

Department of Biotechnology, IIIT NOIDA
Information related to Sponsored R&D Projects

Project Ongoing

S. No.	Principal Investigator	Co-Principal Investigator (Co-PI)/Co-Investigator (Co-I)	Title	Funding Agency	Start Date	End Date	Grant Amount (In Lakhs)
1.	Prof. Pammi Gauba & Prof. Vibha Rani	Prof. Shweta Dang (Co-pi) Centre Representatives: Prof. Reema Gabrani & Prof. Indira Sarethy	Development of Natural Product Laboratory for Advance Research	DST-FIST	March 2022	March 2027	INR 66.00 lakhs
2.	Prof Pammi Gauba	Prof Pammi Gauba and Dr Shweta Dang	Validation of blood bag Delivery by Drones compared to conventional method of transportation	ICMR	Dec 2022	March 2023	INR 10.38 lakhs
3.	Prof. Sudha Srivastava	Dr. Deepshi Thakral (Co-PI)	Development of Electrochemical biosensor for detection of circulating tumor DNA mutations in Acute myeloid leukemia	ICMR	July 2022	July 2025	INR 18.21 lakhs (for first year)
4.	Dr. Shazia Haider	Prof. Pammi Gauba	Identification of key regulators and their controlling Mechanism in a combinatorial amyotrophic lateral sclerosis Network: an integrated bioinformatics analysis	Life Sciences Research Board (LSRB), DRDO	June 2022	June 2025	INR 24 lakhs
5.	Dr. Jyoti Sharma (Institute of Bioinformatics)	Prof. Vibha Gupta (IIIT)	Development of computational framework for COVID-19 multi-omics data analysis.	ICMR	May 2022	April 2024	INR 54.76 lakhs for first year
6.	Prof. Pammi Gauba		Biotechnology Solutions for Soil and Water Remediation	COE for Biotechnology Solutions, IIIT, Noida	April 2022	April 2025	INR 15 lakhs
7.	Dr. Smriti Gaur	.	Development of fortified prebiotic cookies using edible seeds	IIIT, Noida	April 2022	March 2024	INR 12.7 lakhs
8.	Prof. Vibha Gupta (IIIT)	Prof Punit Kaur (AIIMS) Dr Jyoti Sharma (Institute of Bioinformatics)	Reverse pharmacology and multi-target approach for designing of novel therapeutics and candidates for Covid-19.	ICMR	April 2022	April 2024	INR 10.51 lakhs for first year
9.	Dr. Ashwani Mathur	Prof. Pammi Gauba	Design and fabrication of amperometric enzyme sensors for the detection of parabens	Department of Biotechnology, GoI	July 2021	July 2023	INR 34.7 lakhs

10.	Dr. Ashwani mathur	Prof. Pammi Gauba	Evaluation of the production strategies, nutritional value and therapeutic properties of probiotic Seabuckthorn juice	DST, GoI under India-Egypt Bilateral Research Grant	February 2021	February 2023	INR 12.6 lakhs
11.	Prof. R.K. Gupta (RLA college, DU)	Prof. Vibha Gupta (JIIT) Dr. Perna Diwan (RLA college)	Targeting biofilm formation by inhibiting Cysteine biosynthesis pathway enzymes in ESKAPE pathogens with natural products.	ICMR	February 2021	January 2024	INR 42.3 lakhs
12.	Prof. Shweta Dang	Prof Pammi Gauba	Nose to brain delivery of surface-modified drug loaded PLGA nanoparticles for management of Trigeminal Neuralgia.	ICMR, Govt of India	August 2020	July 2023	INR 40.6 lakhs
13.	Prof. Pammi Gauba	Prof. Shweta Dang	Exploring the efficacy of plants and microbes for the remediation of E-waste contaminated soil.	Ministry of Environment, Forest & Climate Change	November 2019	November 2022	INR 48.44 lakhs
14.	Dr. Garima Mathur	Prof. Pammi Gauba	Developing functional bacterial cellulose composites as immobilization matrix	Council of Science and Technology, UP	November 2019	November 2021 (ongoing; applied for extension, response awaited)	INR 6.8 lakhs
15.	Prof. Pammi Gauba	Dr. Anupam K. Mangal	Evaluation of Heavy Metals Content in the Market Samples of Raw Drugs used in Ayurveda	Ministry of AYUSH	December 2017	December 2022	INR 41.06 lakhs

Project Completed

S. No	Principal Investigator	Co-Principal Investigator(Co-PI)/Co-Investigator(Co-I)	Title	Funding Agency	Start Date	End Date	Grant Amount (in lakhs)
1.	Prof. S Krishna Sundari	Prof. Sudha Srivastav	Application of customized PGPM based formulations for reclamation of soil permeated with Organophosphate pesticide residues.	DBT	2017	2022	INR 62.10 lakhs
2.	Prof. Vibha Rani		Investigating microRNAs as the Next Generation Therapeutic Targets in Diabetic Cardiomyopathy.	SERB	2018	2022	INR 39 lakhs
3.	Prof. Indira P Sarethy	Dr. Hari Prasanna Deka-Boruah (CSIR-NEIST)	Potentially novel carbohydrases (cellulase and related enzymes) for waste management from cultivable bacteria and functional metagenomic library of Northeast India biodiversity hotspot	DBT	2017	2020	INR 22 lakhs
4.	Dr. Sanjay Gupta	Prof. Reema Gabrani	Identification of cellular targets of Chikungunya virus non-structural proteins	ICMR	2016	2019	INR 34.1 lakhs
5.	Prof. Vibha Gupta (JIIT)	Late Dr. Chittaranjan Rout (JUIT)	Development of glyoxylate and methyl- citrate cycles essential for persistence of Mycobacterium tuberculosis	ICMR	2015	2018	INR 33.7 lakhs
6.	Dr. S Krishna Sundari		Biotechnological solution for attaining longer shelf life and portability of microbial inoculum	Trident GreenTec hPvt. Ltd., Andhra Pradesh	2015	2016	INR 3.69 lakhs
7.	Prof. Sudha Srivastava	Prof. Vibha Gupta	Nanoparticles based amperometric biosensors for detection of thyroid	DST	2014	2017	INR 37.30 lakhs
8.	Prof Sujata Mohanty	-	Studies on the Phylogenomics and Population Genomics of Indian <i>Drosophila</i>	DST	2014	2017	INR 34. 01 lakhs
9.	Dr. Nidhi Gupta	Dr Sanjay Gupta	Development of a biocatalyst for the removal of nitrogen and sulphur from diesel.	DBT	2014	2016	INR 25.00 lakhs
10.	Dr. Sanjay Gupta		Development for reagents for simple immunochemical tests for the detection of Chikungunya infection	DBT	2014	2017	INR 18.2 lakhs
11.	Prof. Shweta Dang	Prof. Reema Gabrani Prof Javed Ali	Development and evaluation of green tea catechins based intravaginal nanoemulsion gel for the treatment of urinary	DBT	2013	2016	INR 23.35 lakhs

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12.	Prof. Vibha Gupta (JIIT)	Dr. Punit Kaur (AIIMS)	Structural Biology of Cyse from pathogenic organisms - Potential for rational drug design.	DBT	2013	2017	INR 42.9 lakhs
13.	Dr. Sanjay Gupta		Purification of Chikungunya Virus nsP3 Protein for Peptide Based Inhibitor and Structural Studies	DBT	2013	2016	INR 69 lakhs
14.	Prof. S Krishna Sundari		Ability of select PGPM strains to remediate organophosphate pesticides commonly applied in agriculture	DBT	2013	2015	INR 6.6 lakhs
15.	Dr. Nidhi Gupta	Dr. Sanjay Gupta/Dr. D.K. Adhikari (Indian Institute of Petroleum, Dehradun).	Development of a biocatalyst for dearomatization of diesel	DBT	2013	2015	INR 24 lakhs
16.	Prof. Vibha Rani		Stage Specific microRNAs profiling from developing chick embryonic heart	DBT	2012	2016	INR 42.4 lakhs
17.	Prof. Vibha Rani		Effect of Curcumin on Cardiac hypertrophy.	DBT	2012	2016	INR 32.9 lakhs
18.	Prof. Vibha Rani		Cardio-protective properties of Curcumin: Molecular Interaction of Cardiac Transcription Factors	DST	2012	2016	INR 19.9 lakhs
19.	Prof. S Krishna Sundari		Screening of native microbes with tannase ability, production of tannase and gallic acid using alternate growth substrate.	DBT	2012	2015	INR 19 lakhs
20.	Prof. Shweta Dang	Dr Manisha Singh Prof Javed Ali	Nanoparticle based Drug delivery system of some antiepileptic drugs for brain drug delivery through nasal route	DBT	2011	2014	INR 25 lakhs
21.	Prof. S Krishna Sundari	Dr. Reena Singh (TERI, New Delhi)	Formulation of Microbial Consortia with Parallel biofertilizer and biocontrol properties.	DBT	2010	2014	INR 57.39 (JIIT: 24.22) lakhs
22.	Dr. Sanjay Gupta	Prof. Reema Gabrani	Viral-viral and viral-host protein interaction in Chandipura virus	DST	2010	2013	INR 35.57 lakhs
23.	Prof. Sudha Srivastava	Dr. Nidhi Gupta	Designing a nanoparticle-based glucose biosensor	AICTE	2009	2012	INR 8.4 lakhs
24.	Prof Rachana	-	Scientific documentation and digitization of Indian medicine plants	NMPB Ayush	2008	2011	INR 7 lakhs

25.	Dr. Sanjay Gupta	Prof. Reema Gabrani	Mapping of interaction among Chikungunya proteins	DBT	2008	2012	INR 24.87 lakhs
26.	Dr Sanjeev Sharma	Dr. Sanjay Gupta	Upgradation of comparative and functional genomics lab.	AICTE	2008	2009	INR 7 lakhs
27.	Dr Sujata Mohanty	-	Inferring the Origin, Population Structure and Demographic History of <i>Drosophila malerkotliana</i> with Population Genomic Approach.	DST	2007	2010	INR 7.44 lakhs

Project sanctioned

S. No.	Principal Investigator	Co-Principal Investigator(Co-PI)/Co-Investigator(Co-I)	Title	Funding Agency	Start Date/ Year	End Date/ Year	Grant Amount
1	Prof. Vibha Rani	Prof. Pammi Gauba	Study to Explore Cross Kingdom Regulation of Anticancerous Indian Herbs Derived XenomiRs in Lung Cancer: Basic Research for Future Herbal Oncotherapeutics	ICMR	--	--	Technically Approved. Sanction order awaited
2	Prof. Shweta Dang	Prof. Pammi Gauba	Nano-carrier based nose to brain delivery for anti-psychotic drugs and natural compounds	ICMR	--	--	Technically Approved. Sanction order awaited
3	Prof. Vibha Gupta (JIIT)	Punit Kaur (AIIMS); Jyoti Sharma (Institute of Bioinformatics)	Reverse pharmacology and multi-target approach for designing of novel therapeutics and candidates for Covid-19.	ICMR	April 2022	April 2024	42.9 lakhs
4	Jyoti Sharma (Institute of Bioinformatics)	Prof. Vibha Gupta (JIIT)	Development of computational framework for COVID-19 multi-omics data analysis.	ICMR	May 2022	April 2024	28.3 lakhs
5	Prof. S Krishna Sundari	Dr. Kamlesh	Evaluate ectomycorrhizal diversity in mining-disturbed and undisturbed forest ecosystems in Bastar region, generate metabolic activity profiles of forest ectomycorrhizae and propose best performing isolates for soil restoration	DBT	---	---	Technically Approved. Sanction order awaited

Students Projects where Faculty is a Mentor:

S No.	Student funded Projects (Title of Project)	Name of PI/ Faculty Mentor	Amount (Rs. in Lakh)	Year of start and Completion	Funding Agency
1.	Presence of antibiotics in soil and its remediation	PI: Ms. Arushi Saxena; Mentor: Prof. Pammi Gauba	30.97	2023-2025	DST
2.	Co-administration of Metformin and Vitamin D fro their additive antihyperglycemic effects of nano-formulation for their enhanced targeting and efficacy: An in-vitro study.”	PI: Sakshi Tyagi; Mentor: Dr Shalini Mani	23 Lacs	2022-2024	ICMR-SRF
3.	Investigation of Indian Herbs as ACE2 and TMPRSS2 modulator in HCQ Induced Cardiotoxicity	PI:Priyadarshini Gupta, Mentor: Prof Vibha Rani	24.2	2021-26	DST – Inspire
4.	Ayurvedic herbal formulations in modulating gut microbiota which is associated with diabetic cardiomyopathy.	PI:Shivani Singhal, Mentor: Prof Vibha Rani	24.2	2019-24	DST – Inspire
5.	<i>Syzygiumcumini</i> polyphenols in drug induced cytotoxicity.	PI:Renu Bhadana, Mentor: Prof Vibha Rani	24.24	2019-24	CSIR-JRF
6.	To develop a millet-based fermented food product and assessment of its nutritional and functional properties.	PI: Rishibha Gupta, Mentor: Smriti Gaur	24.6	2019-24	DBT
7.	Designing an alternative cancer therapy by study of anticancerous herbs for their potential mitocan activity.	PI: Geeta Swargiary, Mentor: Dr Shalini Mani	22.08	2018-23	NFST (Ministry of Tribal affairs),
8.	Analysis of host interactors of Chikungunya virus non structural Protein 1	PI:Ritu Ghildiyal, Mentor: Prof Reema Gabrani	16.2	2019-22	CSIR-SRF
9.	Structure, function and inhibition of isocitrate lyases of <i>Mycobacterium tuberculosis</i> .	PI: Ms. Monika, Mentor: Dr. Vibha Gupta	22	2016-2021	DST - Inspire
10.	Fabrication of nanotechnology based point- of-care device for thyroid disease diagnosis.	PI: Rahul , Mentor: Sudha Srivastava	22	2016-2021	DST - Inspire
11.	Genomics of diverse Wolbachia species in Indian Drosophila and to study host-symbiont interactions	PI: Ms. Kopal Singhal, Mentor: Dr Sujata Mohanty	17	2017-2021	CSIR- JRF & SRF
12.	PLGA Nanoparticles for Baclofen and Lamotrigine: Nose to brain delivery	PI: Mr.Kuldeep Nigam, Mentor: Dr Shweta Dang	7.1	2019-2021	CSIR-SRF
13.	Development of PLGA nanoparticles loaded with donepezil and memantine for brain drug delivery through nasal route in Alzheimer’s disease.	PI: Ms. Atinderpal Kaur, Mentor: Dr. Shweta Dang	26	2017-2020	BioCARE -DBT

14.	Nanotechnology based vaccine development against Hepatitis E virus.	PI:Dibya Rani, Mentor: Sudha Srivastava	22	2015-2020	DST - Inspire
15.	Investigating microRNAs and Matrix metalloproteinases as therapeutic target in glucose induced cardiac stress	PI: Mr. Sharad Saxena, Mentor: Dr. Vibha Rani	9.1	2018-2020	CSIR-SRF
16.	Cardioprotective Effects Of Curcumin Against Drug Induced Toxicity	PI: Ms. Aditi Jain, Mentor: Dr. Vibha Rani	9.1	2018-2020	CSIR-SRF
17.	Bioprospection of microorganisms from selected niche habitats (soil/rock) for antimicrobial products.	PI: Mrs. Nidhi Srivastava Mentor: Dr. Indira P Sarethy	22	2014-2019	ICMR
18.	Analysis of Chikungunya virus nsP3 protein micro/macro interactors.	PI: Ms. Ipsita Nandi, Mentor: Dr. Sanjay Gupta	20	2018-2019	DST- (WOS- A)
19.	Identification of peptide/protein binders of Chikungunya Virus.	PI: Ms. Garima Agarwal, Mentor: Dr. Sanjay Gupta	22	2015-2019	DST- Inspire
20.	Studies on production of therapeutically important saponins using <i>in-vitro</i> culture of <i>Bacopa monnieri</i> .	PI: Ms. Pragya Bhardwaj, Mentor: Dr. Ashwani Mathur	20	2014-2018	DST
21.	Rational Structure-based development of potent inhibitors targeting mycobacterial cysteine biosynthetic pathway: in silico and experimental drug design against <i>M. tuberculosis</i> CysE.	PI: Mrs. Sunita Gupta, Mentor: Dr. Vibha Gupta	16	2015-2018	DST
22.	Differential expression pattern of miRNAs in rice root during Cr(VI) stress.	Young Scientist: Dr. Sonali Dubey, Mentor: Dr. Vibha Rani	33	2015-2018	DST
23.	Bioprospection of Actinomycetes from Indian desert and antimicrobial activity of selected isolates	PI: A.Ibeyaima, Mentor: Dr. Indira P. Sarethy.	18	2012-2017	DST- INSPIRE
24.	Deciphering the host interactions of Chandipura virus matrix protein	PI: Mr. Sreejith Rajasekharan, Mentor: Dr. Sanjay Gupta	3	2014-2015	ICMR-SRF