



பாரதியார் பல்கலைக்கழகம்

BHARATHIAR UNIVERSITY

COIMBATORE - 641 046, TAMILNADU, INDIA.

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CENTRE FOR RESEARCH AND TECHNOLOGY DEVELOPMENT (CRTD) ON-GOING PROJECTS (SCIENCE)

S.No	Principal Investigator	Departments	Title of the Project	Funding Agency	Amount Sanctioned	Project started date
1	Dr.R.Sakthivel	Applied Mathematics	Disturbance rejection and tracking control design for periodic piecewise time-varying systems CRG/2020/002844).	DST-SERB-CRG	20,29,610	31.12.20
2	Dr.S.Girija	Bio – Technology	Synthesis and Analysis of Polyamine coated ZnO Nanoparticle formulations for seed priming to raise drought tolerance in Radish (<i>Raphanus sativus</i> L.)”	DBT	37,90,200	10.03.21
3	Dr.K.Ramachandran	Physics	Prediction of particle behavior in RF plasma and spherodization reactors using CFD	DRDO (HEMRL) – CARS	9,50,000	10.08.20
4	Ponmurugan	Botany	Bioinformatics approach for inhibition of toxic action of Russel's viper venom PLA2 by lichen compounds validated through Albino	ICMR	25,29,240	12.02.18
5	Dr.N.Arul	Zoology	Assessment of Epigenetic regulation and Protein modification in Human population influenced by transition metal ions from Industrial Effluents in Tamilnadu.	CSIR	14,14,667	17.07.20
6	Dr.T.Devi	Computer Applications	Design and development of continuous speech based text conversation assistant.	DST-BDTD	7,75,000	17.08.18
7	Dr.C.Viswanathan	Nano Science & Technology	Development of electrochemical wearable biosensor in human sweat	DST – SERB	34,52,064	19.12.19
8	Dr.P.Ekambaram	Bio – Technology	Targeting miRNAs in Fluorosis Extenuation : Role of Phytochemicals	ICMR Ad-hoc	10,83,066	20.12.21
9	Dr.Yekkoni L.Jayachandran	Physics	Preparation and analysis of zinc tin phosphide nanocrystal films for	DST-SERB-ECR	33,77,648	
10	Dr.V. Hemamalini	Bioinformatics	Therapeutic targeting of ER Chaperones exploiting Small Molecules: A Virtual Approach to alleviate ER stress in	DBT	49,75,240	26.09.19
11	Dr P. Ekambaram	Biotechnology	Mitigation of fluorosis and fluoride sensing: An amalgamation of biology and chemistry	TANSCH	60,00,000	27.04.21
12	Dr. C. Viswanathan	Nanoscience	Developing ordered assembly of metal oxide – polyaniline nanohybrid materials for multiple biomarkers detection in diabetes health monitoring system.	TANSCH	17,71,750	27.04.21
13	Dr. P. Premasudha	Nanoscience	DC glow discharge plasma treated zein/ chitosan / ZnO nanocomposite blends for active packaging.	TANSCH	28,70,500	27.04.21

14	Dr. N. Ponpandian	Nanoscience	Novel photoelectrode nanomaterials for photoelectrochemical applications: Reduction of atmospheric CO ₂ in to hydrocarbon fuels and H ₂ production.	TANSCHÉ	18,00,750	27.04.21
15	Dr P. Kalai Selvan	Physics	Development and performance analysis of all solid state flexible high energy Li-ion hybrid capacitors	TANSCHÉ	32,71,750	27.04.21
16	Dr K. Senthil Kumar	Physics	Probing the mechanism, thermochemistry and kinetics of the degradation of organic air pollutants in the atmosphere	TANSCHÉ	21,33,000	27.04.21
17	Dr K. M. Saradha Devi	Biochemistry	Evaluation of anticancer efficacy of Gloriosa Superba encapsulated chitosan nanoparticles for cervical cancer: target for PI3/AKT	TANSCHÉ	37,20,500	27.04.21
18	Dr T. Selvaraju	Chemistry	Design and development of low-cost electrocoagulation batch reactor system for efficient industrial effluent treatment	TANSCHÉ	87,58,500	27.04.21
19	Dr T. Parimelazhagan	Botany	Chemotherapeutic potential of osbeckia parvifolia and breynia retusa bioconjugation with nanoparticles against ovarian cancer.	TANSCHÉ	56,34,000	27.04.21
20	Dr.R.Sathishkumar	Biotechnology	Large scale production of lignin peroxidises (LIP) by molecular farming for rapid and low-cost degradation of coir waste – a green technology for tackling agro-waste pollution in western	TANSCHÉ	19,53,000	27.04.21
21	Dr.M. Gnanadesigan	Microbial Biotechnology	Prototype development for the treatment of the textile reactive dyes using the agro wastes of the Musa sps – A nanotechnology	TANSCHÉ	9,03,000	27.04.21
22	Dr.R. Kavitha	Biochemistry	Development of whole cell microbial biosensor for heavy metal sensing, waste water treatment and bioelectricity	TANSCHÉ	15,19,000	27.04.21
23	Dr D. Nataraj	Physics	Development of prototype water pollutant (heavy metal, oil and dye)	TANSCHÉ	52,02,250	27.04.21
24	Dr T. Muthu Kumar	Botany	Diversity of mycorrhizal fungi in medicinal bulbo phylum speices (orchidaceae) of the Nilgiri biosphere reserve, western ghats and their role in orchid conservation.	TANSCHÉ	44,30,000	27.04.21
25	Dr K. Suresh	Physics	Construction of micro plasma device for the treatment of industrial	TANSCHÉ	17,64,250	27.04.21
26	Dr. M. Arun	Biotechnology	Invitro and insilico approach in endangered medicinal plant hemidesmusindicus for conservation and production of clinically important triterpenoids	TANSCHÉ	24,84,500	27.04.21
27	Dr S. Selvakumar	Biochemistry	CD36 and GPR120 mediated cell signalling mechanisms in taste bud cells – implication in prevention of obesity development	TANSCHÉ	20,64,750	27.04.21

28	Dr Manju Puspha	Physical Education	Cardio respirator fitness through pranayama for over weight children	TANSCHÉ	7,93,000	27.04.21
29	Dr V. Vijaya Padma	Biotechnology	Protective efficacy of shikonon on paraquat induced neurodegeneration in PC12 cells and a rodent Parkinson's disease model.	TANSCHÉ	19,11,000	27.04.21
30	Dr Sujith Raman	Electronics	A qualitative approach for osseointegration assessment based on microwave antenna fabricated on conductive wearable textile as a sensing analyzer.	TANSCHÉ	31,77,250	27.04.21
31	Dr R. Rajkumar	Environmental Sciences	Investigation on microalgal distribution in the salt pans of Tamil Nadu and assessment of its lipid profiles for bio energy	TANSCHÉ	22,65,500	27.04.21
32	Dr A. Kannan	Chemistry	Synthesis and characterization of sulfone based dendrimers for the	TANSCHÉ	33,75,000	27.04.21
33	Dr.N. Annalakshmi	Psychology	Promoting the health and resilience of underprivileged adolescents: A mixed method evaluation of multilevel intervention	TANSCHÉ	18,23,750	27.04.21
34	Dr.S.Saravanan	Mathematics	Single and Multi Component Convection with Hyperbolic Diffusion	TANSCHÉ	12,95,500	27.04.21
35	Dr.B.Sathya Priya	Environmental Sciences	Production of eco friendly pigments with antimicrobial potential from actinomycetes using agricultural waste as feedstock and its application in antimicrobial clothing for medical textile	TANSCHÉ	20,18,000	27.04.21
36	Dr.K. Malar Mathi	BSMED	Green consumer segmentation and development of green consumer behaviour model for sustainable consumption pattern.	TANSCHÉ	9,64,250	27.04.21
37	Dr.P.Sakthivel	Nano Science	Synthesis and studies of D-A- π – A – D type weak donor [Thieno (Indenoindole)] and strong acceptors based polymers for organic solar cell.	TANSCHÉ	30,16,500	27.04.21
38	Dr.V.M.Subramaniam	Linguistics	Developing a Teaching and Learning Module of the Productive skills of Tamil and English Languages for Tribal Students of Western Ghats of Nilgiris District in Tamil Nadu.	TANSCHÉ	6,78,000	27.04.21
39	Dr.S.Thangarajathi	Educational Technology	Implementation of outcome-based education in Tamilnadu universities – An Assessment.	TANSCHÉ	15,10,500	27.04.21
40	Dr.G.Singaravelu	Education	Barriers of Tribal Learners in Life Skills: Developing a Digitalized	TANSCHÉ	3,75,000	27.04.21

41	Dr.M.Muthamilselvan	Mathematics	Numerical and analytical analysis of flow structures and heat transfer	TANSCHÉ	3,63,000	27.04.21
42	Dr.D.Prabha	Environmental Science	An investigation of the occurrence, source analysis and ecotoxicity of veterinary antibiotics in agroecosystems of Coimbatore District, Tamilnadu.	TANSCHÉ	15,33,000	27.04.21
43	Dr.J. Manivannan	Environmental Science	Traffic- related air pollution (TRAP) Hotspots in Coimbatore city and its adverse impacts on human health.	TANSCHÉ	33,78,500	27.04.21
44	Dr.R.Sakthivel	App.Maths	Reliable non fragile control for networked control systems with quant	TANSCHÉ	399250	27.04.21
45	Dr.N.Arul	Zoology	Epigenetic Regulation and Transcriptional factors in Ovarian	TANSCHÉ	970000	27.04.21
46	Dr.A.Manimekalan	Environmental Sciences	Municipal solid waste characterization and quantification as a measure towards effective waste management for Coimbatore City	SWM project	9,45,000	
47	Dr.A.Manimekalan	Environmental Sciences	Establishing green cover with indigenous plant species in Bharathiar University Campus in the foot hill or western Ghats” and “Tree transplanting from Coimbatore Airport to Bharathiar	AIRPORT	34,40,000	
48	Dr.J.Vijayakumar	Electronics and Instrumentation	Fabrication, Implementation of Smart Sensors and Machine learning techniques based novel automated hydroponic turmeric	TNSCST	1,75,000	29.03.21
49	Dr.Yekkoni L.Jayachandran	Physics	Fabrication of Novel Nanoparticle/ thin film alternatively layered coatings of metal oxides.	CSIR	24,33,450	29.12.16
50	Dr.K.M. Saradhadevi	Bio – Chemistry	Dendrimer –Lactobacillus plantarum (MTCC-1407) clusters to Trigger autophagy towards mTCR (P13K/Akt) and HIF-1a Pathway of Warburg effect in breast Cancer	TNSCST	1,70,000	29.03.21
51	Dr.Yekkoni L.Jayachandran	Physics	Development of amphiphillic titanium oxide-silicon oxide coatings	NRB	21,16,550	30.11.17
52	Dr.M.Ilanchelian	Chemistry	Metal Nanoclusters Based Fluorescence Probes For Point of Care Detection of Biomarkers for Traumatic Brain Injury	DST-SERB-EEQ	22,82,300	
53	Dr.R.Rakkiyappan	Mathematics	“Qualitative and Quantitative Features of Fractional-order Nonlinear	DST-SERB-CRG	15,77,400	
54	Dr.N.Vijayan	Linguistics	“Forensics Linguistics study of Deception in Cyber Stalking”	ICSSR	4,00,000	New

55	Dr. N. Annalakshmi	Psychology	"The multisystemic sources of human resilience to COVID-19 related stress: Learning from emerging adults in Indian and South Africa	NIHSS - ICSST JO	5,00,000	New
56	Dr. F.X. Loveline little	Social Work	"Depression in Women: A Therapeutic Approach to enhance Mental	DST -SEED	34,00,000	New
57	Dr.N. Dhanabakym	Commerce	"Two Weeks Capacity Building Programme for young Social	ICSSR	8,00,000	New
58	Dr. N. Sumathy	Commerce	Research Methodology course for M.Phil/Ph.D./PDF scholars in Social Sciences	ICSSR	5,50,000	New
59	Dr.R.Sathishkumar	Bio – Technology	Cost effective production of engineered antibodies for early differential diagnosis of dengue and chikungunya infection	UGC-UKIERI - III	13,11,530	
60	Dr. S. Selvakumar	Bio – Chemistry	Oro-gustatory perception of dietary lipids and genetic polymorphism in bitter taste receptor TAS2R38 in Indian subjects: implications	ICMR	24,74,472	02.09.19
61	Dr.M.Balasubamaniam	Physics	Statistical and dynamical description of particle accompanied fission of medium to heavy mass nuclei.	CSIR	7,61,115	02.03.19
62	Dr. L.SenthilKumar	Physics	2-Dimensional Materials for Covid-19 Breath Analyzer - A DFT Stud	DST-SERB-EEQ	29,53,764	04.03.22
63	Dr.R.Kalaiselvan	Physics	Development of high energy K-ion hybrid capacitors using binder free electro spun $K_3M_2(PO_4)_3$ @ CNF(M=V,Mn,Ti,) and porous carbon derived from dead leaves of Ficus religiosa.	CSIR	19,51,667	04.06.18
64	Dr.A.M.Ballamurugan	Nano Science & Technology	Development and evaluation of therapeutic nano-materials for osteoporosis.	TNSCST-2	4,08,000	04.11.19
65	Dr.N.Jeyakumar	Bioinformatics	Integrated meta-omics analysis to study the modulation of gut microbiota for better prognosis of Gastrointestinal disorders	DBT	28,07,720	06.01.21
66	Dr. R.T.Rajendrakumar	Nano Science & Technology	Metal Organic functionalized 2D MoS_2 , WS_2 based electronic nose towards selective detection of disease related Volatile Organic	DST-SERB	39,85,437	06.09.18
67	Dr. R.T.Rajendrakumar	Nano Science & Technology	Swift Heavy Irradiating effects on the texture, micro structural and piezoelectric properties of reactive sputtered, aluminium nitride	UGC-IUAC	4,83,186	07.01.19
68	Dr.T.Selvaraju	Chemistry	Hybrid Reduced Graphene Oxide Supported Bimetallic Porous Nanostructures Syntheses and its Applications.	SERB-EMR	32,59,700	08.03.16

69	Dr.P.Sakthivel	Nano Science & Technology	Synthesis, characterization and Studies of Novel Poly (Thieno (Indenoindole)) Based Low Band Gap Polymers for Organic Solar Cell Applications.	DST-SERI	41,90,560	08.03.17
70	Dr.K.Srinivasan	Physics	Investigation on the Control of Liquid-Liquid Phase Separation (LLPS) and Isolation of VaNillin Polymorphs for Industrial Applications through Novel Crystallization	CSIR	17,30,872	08.05.17
71	Dr.R.Kalaiselvan	Physics	Investigation on the reduction of polysulfide shuttling effect using electro spun polymer composite membrane separators for high performance Li-S batteries.	DBT	37,42,090	09.03.19
72	Dr. Marthandam Asokan Shibu	Bio-technology	Hypoxia inducible Exosomal Chaperones and miRNAs as therapeutic strategy for healthy cardiac aging	DBT-Ramalingaswamy Faculty Fellow	2472000	10.11.21
73	Dr.R.Kalaiselvan	Physics	Investigations on the crystal structure of $K_{0.7}Mn_{1-y}M_yO_2$ particles by	UGC-DAE -CRS	45,000	10.12.20
74	Dr.A.M.Ballamurugan	Nano Science & Technology	Bio ceramic/ Polymer composite material for Hard Tissue Replacement.	TNSCST	4,38,000	11.04.17
75	Thangarajathi	Educational Technology	Metal Nanoclusters Based Fluorescence Probes For Point of Care Detection of Biomarkers for Traumatic Brain Injury	ICSSR	8,00,000	11.09.19
76	Dr.Yuvaraj Haldorai	Nano Science & Technology	Novel amino acid-based biocompatible polymeric vectors for gene delivery: A facile and “green” synthetic approach.	DBT-Ramalingaswamy Faculty Fellow	1,01,14,465	12.10.17
77	Dr. V.Vijaya Padma	Bio – Technology	Studies on the efficacy of neferine against doxorubicin induced cardiomyopathy.	DST-SERB	40,48,000	12.11.18
78	Dr.R.Rajkumar	Environmental Sciences	Exploration and enumeration of high lipid producers of diatoms for biodiesel production from South East Coast of India.	DST-SERB	15,09,336	13.01.16
79	Dr.T.Devi	Computer Applications	Knowledge Banking and Dissemination: Design and Development of an integrated data model, Knowledge base and dissemination	DST-ICPS	50,46,000	14.03.19
80	Dr.S.Sadhasivam Subramaniam	Microbial Biotechnology	Fabrication of feruloylated hyaluronic acid based infectable hydrogel for cartilage tissue engineering by laccase catalyzed	DBT-Ramalingaswami Fellow	88,00,000	14.09.15
81	Dr.P.B.Pankajavalli	Computer Science	A System for sensing and controlling the stress level of computer users using IoT.	DST- ICPS	24,98,810	14.12.18
82	Dr.N.Ponpandian	Nano Science & Technology	Au Decorated WO ₃ /Graphene anohybrids as High Efficient Photo electrochemical Water splitter for Hydrogen Production.	DST-SERB	46,45,520	16.08.17

83	Dr.J.Manivannan	Environmental Sciences	Exploring novel pathways involved in oxidized low density lipoprotein (oxLDL) induced vascular smooth muscle (VSMC) foam cell formation in atherosclerosis and pharmacological effects of mitochondria targeted antioxidant – mito TEMPO.	SERB	8,12,629	16.10.18
84	Dr.M.Muniasamy	Environmental Sciences	Monitoring the Pollution Intensity of Lakes of Coimbatore, Tamil Nadu, India.	DST-SERB	23,33,500	17.03.18
85	Dr.K.Suresh	Physics	Effect of Thermo-mechanical Processing on Hot Deformation Behavior of WE43 Magnesium Alloy.	DST – SERB	47,95,621	18.03.19
86	Dr.R.Sathishkumar	Bio – Technology	M.S.C Medical Biotechnology	DBT-	1,80,00,000	19.03.21
87	Dr.R.Vivek	Zoology	Development of Next Generation Nano-Biotechnology for “Multimodal Synergistic Targeted Cancer Therapy” of Biocompatible Nanoparticles.	DBT- Ramalingaswamy Faculty Fellow	1,13,60,000	19.11.18
88	Dr.S.Girija	Bio – Technology	Plant cell culture strategies for the enhanced production of Sennoside from Tinneyvelly senna (Senna alexandrina Mill) and assessing its Pharmacological activity.	DST-SERB	37,21,500	20.02.19
89	Dr.M.Rajkumar	Environmental Sciences	Basic Approches for the Development of Biochar and Rhizobacteria Based Bioformulation and its Effects on Crop Growth and Productivity in Heavy Metal Contaminated Arid/Semi-Arid Regions of Tamil Nadu.	Indo -Russian	23,07,284	21.01.20
90	Dr.K.Sundaravel	Chemistry	Biomimetic Nonheme Manganese-dioxygen Complexes in Oxidation	SERB	26,13,000	23.07.18
91	Dr.V.Balachandar	Human Genetics and Molecular Biology	Screening of histone modifications and Mitochondrial DNA copy number variation in Parkinson’s disease (PD) from Tamil Nadu population	DHR -ICMR ADHOC Mental Health Project	36,00,00	24.01.22
92	Dr.C.S Sureka	Medical Physics	Fabrication and Characterization of a compact prototype positive ion detector as a non-invasive device for early detection of	DST-BDTD	39,99,024	24.03.21
93	Dr..K.SenthilKumar	Physics	Driving Perovskite Photovoltaics Towards Next Generation Solar Cells through Computational Material Engineering.	DST-SERB-CRG	22,69,764	25.12.20
94	Dr.P.Ekambaram	Bio – Technology	Identification, validation, analysis and characterization of molecular activators and antioxidant response elements of Keep1/Nrf2/ARE	DST-SERB	46,19,000	26.02.19
95	Dr.N.Ponpandian	Nano Science & Technology	2D WS ₂ nanostructure sand witched with hetero-atom doped (N,B)	UGC-DAE-CSR	4,75,784	26.12.18
96	Dr.K.Sundaravel	Chemistry	Biomimetic High-valent Oxo-manganese (IV/V) Complexes: Generation, Spectroscopic Characterization and Reactivity.	DST-INSPIRE Faculty Award	14,97,756	27.08.12
97	Dr.G.Shanmugavelayutham	Physics	Synthesis of Magnetic Nano powders by Plasma Arc Discharge.	DRDO	13,38,000	27.09.17

98	Dr.K.Ramachandran	Physics	Development of prototype of a metal 3D printer suitable for orthopaedic and knee implants	DST- AMT	33,84,400	28.05.20
99	Dr.V.Balachandar	Human Genetics and Molecular Biology	Targeting RhoA and Dopamine Transporter (DAT) in Parkinson's Disease (PD) derived Human Induced Pluripotent Stem cell, (hiPSCs) : As a potential therapeutic target	ICMR ADHOC	38,00,000	28.09.21
100	Dr.P.Christopher Selvin	Physics	Thirst for efficient anode materials for sodium ion batteries and all solid device assembly (A minor substitution to Li ion	DST-SERB-CRG	41,14,255	28.12.20
101	Dr.R.Sathishkumar	Bio – Technology	Systems approach to dissect the novel O-acyltransferase role in TAG biogenesis towards the promising fourth generation	DST-SERB-CRG	26,40,264	29.12.20
102	Dr.A.M.Ballamurugan	Nano Science & Technology	Development and Evaluation of New Generation Sol- Gel derived Nanoscale Bioactive Materials.	ICMR	18,88,000	30.03.15
103	Dr. R.T.Rajendrakumar	Nano Science & Technology	Synthesis and characterization of Zinc ferrite/Titano silicate nonocomposites for the removal of Cs and Sr.	UGC , DAE-CSR	1,18,650	01.02.17
104	Dr.V.Thirunavukkarasu	Bio – Technology	Role of NOTCH2 in cancer and immunity.	DBT- Ramalingaswami Re-entry Fellow	21,04,641	01.04.16
105	Dr.D.Nataraj	Physics	Advanced studies in physics for the development of solar energy materials and devices.	CPEPA Scheme	3,54,00,000	01.04.16

