

Ongoing PROJECT DURING THE FINANCIAL YEAR 2019-20

Sr. No.	Title of the project	Sponsoring Agency	Project Investigator
1	Investigating the mechanism by which a newly identified E3 ligase degrades tumour suppressor p53 during DNA damage	DBT	Dr. Sagarsen Gupta
2	Bacterial inclusion bodies as a model for study of a-synucleinopathy sanctioned to Ms Sudeepa Srichandran to work under supervision of Dr. Amulya K Panda	DST	Ms Sudeepa Srichandran
3	DST'S INSPIRE Faculty Award Programme	DST	Dr. ASHIMA BHASKAR
4	Bioinformatics Information System (Immunology)-DIC	DBT	Dr. Debasisa Mohanty
5	DST'S INSPIRE Faculty Award Programme	SERB	Dr. Ekjot Kaur
6	Indo-UK collaboration Research Project on Biotechnology Cancer Research Programme	DBT	Dr. Anil Suri
7	DST'S INSPIRE Faculty Award Programme	SERB	Dr. Anismrita Lahon
8	JC BOSE FELLOWSHIP	SERB	Dr. Rajesh S. Gokhale
9	JC BOSE FELLOWSHIP	SERB	Dr. R.P. ROY
10	Understanding the function and regulation of SIRT6 in cancer metabolism	DBT	Dr.Sanjeev Das
11	Mechanisms by which bone proteins influence Aβ ₁₋₄₂ aggregation, amyloid deposition and immune response in mouse model of Alzheimer's disease	DST	DR. VIJI VIJAYAN
12	SERB' National Post Doctoral Fellowship scheme	SERB	Dr. Monika Malik
13	Mechanism and function of modulation of human immune responses by dengue virus non-structural protein 1	SERB	DR. NIMESH GUPTA
14	DBT-TANUVAS Canine Research Centre and Networks	DBT	Dr. Amulya Kumar Panda
15	Centre of Excellence on Molecular Machinery of Plasmodium : Signaling, Autophagy and Ubiquitin Proteasome System (UPS)	DBT	DR. PUSHKAR SHARMA
16	Peptide based subunit vaccine against Clostridium perfringens epsilon toxin	INSA	Dr. Lalit Garg
17	DST'S INSPIRE Faculty Award Programme	SERB	DR. SANCHITA DAS
18	Development of novel lipid and polymer based nano formulations for targeted delivery of antimalarial drugs	DBT	Dr. Agam Prasad Singh
19	Establishment of a road map of signaling and trafficking cascades in malaria parasite - R&D project	DBT	DR. PUSHKAR SHARMA

20	In silico analysis of signaling and Protein-Protein Interaction (PPI) networks in <i>P. falciparum</i> and identification of novel modulators/inhibitors of signalling and PPI	DBT	Dr. DEBASISA MOHANTY
21	SERB' National Post Doctoral Fellowship scheme	SERB	Dr. Ravi Kumar
22	Joint collaboration agreement between NII and M/s Indian Immunological Ltd. (IIL), Hyderabad for the Project on " Expression of recombinant proteins virulent factors of <i>Clostridium novyi</i> , and <i>Clostridium chauvoei</i> , for use as vaccine candidates	IIL	Dr.L.C.Garg
23	SERB' National Post Doctoral Fellowship scheme	SERB	Dr. Md. Maroof Alam
24	Modulation of oral tolerance by innate and adaptive immune cells	DBT	Dr. Anna George
25	Analysis of crosstalk between gut microbiota and host factors in calibrating IgA responses	SERB	Dr. Anna George
26	Investigating collaboration between TNF signal and activating mutation in the non-canonical NF- κ B module in multiple myeloma	SERB	DR. SOUMEN BASAK
27	Functional characterization of an Immunomodulatory protein in <i>Plasmodium</i>	SERB	DR. AGAM PRASAD SINGH
28	Endothelial function and markers of valve damage in rheumatic heart disease	ICMR	Dr. PK Upadhyay
29	Genotype-phenotype relationship in rare genetic disorders: Physicochemical analysis of mutations in GNE myopathy and phenotypic modulation by small molecule effectors	DBT	Dr. Debasisa Mohanty
30	Mechanisms of stress tolerance in <i>Mycobacterium tuberculosis</i> and its physiological relevance	DBT	DR. VINAY NANDICOORI
31	SERB' National Post Doctoral Fellowship scheme	SERB	Dr. Nimi Kiran Vashi
32	Using next generation genome editing tool CRISPR/Cas9 in <i>Caenorhabditis elegans</i> to understand the molecular link of nutrient signaling and aging	DBT	Dr. Arnab Mukhopadhyay
33	Role of RNA polymerase III generated non-coding RNAs in myelination	SERB	Dr. Aneeshkumar G Arimbasseri
34	Development of an immunohistochemistry assay to detect <i>Mycobacterium tuberculosis</i> PknB PASTA antigen for diagnosis of extrapulmonary tuberculosis	SERB	DR. VINAY NANDICOORI
35	Investigating the role of phosphorylation in modulating the cell division and cell wall synthesis in <i>Mycobacterium tuberculosis</i>	SERB	DR. VINAY NANDICOORI
36	Molecular genetic characterization of a protein kinase that regulates insulin signaling (National	DBT	Dr. Arnab Mukhopadhyay

	Bioscience Award)		
37	DST'S INSPIRE Faculty Award Programme to DR. Rakesh Pandey	SERB	DR. RAKESH PANDEY
38	SERB' National Post Doctoral Fellowship scheme	SERB	Dr. Hassan Mubarak Ishqi
39	Core Project "Centre of Excellence in vaccine delivery using biodegradable polymeric particles	DBT	DR. AK PANDA
40	DST'S INSPIRE Faculty Award Programme to DR. Sneh Lata	SERB	DR. SNEH LATA
41	Centre of Excellence in vaccine delivery using biodegradable polymeric particles - Immunogenicity of nanoparticle-based polysaccharide vaccine	DBT	DR. AK PANDA
42	Centre of Excellence in vaccine delivery using biodegradable polymeric particles - Why glycoconjugate vaccines work : The B cell side of the story	DBT	DR. DEVINDER SEHGAL
43	Investigating whether BLM helicase regulates the functions of multiple oncogenic gbw7 substrates by enhancing their turnover	CSIR	Dr. Sagar Sengupta
44	Understanding the role of novel p53 target gene cyclin F in p-53 functions	DBT	DR. SANJEEV DAS
45	Mapping the hierarchical participation of assembly factors during ribosome assembly	DBT	DR. VINAY NANDICOORI
46	Genetic studies to understand mitochondrial electron transport chain dysfunction using caenorhabditis elegans	DBT	DR. ARNAB MUKHOPADHYAY
47	DST'S INSPIRE Faculty Award Programme to DR. Ritu Mishra	SERB	DR. RITU MISHRA
48	Ramalingaswamy Fellowship for the project "Investigation of the Dynamics of T helper cell ;Responses Induced by a Viral Vaccine"	DBT	DR. NIMESH GUPTA
49	Cytokines and growth factors mediated migration and invasion of trophoblastic cells under normal & hypoxic conditions:Deciphering the relevance of cell signaling and miRNAs	DBT	DR. SK GUPTA
50	Role DNA replication proteins in preserving centrosomal integrity and preventing genomic instabiligy and carcinogenesis	SERB	DR. SANDEEP SAXENA
51	Interactomeanalysis of HIV-I subtype C accessory proteins DHR/ICMR project transfered from University college of Medical Science & GTB Hospital	ICMR	DR. Snehlata
52	Delineation of the role of human chorionic gonadotropin in tumor progression	DBT	Dr. Rahul Pal

53	Directorate of Rice Research of ICAR	ICAR	Dr. Anil Suri
54	To study the macrophage function in T cell-deficient mice and its underlying mechanisms in context of mycobacterium tuerculosis infection	DBT	Dr. Sangeeta Bhaskar
55	JC BOSE FELLOWSHIP sanctioned to Dr. Pushkar Sharma	SERB	DR. PUSHKAR SHARMA
56	Role of tRNA biogenesis in neuronal gene expression The Ramanujan Fellowship award to Dr. G. Aneeshkumar Arimbasseri	SERB	DR. ANEESHKUMAR AG
57	Influence of CTCF on chromatin organization relevant for regulation of TCRb locus	DBT	DR. MADHULIKA SRIVASTAVA
58	Molecular and cellular biology of prostate cancer and Its implications in early Detection and diagnosis	SERB	DR. ANIL SURI
59	Phosphorylation of the inner membrane complex of malaria parasite	DST	Dr. Pushkar Sharma
60	Integrative functional analysis of the human immune responses to ta flavivirus vaccine	DBT	Dr. Nimesh Gupta
61	Usage of CRISPR-generated isogenic model systems to identify and validate small molecules which can reverse drug resistance	DBT	Dr. Sagar Sengupta
62	Investigating the role of BLM helicase as a global tumor suppressor : under- standing its regulatory loops and using the knowledge for therapeutic and clinical applications in cancer biology	DBT	Dr.Arnab Mukhopadhyay
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65	JC BOSE FELLOWSHIP	SERB	DR. SK GUPTA
66	Mechanistic investigatins of UDP-N-acetyl-D-galactosaminopolyptide N-acetyl-D-galactosaminyl transerases (ppGalNAcT) involved in the biosynthesis of mucin type O-glycosylation	SERB	Dr. Srinivasagopalan Sampathkumar
67	Rational design of small molecule inhibitors for a bifunctional enzyme L-histidinol dehydrogenese (HisD) from mycobacterium tuberculosis	ICMR	Dr. Bichitra Kumar Biswal
68	Fellowship To Dr. C. SHAHA	DST	Dr. C. SHAHA
69	Regulation of neuronal cell cycle during differentiation and death	DBT	Dr. Pushkar Sharma

70	Multi-functional Nanomaterial systems for modulation of glycosylation in animals	DST	Dr. Srinivas Gopalan Sampathkumar
71	Investigation into the role of melanocytes in skin wound healing	SERB	Dr. Rajesh S. Gokhale
72	Understanding the machinery involved in positioning a unique motif of Helicobacter pylori arginase and its implication to design a novel class of inhibitors	DBT	Dr. Apurba Kumar Sau
73	Role of chromokinesin and kinesin motor proteins in driving chromosomal aberrations	DBT	Dr. Sandeep Saxena
74	Analysis of eRNA at Enhancer Eb of murine TCRb locus	SERB	Dr. Madhulika Shrivastava
75	Towards differential diagnosis of Tuberculosis at extrapulmonary sites using blood based gene signatures	DBT	Dr. Rajesh Gokhale
76	Influence of maternal one-carbon (1C) metabolism in placental functional, fetal growth and programming	DBT	Dr. Arnab Mukhopadhyay
77	Investigating the role of JWA/Arl6ip5/GTRAP3-18 in the regulation of autophagy in neuronal cells and neurodegenerative disorders	SERB	Dr. Sarika Gupta
78	Unraveling the molecular mechanism of the transfer of octanoyl chain from C8-ACP to the lipoyl domains by the lipoate protein ligases B of Leishmania	SERB	Dr. Monica Sundd
79	Financial sanction of the award J C Bose Fellowship to Dr. Sagar Sengupta	SERB	Dr. Sagar Sengupta
80	Determining whether ubiquitylation of proteins on mitochondrial outer membrane negatively controls their entry into the organelle	SERB	Dr. Sagar Sengupta
81	Defining the molecular specificity in interferon regulatory factors leading	SERB	Dr. Prafulla Kumar Tailor
82	CRISPR-Case9 ribonucleoprotein-based genome editing to elucidate the mechanism of pathology of RNA modification enzyme mutations	DBT	Dr. Aneeshkumar Arimbasseri
83	Towards understanding the interaction between triphala and gut microbiota & its implication in alzheimer's disease	ICMR	Dr. Prabhat Upadhyay
84	Development of dendritic cell vaccine for the treatment of recurrent/metastatic reproductive cancers	ICMR	Dr. Anil Kumar Suri
85	Comprehensive analysis of the follicular helper T cell repertoire in flavivirus infection and vaccination	DBT	Dr. Nimesh Gupta

86	To Evaluate the effectiveness of foamy virus mediated gene delivery and strategies to induce transgene tolerance in a mouse model of haemophila A	DBT	Dr. Prafullakumar B Tailor
87	Structural and functional biology of membrane proteins from mycobacterium tuberculosis: Implications in the design of new anti-TB agents (submitted under call for proposal"Membrane structural biology")	DBT	Dr. Bichitra kumar biswal
88	Evaluation of the role and mechanisms of Rigampicin and its analogs in alleviating hyperglycemiarelated complications	DBT	Dr. Arnab Mukhopadhyay
89	Low-cost, multiplex point of care (POC) diagnostic test for differential diagnosis of fever	SERB	Dr. Anil Kumar
90	Characterization of a cyclin-dependent kinase that interacts with the insulin signaling pathway to regulate germ cell maturation, stress response and aging	SERB	Dr. Arnab Mukhopadhyay
91	Investigating the engagement of the NF-kB system during Chandipura virus infections	DBT	Dr. Soumen Basak
92	Plasma fractionation process for production of albumin, immunoglobulin and other products for therapeutic uses	BIRAC	Dr. Amulya Kumar Panda
93	Developing mycobacterium smegmaitis for metabolic engineering of delta-decanolactone/or/delta-dodecanolactone	BIRAC	Dr. Rajesh Gokhale
94	Molecular mechanisms mediated by vitamin D signaling on skeletal muscle function	DBT	Dr. Aneeshkumar Arimbasseri
95	Gene editing of key plasmodium transporters and lipid metabolism enzymes to decipher parasite drug resistance mechanisms	DBT	Dr. Pushkar Sharma
96	Delineating the role of commensal microbial consortium in Wnt/B-catenin dependent tolerance vs immunity: small molecule-directed protection against drug-resistant parasite infection	DBT	Dr. Tanmay Majumdar
97	Translational Research Consortium for establishing platform Technologies to support prophylactic and Therapeutic strategies for dengue discovery to proof-of-concept	BIRAC	Dr. Nimesh Gupta
98	Clinical applications of retinal neural like cells (RNLCS) derived from blood of retinitis pigmentosa (RP) patients	DST	Dr. P.K Upadhyay

99	Co-delivery of paclitaxel and anti PD-L1 siRNA by pH-responsive polymer capped PLGA tethered core-shell magnetic mesoporous silica nanocarrier for targeted breast cancer therapy	ICMR	Anuradha Gupta
100	DST'S INSPIRE Faculty Award Programme DR. Priyanka Shukla	SERB	DR. Priyanka Shukla
101	Nanoparticles mediated targeted delivery of drugs and cancer antigens for combination therapy in lung cancer treatment	DBT	Dr. Aditi Varshney under Dr. Amulya Kumar Panda
102	"Systems biology approaches to understand the biology of human CD4+helper T cells with cytotoxic potential (CD4-CTLs) in viral infections"	DBT / WELLCOME TRUST	DR. VEENA S PATIL
103	Investigating the role of DivIVA domain containing proteins in M. Tuberculosis	SERB	Dr. Vinay Kumar Nandicoori
104	Role of probiotic and EPC in high fat diet alcoholic induced liver disease	DST	Dr. Nidhi Chaudhary
105	"Exploring non-canonical NF-kappaB regulations in TNBS induced colitis"	ICMR	Ms. Meenakshi Chawla (SRF) under Dr. Soumen Basak
106	"Investigating on the functional consequences of modulation of glycosylation using non-canonical hexosamine analogues"	ICMR	Ms. Pratima Saini (SRF) under Dr. Srinivas Gopalan Sampatkumar
107	Structural and mechanistic studies of the galactofuran biosynthesis enzymes from mycobacterium tuberculosis	ICMR	Dr. Savita Yadav
108	Biochemical and functional analysis of plasmodium HSP40 family protein	ICMR	Mr. Mohammad Kashif (SRF)
109	Imparting sheath blight disease tolerance in rice	DBT	Dr. Amulya Kumar Panda
110	JC BOSE FELLOWSHIP sanctioned to Dr.Vinay Kumar Nandicoori	SERB	Dr.Vinay Kumar Nandicoori
111	Towards understanding the role of gut microbiota and their metabolites in the causation and treatment of colorectal cancer	SERB	Dr. Anil Kumar
112	Immunoengineering: Cell therapy platform	DBT	Dr. Amulya Kumar Panda

Completed PROJECT DURING THE FINANCIAL YEAR 2019-20

1	Deciphering the role of Mycobacterium tuberculosis Serine/Threonine protein phosphatase PstP	IFCPAR	Dr. Vinay K Nandicoori
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2	Signals regulating B cell development and maturation	SERB	DR. Anna George
3	Role of calcium and phosphoinositide regulated kinases in malaria parasite	DBT	Dr. PUSHKAR SHARMA
4	Stress induced micro RNA regulation of DNA replication	DBT	Dr. SANDEEP SAXENA
5	Functional role of a tetramer in Human Guanylate Binding Proteins and its implication on the antiviral activity National Bioscience Award	DBT	Dr. Apurba Kumar Sau
6	Development of procedures for restoration of fertility in cancer affected male individuals, post chemotherapy	SERB	Dr. SUBEER MAJUMDAR