

Sl. No.	Year of Sanction	Investigator	Project title	Funding agency	Project objective
1	2016	Dr Santanu Palchaudhuri	Understanding the transcriptional Regulatory Network controlling Epithelial Mesenchymal Transition	DST-SERB	<ol style="list-style-type: none"> 1. Mapping the expression profile of nuclear proteins, specifically transcriptional regulators in a time dependent manner following EMT activation. 2. Unravelling the significance of the observed changes in expression level of the transcriptional regulators towards EMT. 3. Examining the inter-dependency/ cross-talking among the transcriptional regulators of EMT. 4. Identification of target genes for the novel transcriptional regulators (EMT-TFs)
2	2016	Dr Ashima Bhattacharjee	Mechanism and Consequences of disruption of cellular copper homeostasis	DST-SERB	<ol style="list-style-type: none"> 1. Dissecting mechanism of copper homeostasis dysregulation mediated by disruption of ATP7B 2. Investigating organelle specific redox perturbation in response to copper homeostasis dysregulation 3. Investigating the role of copper homeostasis dysregulation in tumorigenesis
3	2017	Dr Ashima Bhattacharjee	Understanding the interplay of cellular copper and redox homeostasis in neuronal & glial differentiation	DST-SERB	<ol style="list-style-type: none"> 1. Investigating the role of copper homeostasis in neuronal and glial differentiation & neuron-glia communication 2. Investigating the role of compartment specific redox homeostasis in neuronal differentiation 3. Investigating the role of WD mutations in neuronal copper and redox homeostasis

Sl. No.	Year of Sanction	Investigator	Project title	Funding agency	Project objective
4	2018	Dr Surajit Chattopadhyay	Exploring the evolution of the universe by unifying inflation with late-time acceleration in viscous modified gravity cosmology	Council of Scientific and Industrial Research (CSIR)	<ol style="list-style-type: none"> 1. Studying the effects of possible existence of a bulk viscosity on the cosmological dynamics of the universe with different parameterization schemes for the equation of state parameter aimed at studying the cosmological evolution with bulk viscosity in the framework of modified gravity 2. Looking into a fluid description of the inflationary universe in which the equation of state for a fluid includes bulk viscosity in modified gravity framework 3. Studying cosmological bounce for modified gravity in presence of bulk viscosity along with study of future singularities in the effective dynamics of loop quantum cosmology in presence of bulk viscosity along with study of evolution of perturbations of the matter bounce in modified gravity framework
5	2018	Dr Kajari Dutta	Design of Ag decorated Oxide Quantum Dot / Graphene Nanocomposites: Highly efficient Eco-friendly visible light photocatalyst	SERB, Govt of India	<ol style="list-style-type: none"> 1. Synthesis of different wide band gap semiconductor oxides quantum dots (QDs) and studying their photocatalytic performances to degrade various toxic dyes under visible and UV light irradiations 2. Synthesis of oxide-graphene composites of synthesized oxide QDs to increase the visible light absorptivity of the photocatalyst, which results in improved catalytic efficiency of degradation of different toxic dyes under solar light illumination 3. Decoration of plasmonic nanoparticles on oxide QDS-Graphene composites to tune the absorptivity of oxide more towards visible region and enhance the charge transfer from plasmonic nanoparticles to QDS-Graphene composites, which results highly efficient photocatalytic performance of oxide QDs under solar light illumination.

Sl. No.	Year of Sanction	Investigator	Project title	Funding agency	Project objective
6	2018	Dr Raja Bhattacharya	Identification and characterization of a conserved signaling pathway regulating feeding behavior: implications for obesity	DBT	<ol style="list-style-type: none"> 1. Utilizing a “single-synapse” in vivo model to study D2-like dopamine (DA) receptors 2. Investigating cellular and molecular role of D2-like receptors in food-related behaviors
7	2018	Dr Soumitra Sau	A molecular approach to study genome and episome stability factors	DBT, India	<ol style="list-style-type: none"> 1. Identifying the molecular mechanisms of segregation of extra-chromosomal elements in eukaryotes 2. Identifying novel host targets of viral pathogens during episome propagation 3. Understanding the impact of parasitism on the evolution of host proteins by investigating the functional consequences of positive selection 4. Understanding the regulation of yeast Elg1 by DNA damage checkpoint protein kinases 5. Unravel the coordination of genome stability factors and chromosome segregation machinery to preserve genome integrity 6. Studying pathogenic yeasts’ genome stability factors
8	2018	Dr Pradip Kumar Sukul	Design and Synthesis of Amphiphilic Metallo-Peptide Complex Arrays as Biomaterials for Drug/siRNA Delivery, Cancer Therapy and Anti-Amyloid Agents	DST INSPIRE	<ol style="list-style-type: none"> 1. Design, synthesis and characterization of novel amphiphilic Metallo-Peptide Complex Arrays (MPCAs) 2. Self Assembly studies of the synthesized MPCAs 3. Applications of the pure/self-assembled MPCAs for anticancer and anti-amyloid activity in the lab. 4. Finally, animal experiment will be performed in collaboration with other research group

Sl. No.	Year of Sanction	Investigator	Project title	Funding agency	Project objective
9	2019	Dr Swatilekha Ghosh	Deciphering the role of the Unfolded Protein Response (UPR) Pathway to combat chemo-resistance in triple negative breast cancer cells	DST-SERB	<ol style="list-style-type: none"> 1. Evaluation of the effect of Emodin on TNBC cells, viz, MDAMB-231 and MDAMB-468 cells. 2. Establishment of different conventional chemotherapy resistant (Doxorubicin, Paclitaxal) TNBC cell lines and check the role of Emodin in chemo-sensitization of these cells 3. Deciphering the involvement of Emodin in controlling the expression of different ABC transporter genes, associated with chemoresistance in TNBC cells 4. Delineating the role of Emodin in maneuvering UPR pathway responsible for controlling the ABC drug transporters contributing towards drug-resistance in TNBC cells
10	2019	Dr Surajit Bhattacharya	Genetic engineering approach to increase storage lipid synthesis in rice leaves for sustainable biofuel production	DST-SERB	Developing a transgenic rice plants accumulating higher content of storage lipids in vegetative tissues
11	2019	Dr Sujay Ray	Mutational and Structural Analysis Centering Gp130 and its interaction in Cancer and AIDS: An In Silico Approach to Explore Residual Participation in Cellular Signalling” under guidance	ICMR	<ol style="list-style-type: none"> 1. Interaction of IL11, IL11Rα and Gp130 for platelet recovery due to Chemotherapy induced Thrombocytopenia 2. Mutational effects on IL11, Interaction Pattern and Residual Involvement with IL11Rα and Gp130 3. Human Gp130- as a drug target for cancer therapy

Sl. No.	Year of Sanction	Investigator	Project title	Funding agency	Project objective
8	2018	Dr Pradip Kumar Sukul	Design and Synthesis of Amphiphilic Metallo-Peptide Complex Arrays as Biomaterials for Drug/siRNA Delivery, Cancer Therapy and Anti-Amyloid Agents	DST INSPIRE	<ol style="list-style-type: none"> 1. Design, synthesis and characterization of novel amphiphilic Metallo-Peptide Complex Arrays (MPCAs) 2. Self Assembly studies of the synthesized MPCAs 3. Applications of the pure/self-assembled MPCAs for anticancer and anti-amyloid activity in the lab. 4. Finally, animal experiment will be performed in collaboration with other research group
12	2020	Dr Swatilekha Ghosh	Elucidating the crosstalk between the ER stress pathway and the miRNA axis to impart anti-carcinogenic effect on NSCLC: Involvement of a synthetic dihydropyrimidone, Nifetepimine	CSIR	<ol style="list-style-type: none"> 1. Elucidating the role of nifetepimine in inducing apoptosis in NSCLC cells 2. Studying the involvement of nifetepimine in regulation of GRP78 expression to control growth of NSCLC cells 3. Identifying and evaluating the role of the individual miRNAs as upstream regulators of GRP78 in NSCLC cells 4. Investigating the role of nifetepimine in regulating the miRNA axis to in turn modulate GRP78 mediated downstream signaling cascade in NSCLC cells 5. Extrapolating the in vitro finding to chick CAM xenograft models

Sl. No.	Year of Sanction	Investigator	Project title	Funding agency	Project objective
13	2020	Dr Rudranil De	Evaluation of mitochondrial dynamics mediator proteins Drp1, Opa1 and mitophagy regulator PINK1 as potential therapeutic targets in signalling pathways that alter metabolism associated with cancer cell proliferation	DST-SERB	<ol style="list-style-type: none"> 1. Kinetic assessment of the cellular decision point and key players involved in the gastric cancer progression 2. Influencing of the mitochondrial morpho-dynamics mediators in deciding cell fate will be assessed by means of various pharmacophoric intervention 3. Evaluation of the effect of NSAIDs administration on bioenergetics status of cancer
14	2020	Dr Amit Ranjan Maity	Nanocarriers for intracellularly-targeted drug delivery	DBT-RLF	Determining the contribution of intracellular targeting to the efficiency of anticancer therapy
15	2020	Dr Debasish Roy	Financial Assistance for National Conference	NBHM	Providing mathematics training to undergraduate students of statistics supported by National Board for Higher Mathematics, Department of Atomic Energy
16	2020	Dr Raja Bhattacharya	Interrogating a conserved Somatostatin-like peptidergic signaling system in C. elegans: implications for Major Depressive Disorder pathophysiology	DST-SERB	<ol style="list-style-type: none"> 1. Mechanisms through which NLP-18/SST alters neural circuit properties to generate behavioral flexibility 2. Defining the molecular components involved in NLP-18/SST signaling 3. Establishing a novel mechanistic link between the neuromodulators NLP-18/SST and 5-HT

Sl. No.	Year of Sanction	Investigator	Project title	Funding agency	Project objective
17	2021	Dr Sumanta Nayek	Qualitative estimation of subsurface waterflow and identification of contaminant mobilization in mining areas using nanomaterials as tracers	DST	<ol style="list-style-type: none"> 1.To study the stability and diffusion properties of the nanoparticles in simulated geo environments in laboratory. 2.To address water management issues in mining areas. 3.To monitor the heavy metal contaminant plume that is generated in the left over mines.
18	2021	Dr Harshata Pal	Circular Urban Cultivation Systems with Reuseable Textile Growing Substrates	IGSTC-DST	<ol style="list-style-type: none"> 1. Development of re-useable textile substrate for urban cultivation systems 2. Development of substrate cleaning process to ensure re-usability 3. Adaptation of urban cultivation systems in Germany and India

Sl. No.	Year of Sanction	Investigator	Project title	Funding agency	Project objective
19	2021	Dr Soumitra Sau	A crosstalk between DNA replication and chromosome segregation machineries	DST-SERB	<p>1. Studying role of Elg1 in chromosome segregation: 1.1 Examining Elg1-CTD and Spc25 interaction 1.2 Identify protein(s) required for Elg1-CTD and Spc25 interaction 1.3 Conduct assays to test segregation defect of elg1 cells 1.4 Identify additional Elg1-CTD interacting proteins involved in chromosome segregation process • Aim 2. Analysis of Elg1 – chromatin association: 2.1 Study of Elg1 association with specific genomic loci involved in chromosome segregation 2.2 Profiling of cell-cycle specific Elg1 – chromatin binding at mentioned genomic regions (2.1) to evaluate M-phase specific Elg1 function 2.3 Identify mediator protein(s) for Elg1 – chromatin association • Aim 3. Assessment of kinetochore – microtubule (KT - MT) interaction in elg1 mutant: 3.1 Dicentric plasmid stability assay in elg1 mutant 3.2 Viability assay of elg1 cells in presence of MT poisons.</p>
20	2022	Dr Susmita Singh	Development of irradiation-induced nano carbon allotrope supported novel plurimetallic electrocatalyst for Low Temperature Fuel Cell	UGC DAE CSR	<p>1. Surface modification of carbon-based support materials (MWCNT, nano carbon allotropes) by Ion Irradiation method for tailoring properties by creating defects and adjusting structure in a controlled way 2. Synthesizing noble metal nanocatalysts supported on carbon allotropes having characteristics feature for potential electro-catalytic performance, by Gamma Irradiation Induced reduction method of metal ions at room temperature. 3. An alloying strategy involving Pt-based bimetallic and trimetallic nanocatalysts can be taken for tailor made plurimetallic catalyst.</p>

Sl. No.	Year of Sanction	Investigator	Project title	Funding agency	Project objective
21	2022	Dr Mansi Rastogi Dr Rupashree Baral	What stops Indian female athletes?: Exploring a mechanism for their ramp up	National Commission for Women	<ol style="list-style-type: none"> 1. Identifying the social challenges (e.g., family, society, stereotyping based on sex) being faced by women athletes 2. Identifying the financial and infrastructure-related concerns/ expectations of the women athletes 3. Studying the level of awareness among female athletes about the protection of their rights against any exploitation 4. Identifying and proposing encouraging policies to have a greater number of female participations in sports
22	2022	Dr Suddhasanta Dey	Performance Analysis and NPA Management of Indian Banking Sector	Indian Council of Social Science Research	Estimation of sustainable future performance and probability of sustenance of Indian banks applying CAMEL variables based vector-autoregressive model
23	2022	Dr Ankan Dutta Chowdhury	A dual modal diagnostic approach for sensitive detection of viral diseases	Regional Centre for Biotechnology, DBT	<ol style="list-style-type: none"> 1. Develop a comprehensive dual modal diagnostic system capable of detecting viral diseases with high sensitivity. 2. Integrate multiple diagnostic techniques to enhance the accuracy and reliability of viral disease detection. 3. Investigate the feasibility and effectiveness of combining different diagnostic modalities for improved sensitivity in viral disease detection. 4. Optimize the dual modal diagnostic approach to achieve rapid and efficient detection of a wide range of viral pathogens.

Sl. No.	Year of Sanction	Investigator	Project title	Funding agency	Project objective
24	2023	Dr Rashi Dubey Mishra	Vedic Literature for Developing Scientific Literacy and Spiritual Intelligence among Students: A Philosophical Study	ICPR-Ministry of Education	Identifying the role of the Vedas in promoting Scientific Temper and Spiritual Intelligence among students
25	2023	Dr Surajit Bhattacharya	Towards developing 'zero-As' rice grains: A multigene engineering approach to limit root-to-shoot transport of As in rice	SERB	Developing a transgenic rice plant accumulating low arsenic in the grains by limiting root-to-shoot translocation of arsenic using a multigenic approach.
26	2023	Dr Ankan Dutta Chowdhury	Detection of viral RNA by two-fold cyclic amplification method	DST-JSPS	<ol style="list-style-type: none"> 1. Develop a robust and sensitive two-fold cyclic amplification method for the detection of viral RNA, aiming to enhance the efficiency and reliability of viral RNA detection assays. 2. Evaluate the sensitivity and specificity of the developed two-fold cyclic amplification method in detecting various types of viral RNA, including but not limited to RNA viruses causing infectious diseases in humans, animals, and plants. 3. Investigate the potential application of the two-fold cyclic amplification method in clinical diagnostics, environmental monitoring, and surveillance programs for timely detection and management of viral infections, with a focus on scalability, cost-effectiveness, and ease of implementation in diverse settings.

Sl. No.	Year of Sanction	Investigator	Project title	Funding agency	Project objective
27	2023	Dr Amit Ranjan Maity	Targeted drug delivery to glioblastoma into the brain	Interstellar Initiative funded by Japan Agency for Medical Research and Development (AMED) and the New York Academy of Sciences (NYAS)	1. Preparation of DDS using chemical methods 2. Characterisation of DDS and determine the limiting conditions for drug delivery 3. Developing an efficient strategy treating glioblastoma and other intractable cancers.
28	2023	Dr Santanu Palchaudhuri	Understanding the role of Arid (AT-Rich Interaction Domain) Family of DNA Binding Proteins during Epithelial Mesenchymal Transition	CSIR-HRDG	1. Developing NMuMG cells devoid of Arid3a and Arid5a using CRISPR-CAS technology. 2. Investigating how these transcriptional (co)regulators influence the EMT process using the knockout cell lines. 3. Investigating the mode of action of Arid3a and Arid5a during EMT through identification of probable target genes.
29	2023	Dr Kajari Dutta	Financial Assistance for conducting National Conference	SERB, Govt of India; CSIR, Govt of India and American Chemical Society	Synthesis of different wide band gap semiconductor oxides quantum dots (QDs) and study their photocatalytic performances to degrade various toxic dyes under visible and UV light irradiations.