murty, Subham Banerjee\*.** Stereolithography assisted fabrication of 3D printed polymeric film for topical berberine delivery: in vitro, ex-vivo & in vivo investigations. *VSI: 3D Printing in Pharmacological & Pharmaceutical Sciences, Journal of Pharmacy and Pharmacology*. In Press. 2022.

**Maharshi Thalla, USN Murty, Subham Banerjee\*.** Pharmacoengineering: A New Frontier in Cutting-Edge Translational Pharmaceutical Research in India. *Proceedings of the National Academy of Sciences, Biological Sciences (NASB)*. In Press. 2022.

**Dinesh Choudhury, Peeyush Kumar Sharma, USN Murty, Subham Banerjee\*.** Stereolithography assisted fabrication of 3D printed polymeric film for topical berberine delivery: in vitro, ex-vivo & in vivo investigations. *VSI: 3D Printing in Pharmacological & Pharmaceutical Sciences, Journal of Pharmacy and Pharmacology*. In Press. 2022.

**T Raja Sekharan, R Margret Chandira, Shunmugaperumal Tamilvanan, SC Rajesh, BS Venkateswarlu.** Deep eutectic solvents as an alternate to other harmful solvents. *Review*, 12, 847-860.

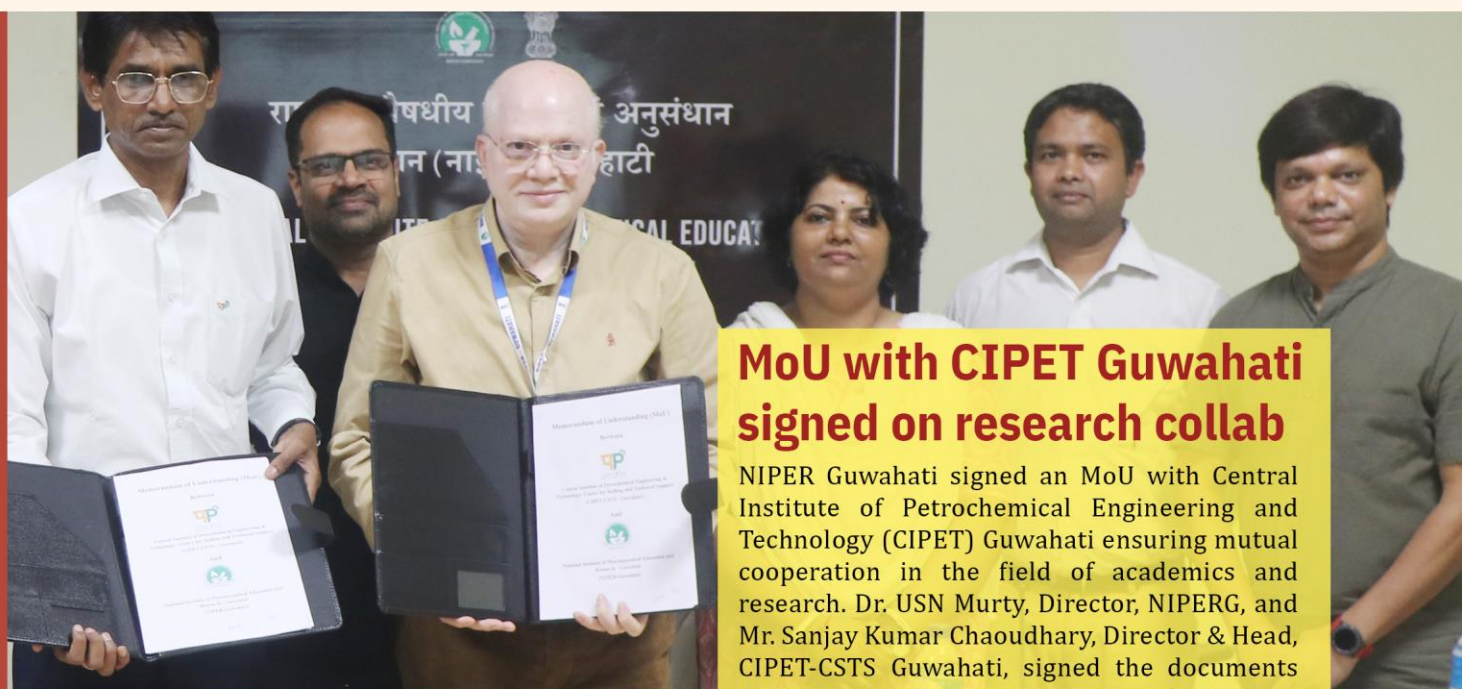
**Hina L Nizami, Parmeshwar B Katare, Pankaj Prabhakar, Ramu Adela, Soumalya Sarkar, Sudheer Arava, Praloy Chakraborty, Subir K Maulik, Sanjay K Banerjee.** Paricalcitol Attenuates Metabolic Syndrome-Associated Heart Failure through Enhanced Mitochondrial Fusion. *Oxidative Medicine and Cellular Longevity*, In Press, 2022.

**Paramesha Bugga, Md Jahangir Alam, Roshan Kumar, Subhashis Pal, Naibedya Chattopadhyay, Sanjay Kumar Banerjee.** Sirt3 ameliorates mitochondrial dysfunction and oxidative stress through regulating mitochondrial biogenesis and dynamics in cardiomyoblast. *Cellular Signalling*, 94, 110309, 2022.



## Funded Extra-Mural Research Projects (January to June 2022)

- Project Title:** Therapeutic Significance of MARCKS signalling Axis in ovarian cancer Metastasis: A precision Anti-Metastatic Therapy approach  
**PI & Centre Coordinator:** Dr. Purusottam Mohapatra  
**Funding Agency:** SERB (DST) **Amount: 60.01 Lakh**
- Project Title:** Deciphering the redox chemistry of physical plasma-treated clinically-relevant liquids as novel therapy against ovarian cancer  
**PI & Centre Coordinator:** Dr. Naresh Kumar  
**Funding Agency:** SERB (DST) **Amount: 53.90 Lakh**
- Project Title:** Responsive Self-folding Feedstock for Pharmaceutical 4D Printing Applications  
**PI & Centre Coordinator:** Dr. Subham Banerjee  
**Funding Agency:** SERB - SIRE Scheme **Amount: USD 10,000**
- Project Title:** Prototyping of transdermal patches by innovating 3D printing platform technologies  
**PI & Centre Coordinator:** Dr. Subham Banerjee  
**Funding Agency:** AMTZ, Vizag **Amount: 10.00 Lakh**
- Project Title:** Deciphering the Pharmacodynamics of Ayurvedic formulations used in the treatment of neurodegenerative diseases by integrating reverse pharmacological approaches  
**PI & Centre Coordinator:** Dr. VGM Naidu  
**Funding Agency:** Ministry of Ayush, Govt. of India **Amount: 1.48 Crore**

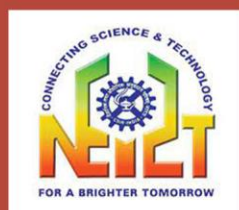


### MoU with CIPET Guwahati signed on research collab

NIPER Guwahati signed an MoU with Central Institute of Petrochemical Engineering and Technology (CIPET) Guwahati ensuring mutual cooperation in the field of academics and research. Dr. USN Murty, Director, NIPERG, and Mr. Sanjay Kumar Chaoudhary, Director & Head, CIPET-CSTS Guwahati, signed the documents during a programme organized at Conference Hall on 24<sup>th</sup> June 2022.

During these months, NIPERG has renewed previously signed MoUs with the following list of organizations to ensure progress of the institute through knowledge -sharing.

1. CSIR-North East Institute of Science and Technology (NEIST), Jorhat (Assam)
2. College of Veterinary Sciences (CVSc), Assam Agricultural University, Khanapara (Assam)
3. Guwahati Neurological Research Research Centre (GNRC), North Guwahati (Assam)
4. Guwahati Biotech Park (GBP), IIT Guwahati campus (Assam)



**GNRC**  
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**GUWAHATI BIOTECH PARK**



## Govt. of India recognised National Centres

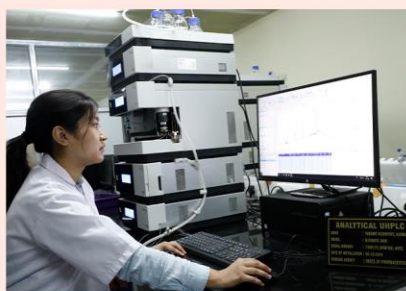
Sl. No.	Name of National Centres	Centre PI	Centre Coordinators	Funding Agency
1	North-Eastern Societal Aspect for Translational (NEST) Phytopharmaceutical/ Herbal Research Incubation Centre	Dr. USN Murty	Dr. Amit Alexander	BioNEST Scheme, BIRAC, DBT, Govt. of India
2	National Centre for Pharmacoengineering (State-of-the-art facility)		Dr. Subham Banerjee	DPRP Scheme, DST, Govt. of India
3	Centre of Excellence to Study and Access the Knowledge of Traditional Healthcare Practices and Traditional Medicines used in Tribal Population and Revitalizing by Scientific Validation.		Dr. Ramu Adela	Ministry of Tribal Affairs, Govt. of India
4	QA and Value Addition Centre for Herbal Industry in the North Eastern States of India		Dr. P. Radhakrishnanand	TIES Scheme, Ministry Commerce, Govt. of India
5	Establishment of GMP accredited Pilot Scale Extraction Facilities for Development of Phytopharmaceutical Products from the Medicinal Plants for North East India		Dr. VGM Naidu	DBT, Govt. of India
6	Adverse Drug Reaction Monitoring Centre		Dr. Krishna Undela & Dr. Ramu Adela	NCC-PvPI, MoHFW, Govt. of India
7	Advanced Centre for Computer-Aided Drug Design (ACAD)		Dr. Vaibhav A. Dixit	MeiTY, Govt. of India
8	Animal Breeding Centre and GLP-accredited Biological Screening and Toxicology Centre		Dr. VGM Naidu	Ministry of DoNER, Govt. of India



# Central Instrumentation Facility (CIF)



3D Printer



Analytical UHPLC



Differential Scanning Calorimeter



Dissolution Apparatus



Electron Microscope



FTIR



GCMS



High Energy Ball Mill



HPLC



LC-MS/MS



NIR



QTOF



Rotary Evaporator



TGA



UV-VIS Spectrophotometer



## Alumni Voices

“ ”

*Being in this excellent institute, I learned the importance of hard work and resilience. If one continues to work hard, nothing can stop one from reaching their full potential. NIPERG provides a massively rich experience and excellent opportunities for the overall development of young minds.*



Mukesh Kumar  
M.S. (Pharm)  
Pharmacology & Toxicology (2013-15)

**Current Position**

Postdoctoral Researcher at Pharmacology and Drug Discovery, University of Hong Kong



Surender Gurram  
MS, Ph.D  
Pharmacy Practice (2012-13 MS, 2015-16 Ph.D)

**Current Position**

HEOR Analyst at AccuScript Consultancy

“ ”

*With its diversity in various aspects, I always feel that NIPER-Guwahati is a nature-gifted family for me. I spent more than 8 years there and during this, it taught me so many life lessons and gifted with two prestigious degree awards (Masters's degree and a Ph.D.).*







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