

Kerala State Council for Science Technology and Environment

Science Research Scheme (SRS)

List of Pre-proposal recommended to next stage

No.	Name & Address of PI	Title of the Project
1.	Dr. Sajeena A Assistant Professor (Plant Pathology) Integrated Farming System Research Station KAU, Karamana, TVM.	Microbial consortia for insitu degradation of banana crop residues and soil borne disease management.
2.	Dr. Rajesh Kalladan Assistant Professor Department of Plant Physiology, RARS Pilicode, Kerala	Drought tolerant rice variety: characterization and utilization of traditional rice varieties of Kerala for tolerance to terminal drought.
3.	Dr. Geetha Lekshmi P R Assistant Professor (Horticulture) Department of Post Harvest Technology College of Agriculture, Vellayani, KAU	Development of bio-nanocomposite edible coating for extended shelf life of fresh and minimally processed fruits and vegetables.
4.	Dr. K N Anith Professor and Head Department of Agricultural Microbiology College of Agriculture, Vellayani, TVM	Phytomicrobiome complementation from wild ginger species for disease management in cultivated ginger (<i>Zingiber officinale</i> Rosc.)
5.	Dr. Dhanyalakshmi K H Assistant Professor College of Agriculture, Padannakkad	Boosting growth and climate resilience in brinjal (<i>Solanum melongena</i> L.) using habitat-adapted endophyte(s).
6.	Dr. Rekha V R Nair Assistant Professor Department of Soil Science & Agricultural Chemistry, RARS (SZ), College of Agriculture, Vellayani	Standardisation of foliar nutrition with nano fertilizers for solanaceous vegetables.
7.	Dr. Bobby V Unnikrishnan Assistant Professor Department of Agricultural Microbiology College of Agriculture, Padannakkad	Exploration of salt tolerant plant growth promoting fungal endophytes for salinity adaptation in rice.
8.	Dr. Smita Nair Assistant Professor Centre for Plant Biotechnology and Molecular Biology, College of Agriculture Vellanikkara	Split embryo technique for direct in vitro organogenesis in tall and dwarf coconut ecotypes.
9.	Dr. Krishnapriya P J Assistant Professor (Plant Pathology) College of Agriculture, Vellayani	RNA vaccination of tomato plants against Tomato spotted wilt virus infection.
10.	Dr. Praveena R Senior Scientist (Plant Pathology) Division of Crop Protection, ICAR-Indian Institute of Spices Research, Kozhikode	Developing a portable bio-sensor for early detection of soft rot pathogen, <i>Pythium myriotylum</i> , a major constraint for ginger production in Kerala.
11.	Dr. Vishnu R Assistant Professor	Wood preservation using Zn & Cu nanoparticles based plant extractives

	Department of Forest Products and Utilization, College of Forestry, KAU	produced by green synthesis method.
12.	Dr. Nisha A R Associate Professor and Head, Department of Veterinary Pharmacology and Toxicology , College of Veterinary and Animal Sciences , Mannuthy, Thrissur	Pharmacological screening of proline rich peptides isolated from caprine spleen and thymus.
13.	Dr. Divya M P Assistant Professor Verghese Kurien Institute of Dairy and Food Technology, Mannuthy	Development of paper strips for quick and simultaneous detection of multiple adulterants in milk.
14.	Dr. Surya Sankar Assistant Professor Dept of Veterinary Microbiology, College of Veterinary and Animal Sciences, Thrissur	Antimicrobial resistance among companion animals in Kerala and its public health significance- A comprehensive study.
15.	Dr. Aparna Sudhakaran V Assistant Professor Department of Dairy Microbiology Mannuthy, Thrissur	Bioprospecting of exopolysaccharide producing Lactic Acid Bacteria as bioremediators and biothickeners for food industry.
16.	Dr. Ajith Kumar K G Associate Professor Department of Veterinary Parasitology College of Veterinary and Animal Sciences Pookode, Wayanad	Role of domestic animals in the epidemiology of Leishmaniosis in an emerging endemic foci of Northern Kerala.
17.	Dr. B Bibin Becha Associate Professor Department of Animal Reproduction, Gynaecology & Obstetrics, College of Veterinary and Animal Sciences, Mannuthy	Microencapsulation of goat spermatozoa and its in vitro and in vivo fertility studies during chilled and frozen preservation.
18.	Dr. Suja Rani S Associate Professor Dept of Veterinary Pharmacology and Toxicology, College of Veterinary and Animal Sciences, Mannuthy	Essential oil loaded chitosan based nanoformulation for therapeutic management of multidrug resistant bacteria infected wound.
19.	Dr. Laly S J Senior scientist Quality Assurance and Management Division, ICAR- CIFT, Cochin	Shellfish allergen screening: detection, molecular characterization and mitigation measures.
20.	Dr. Murugadas Vaiyapuri Senior Scientist Microbiology, Fermentation and Biotechnology Division, ICAR-CIFT, Kochi	Development of phage probiotics for post-harvest applications in fisheries.
21.	Dr. Vani Kesari A Hon Director & Associate Professor Prof NR Madhava Menon Interdisciplinary Centre for Research Ethics and Protocol CUSAT	Scientific and legal assessment of aquatic bio-invasion in vembanad kol wetland: an interdisciplinary approach.
22.	Dr. J Sangeetha Assistant Professor Department of Environmental Science, Central University of Kerala, Kasaragod	Unravelling the presence of microplastic contamination in <i>Perna viridis</i> and <i>Villorita cyprinoides</i> from West Coast of Kerala.

23.	Dr. Ratheesh Kumar R T Assistant Professor Department of Marine Geology and Geophysics, School of Marine Sciences CUSAT,Kochi	A multi-proxy assessment of the sub-surface sedimentary characteristics of the 26 December 2004 tsunami deposits in the potential coastal zones of Kerala, towards shedding light on similar extreme wave events in the past.
24.	Dr. Devi Priya M Assistant Professor Department of Botany, St Thomas College Ranni	Plumbago rosea bio-fencing: A unique method to tackle human animal conflict.
25.	Dr. Mathew M J Assistant Professor & Head PG & Research Department of Zoology, Sacred Heart College (Autonomous), Thevara	Are the predators still around? Post-flood assessment of spiders (Arachnida: Araneae), important natural regulators of insect pests in the agroecosystems of Kerala.
26.	Dr. Pramod C Assistant Professor Department of Botany,University of Calicut	Studies on the aerodynamics and biomimetics of winged diaspores of selected flowering plants of South India.
27.	Dr. Sudha Kappalli Professor, Department of Zoology School of Biological Sciences, Central University of Kerala, Kasaragod	Bopyrid isopods parasitizing the commercially important Crustaceans – Diversity and Host-parasitic interaction.
28.	Dr.Vipin Mohan Dan Scientist JNTBGRI, Palode, Thiruvananthapuram	Unravelling the therapeutic potential and functional dynamics of Urdamycins against biofilm forming <i>Staphylococcus aureus</i> .
29.	Dr. Janeesh P A Department of Biochemistry, University of Kerala Kariavattom, Thiruvananthapuram	Targeted delivery of nanobiomaterials for the treatment of atherosclerosis.
30.	Dr. Anitha Ayyappan Pillai Associate Professor ICCONS, Kavalappara, Shoranur, Palakkad	Does salivary dysbiosis and salivary miRNA dysregulation contribute to cognitive impairments in autism spectrum disorders?
31.	Dr. Anugya Bhatt Scientist G BMT WING, SCTIMST, TVM	3D Bioprinted multicellular tissue models: an emerging approach of drug screening in specific cancers.
32.	Dr. Midhun S Assistant Professor, Department of Psychiatry, Government Medical college Kozhikode, Kerala	Genetic characterization of sensory processing deficits in autism spectrum disorders.
33.	Dr. Arun Anirudhan V Engineer E BMT Wing, SCTIMST, Trivandrum	Prototype development of an automated cardiopulmonary resuscitation device (a-CPR).
34.	Dr. Mohanan Valiya Veettil Senior Principal Scientist Institute of Advanced Virology Thonnakkal, Trivandrum	Production and characterization of Kyasanur Forest Disease Virus-like particles (KFDV-VLP) for developing antiviral drugs against Kyasanur Forest Disease (Monkey fever)
35.	Dr. Amita Radhakrishnan Nair Associate Professor Department of Transfusion Medicine SCTIMST, Trivandrum	Development of a rapid immunochromatography based hepatitis C Antigen detection assay.

36.	Dr. Lakshmi S Additional Professor Regional Cancer Centre Thiruvananthapuram	Role of alpha actinin-1 expression as a marker of epithelial to mesenchymal transition and its evaluation as a potential target for treatment of drug resistant breast cancers.
37.	Dr. Aswathyraj S Scientist C Institute of Advanced Virology Thonnakkal , Thiruvananthapuram	Development of a rapid antigen detection kit for the diagnosis of Influenza and validation using circulating virus strains from Kerala.
38.	Dr. Deepak Roshan Assistant Professor Division of genetics Malabar Cancer Center, Thalassery	Developing a 3-dimensional (3D) organotypic co-culture system of breast cancer cells with adipocyte and immune cells for drug screening.
39.	Dr. Renu Mohan UGC Assistant Professor Department of Biotechnology, University of Kerala, Kariavattom	Elucidating the role of extracellular matrix components on tumour cell response to antimicrotubule drugs: Specific focus on End Binding (EB) proteins.
40.	Dr. Tom Skaria Assistant Professor School of Biotechnology, NIT Calicut	Elucidating the druggable mechanism of regulation of type I antiviral immune response by asthmatic, inflammatory IL-4 in vascular endothelial and epithelial cells.
41.	Dr. Sayuj K P Assistant Professor Department of Biotechnology, CUSAT	CRISPR/Cas9-targeted knockout of Zingiber officinale susceptibility genes for resistance against soft rot disease.
42.	Dr. Bhavya B C Assistant Professor Department of Biotechnology,CUSAT	Identifying biomarkers from lung fibrosis subjects from Kerala for developing strategies for the early diagnosis and effective prognosis of idiopathic pulmonary fibrosis.
43.	Dr. Mashhoor K Assistant Professor Department of Biotechnology, EMEA College of Arts and Science, Kondotty, Malappuram	Genomic diversity of gut microbiota and its significance in disease resistance of cavity nesting honeybees from Kerala – a metagenomic approach.
44.	Dr. Tina Sebastian Assistant Professor, Department of Physics Deva Matha College, Kuravilangad	Self-powered ultraviolet photo-sensors using CuI/ZnO transparent heterojunction.
45.	Dr. Prakash V Assistant Professor Department of Physics Payyanur College, Edat, Kannur	Investigation of the geographical process responsible for the formation of monazite placer deposits in the southern coastal regions of Kerala on account of well-reported high background radiation areas (HBRA).
46.	Dr. Subramanyan Namboodiri Varanakkottu Assistant Professor, Department of Physics,NIT Calicut	Magnetically responsive Janus Particle-laden liquid-liquid interface as reconfigurable optical elements.
47.	Dr. Sijo A K Assistant Professor Department of Physics, Mary Matha Arts	Design and synthesis of mixed-spinel ferrites for memory applications based on their resistive switching performances.

	and Science College, Wayanad	
48.	Dr. Ravi Varma M K Professor Department of Physics, NIT Calicut	Assessment of impact of urban aerosols on climate radiative forcing.
49.	Dr. Sherin Thomas Assistant Professor, Department of Physics Assumption College, Changanasserry	Synthesis of flexible AB ₂ O ₄ (A= Ni, Mg, Mn, Zn and B=Cr, Mn) composite electrodes for super capacitor application.
50.	Dr. Zuhail K P Assistant Professor, Department of Physics University of Calicut	Biosensors based on liquid crystal lasers.
51.	Dr. C S Suchand Sangeeth Assistant Professor Department of Physics, NIT Calicut	Fabrication of surface-enhanced Raman scattering active substrates for narcotic detection.
52.	Dr. Arun Aravind Assistant Professor, Department of Physics Bishop Moore College, Mavelikara	Biochar supported 2D layered TMO/TMD heterostructure for sustainable supercapacitor as future energy storage device.
53.	Dr. Shinoj V K Assistant Professor, Department of Physics Union Christian College, Aluva, Kerala	A portable spectroscopic probe scheme aided by statistical methods for food quality analysis.
54.	Dr. Subodh G Assistant Professor, Department of Physics University of Kerala, Thiruvananthapuram	Development of cold sintered antennas for 5G communication systems.
55.	Dr. Asha A S Associate Professor of Physics Department of Physics, CUSAT, Kochi	Fabrication of all solid-state asymmetric supercapacitor using Ti ₃ C ₂ T _x MXene hybrid and Conducting Polymer-MXene composite, for wearable electronic devices.
56.	Dr. Aldrin Antony Associate Professor Department of Physics, CUSAT, Kochi	Development of optical bio-sensors based on hydrogel strips encapsulated with metal oxide Quantum Dots decorated over a 3D Photonic crystals for early-stage cancer diagnosis.
57.	Dr. Arun Babu K P Assistant Professor, Department of Physics St. Albert's College, Banerji Road Ernakulam, Cochin	Analysing the geo-effectiveness of space-weather transients with cosmic ray observations.
58.	Dr. Sujith K V Assistant Professor Dept. of Chemistry, Payyanur College	Synthesis and characterization of heterocyclic compounds and NSAID derivatives as pharmaceutical analogues.
59.	Dr. Jinu George Assistant Professor Department of Chemistry Sacred Heart College (Autonomous) Thevara, Kochi.	Synthesis of a multifunctional nano polymeric micelle using photoisomerization of azobenzene moiety for Targeted Delivery of hydrophobic SCR7 pyrazine, a DNA ligase IV inhibitor that blocks nonhomologous end-joining (NHEJ) in a ligase IV-dependent manner, for enhancing their bioavailability and efficacy.
60.	Dr. Ambiliraj D B Assistant Professor, Dept of Chemistry	Design and development of efficient light conversion molecular devices based on

	Sree Narayana College, Chempazhanthy	lanthanide chelate complexes.
61.	Dr. Shibu E S Assistant professor Department of Nanoscience and Technology, University of Calicut	Highly stable invisible-visible perovskite quantum dots for light-emitting devices and anticounterfeiting applications.
62.	Dr. Renuka N K Professor, Department of Chemistry University of Calicut	Development of biomass derived carbon nanodots for sustainable agriculture.
63.	Dr. Priya Thambi T Assistant Professor Department of Chemistry, Baselius College, Kottayam	In silico and In vitro evaluation of terpenoids as a potent drug lead for Attention deficit/hyperactivity disorder (ADHD).
64.	Dr. Nygil Thomas Assistant Professor Department of Chemistry Nirmalagiri College, Nirmalagiri	Porosity tuned, high surface area carbon coated spinels and perovskites of Co, Ni, Mn and Fe for production of green H ₂ and O ₂ via seawater electrolysis.
65.	Dr. Ajesh K Zachariah Assistant Professor, Department of Chemistry, Mar Thoma College, Thiruvalla	Development of smart corrosion inhibitors from biological wastes.
66.	Dr. Archana S R Assistant Professor, Department of Chemistry, Sree Narayana College, Varkala	Development of metal oxide based electrocatalysts for energy generation.
67.	Dr. Ambili V K Assistant Professor, P G Department of Chemistry, NSS College, Nemmara	Development of functionalized mesostructured SBA 15 materials as efficient, controlled and targeted drug delivery systems.
68.	Dr. Susmita D E Associate Professor Department of Chemistry University of Calicut, Kerala, India	Investigation of the molecular-level mechanism of the anti-viral drug molecules based on purine and pyrimidine analogs for SARS-cov-2 rdp inhibitors – mutagenesis vs chain termination.
69.	Dr. Roymon Joseph Assistant Professor, Department of Chemistry, University of Calicut	Detection of organic pollutants in water with functionalized supramolecules.
70.	Dr. Kala R Assistant Professor Department of Applied Chemistry CUSAT, Kochi	Environmentally benign nanoheterostructured material for the photoelectrochemical sensing of biothiols.
71.	Dr. Sumalekshmy S Assistant Professor, Department of Chemistry, T. K. M. College of Arts and Science, Kollam	Development of sensors based on alpha mangostin isolated from the pericarp of mangosteen fruit for detection of mercury and environmentally hazardous pesticides in water bodies.
72.	Dr. Anitha C Kumar Professor, School of Chemical Sciences Mahatma Gandhi University, Kottayam	Peptide hydrogels for cell therapy.
73.	Dr. Ditty Dixon Associate Professor School of Chemical Sciences, Mahatma Gandhi University, Kottayam	Development of rechargeable Al-Air batteries.
74.	Dr. Anjaly Jose	Topological machine learning and its

	Assistant Professor, Department of Mathematics, St. Joseph's College, Devagiri	application on analysis of post-covid syndromes.
75.	Dr. Lineesh M C Assistant Professor Department of Mathematics, NIT Calicut	Construction of symmetric and compactly supported multiwavelets using matrix polynomial theory.