



# SYMBIOSIS INTERNATIONAL (DEEMED UNIVERSITY)

(Established under section 3 of the UGC Act, 1956)

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Founder: Prof. Dr. S. B. Mujumdar, M. Sc., Ph. D. (Awarded Padma Bhushan and Padma Shri by President of India)

## List of Sanctioned Major Research Projects (SIU Seed Funding)

Sr. No	Name of Principal Investigator & Co-P.I	Institute	Faculty	Title of the project	Year	SIU Sanctioned Grant in Rs.
1	Dr. Rajiv Yeravdekar Dr. Sheila Bhawe Dr. Alaka O Chandak Dr. Manisha Gore	Symbiosis Institute of Health Sciences, Pune	Medical and Health Sciences	Prevention of Lifestyle Related Disorders in School Children: Follow up of SYM-KEM Study of 2005-2011.	2018-19	1000000.00
2	Dr. Alaka Chandak Dr. Rajiv Yeravdekar Dr. Sharvari Shukla	Symbiosis Institute of Health Sciences, Pune	Medical and Health Sciences	Knowledge, Attitude, Practices and Behaviour (KAPB) regarding voluntary blood donation amongst students of Higher Educational Institutes in India.	2018-19	1000000.00
3	Dr. Vidya Patkar	Symbiosis Institute of Computer Studies & Research, Pune	Computer Science	Design and development of a mobile based decision support system for enhancing farmer's Income based on the current agriculture practices and Government Policy for Maharashtra	2018-19	450000.00
4	Dr. Nitin Khedkar Dr. Atul Kulkarni	Symbiosis Institute of Technology, Pune	Engineering	Design and Development of Aerosol Generator for Biomedical Application.	2018-19	975000.00
5	Dr. M.N. Dhanorkar Dr. Sanjay Darvekar (Left)	Symbiosis Institute of Technology, Pune	Engineering	Design, Development, And Analysis of Blades for Compost Mixing	2018-19	1000000.00
6	Atul Kulkarni	Symbiosis Institute of Technology, Pune	Engineering	Development of Smart Water information and management system for Symbiosis Bandhara	2018-19	1000000.00
7	Anirban Sur	Symbiosis Institute of Technology, Pune	Engineering	Design, Development And Analysis of Hollow Polymer Based Micro-Lattice Compact Heat Exchanger	2018-19	910000.00
8	Sayali Sandbhor	Symbiosis Institute of Technology, Pune	Engineering	Analysis of behavior of Bacterial Concrete in different mix designs	2018-19	968800.00



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9	Ganesh Ingavle	Symbiosis School of Biological Sciences, Pune	Medical and Health Sciences	Synthesis of novel polysaccharide-based micro-porous polyHIPE scaffolds for osteochondral tissue regeneration	2018-19	1000000.00
10	Sunil Saroj	Symbiosis School of Biological Sciences, Pune	Medical and Health Sciences	Role of interbacterial cross-talks through secondary metabolites in biofilm formation and pathogenicity of <i>Listeria monocytogenes</i>	2018-19	1000000.00
11	Kavita Menon	Symbiosis School of Culinary Arts and Nutrition Science, Pune	Medical and Health Sciences	Micronutrient profile and determinants of micronutrient status of pre-school children (3-6 years) from the rural areas of Mulshi Block, Pune, Maharashtra.	2018-19	971721.00
12	Dr. Satyajeet Khare Dr. Vasudeo Paralikar	Symbiosis School of Biological Sciences, Pune	Medical and Health Sciences	Study of gene expression markers for schizophrenia in Indian population	2019-20	1000000.00
13	Dr. Ram Kulkarni Dr. Satyajeet Khare	Symbiosis School of Biological Sciences, Pune	Medical and Health Sciences	Adaptive laboratory evolution for developing tolerance towards lignocellulose-derived growth inhibitors in <i>Lactobacillus plantarum</i>	2019-20	1000000.00
14	Dr. Anuradha Vaidya Dr. Vajjayanti Kale	Symbiosis School of Biological Sciences, Pune	Medical and Health Sciences	Neuronal regeneration using extracellular vesicles isolated from murine bone marrow-derived mesenchymal stromal cells: An in vitro study using cell line model.	2019-20	1000000.00
15	Dr. Sumit Kumar	Symbiosis Institute of Technology, Pune	Engineering	Design of a compact Antipodal Vivaldi Antenna (AVA) Array for 5G Applications	2019-20	1000000.00
16	Dr. Anand Pandey Dr. Manikprabhu Dhanorkar	Symbiosis Institute of Technology, Pune	Engineering	Develop combo catalytic converter to convert diesel fuelled vehicle exhaust (waste) to oxygen gas to reduce global warming and metropolitan city's smog in winter session.	2019-20	1000000.00



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17	Dr. Shekhar Bhamre Dr. Dipika Jaspal	Symbiosis Institute of Technology, Pune	Engineering	Synthesis and Characterization of Metal Oxide based Photocatalyst for Dye Removal	2019- 20	1000000.00
18	Dr. Prachi Kadam	Symbiosis Institute of Technology, Pune	Engineering	Building and Leveraging Indian Food image data set for Calorie Calibration of Indian dietary pattern. Annapurna	2019- 20	900000.00
19	Dr. Priyanka Tupe Waghmare Dr. Madhura Ingalhalikar	Symbiosis Institute of Technology, Pune	Engineering	Identifying Neural Substrates of Iron Deficiency in Young Children using Advanced MRI Techniques	2019- 20	1000000.00
20	Prof. Vijayshri Khedkar Mr. Kunal Shejwal Mr. Kiran Wani	Symbiosis Institute of Technology, Pune	Engineering	Machine Learning Based Vibration Response Analysis of Different Plats using Cymatics	2019- 20	997000.00
21	Santosh Koratkar Bishnudeo Roy	Symbiosis School of Biological Sciences, Pune	Medical and Health Sciences	Assessment of SARS- Coronavirus-2 load in sewage water in Pune region of Maharashtra	2020- 21	10,00,000.00
22	Dr. Priya Kulkarni Dr. Sachin Palve	Symbiosis Medical College for Women, Pune	Medical and Health Sciences	Sero-prevalence of Anti-SARS-CoV-2 IgG and IgM antibodies among Healthcare workers in comparison with General Population in Pune, India	2020- 21	4,50,000.00
23	Dr. Satish Kumar Dr. Shruti Patil	Symbiosis Institute of Technology, Pune	Engineering	Inferring quality and fault localization of 3D printer products by using Digital twin.	2020- 21	10,00,000.00
24	Dr. Santosh Koratkar- PI of the project Dr. Mandar Shirodkar Left Symbiosis Dr. Atul Kulkarni	Symbiosis Institute of Technology, Pune	Engineering	Development of chitosan nanostructure- antibiotics nanocomposite drug delivery system for poultry pathogens	2020- 21	8,80,000.00
25	Dr. Bhushan Borotikar Prof. Kavitha Menon	Symbiosis Centre for Medical Image Analysis, Pune	Medical and Health Sciences	Association of obesity and brain health. A neuroimaging-based comparison in urban middle-aged Indian men	2021- 22	10,00,000.00



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26	Prof. Dr. Vaishali Bharambe Dr. Abhijit Patil Dr. Bhushan Borotikar	Symbiosis Medical College for Women, Pune	Medical and Health Sciences	Whole body imaging of the Indian ethnic group: Rethinking medical imaging-based anatomy learning and improving healthcare practices.	2021-22	9,95,000.00
27	Dr. Neeru Bhagat Dr. Brajesh Pandey	Symbiosis Institute of Technology, Pune	Engineering	Synthesis of magnetic-nonmagnetic layers and investigation of their spin properties for possible memory devices	2021-22	10,00,000.00
28	Dr. Meena Laad	Symbiosis Institute of Technology, Pune	Engineering	Fabrication of Superhydrophobic flexible coatings by spray coating multi walled carbon nanotubes dispersed in polymer matrix for flexible electronics applications	2021-22	10,00,000.00
29	Dr. Pooja Singh Dr. Manikprabhu Dhanorkar	Symbiosis Centre for Waste Resource Management, Pune	Engineering	Exploring hotspots for study of emerging pollutants and bioprospecting for biosurfactant and lipase producing microorganisms	2021-22	10,00,000.00
30	Dr. Shruti Patil Dr. Shilpa Gite Mrs. Pooja V. Kamat	Symbiosis Institute of Technology, Pune	Engineering	Development of Attention Span Estimation and Monitoring System in Education 4.0 Era using Artificial Intelligence	2021-22	10,00,000.00
31	Dr. Sushobhan Patankar Dr. Santosh kumar Briswal	Symbiosis Institute of Media & Communication, Pune	Media & Communication	Impact of COVID-19 on Labour, Livelihoods and Employment in Media and Entertainment Industry in India	2021-22	7,28,000.00
32	Dr. Sophia S Gaikwad Dr. Gargee Mitra Dr. Ashwini Wadegaonkar Dr. Krishna Kanta Roy	Symbiosis Teaching and Learning Resource Centre, Pune	Humanities and social Sciences	Towards enhanced learner engagement: A case study approach for evaluating TABLE Model (Technology Abled Blended Learning Engagement Model) in a blended learning environment.	2021-22	7,25,000.00
33	Dr. Rashmi Tupe Dr. A. Kumaran Dr. Bishnudeo Roy Dr. Anuradha Vaidya	Symbiosis School of Biological Sciences, Pune	Medical and Health Sciences	Development of novel anti-ageing phytotherapy for collective inhibition of glycation, amyloid	2021-22	10,00,000.00



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34	Dr. Deepali R Vora Dr Nilima Zade Dr Shruti Patil	Symbiosis Institute of Technology, Pune	Engineering	Detection and Mass Screening of Obstructive Sleep Apnea (OSA) using a sensor-based sleep mask and machine learning algorithms	2022-23	7,59,990.00
35	Dr. Anindita Roy Dr. Anirban Sur Dr. Harsh S. Dhiman	Symbiosis Institute of Technology, Pune	Engineering	Veg-Preserve: A portable, sustainable, smart micro-cold store solution for farmers and local vegetable vendors	2022-23	9,85,000.00
36	Dr. Vijaykumar S Jatti	Symbiosis Institute of Technology, Pune	Engineering	Process Characterization of Laser Powder Bed Fusion Based Additive Manufacturing of Gas Atomized Inconel 718 Alloy Powder	2022-23	9,27,910.00
37	Dr. Nawazuddin Ahmed Dr. Sudipa Majumdar Dr. Jyoti Chandiramani Dr. Shuchi Misra	Symbiosis School of Economics, Pune	Humanities and Social Sciences	Measuring City GDP: A Case of Pune City (PMC)	2022-23	10,00,000.00
38	Dr. Ruchika Kaul-Ghanekar Dr. Anand Vinod Shindikar	Symbiosis Center for Research and Innovation, Pune	Medical and Health Sciences	Evaluating the underlying mechanism of action of plant lignans in the regulation of breast and prostate cancer in vitro	2022-23	10,00,000.00
39	Dr. Om Prakash Dr. Vijaya Sagar Dr. Pooja Singh Dr. Manik Dhanorkar Dr. Yogesh Patil Dr. Prakash Rao Prof. Ruchika Kaul-Ghanekar	Symbiosis Centre for Climate Change and Sustainability, Pune	Medical and Health Sciences	Evaluation of residual pharmaceuticals concentrations in plants and soils impacted with hospital wastewater	2022-23	10,00,000.00
40	Dr. Satish Kumar Dr. Arunkumar Bongaie	Symbiosis Institute of Technology, Pune	Engineering	Enhancing the useful life of a cutting tool through active vibration damping with data-driven approach	2023-24	1000000.00
41	Dr. Rupali Nagar	Symbiosis Institute of Technology, Pune	Engineering	Role of Defects in Nanostructured MXenes and Their Impact on Gas Sensing	2023-24	1000000.00



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42	Dr. Arunkumar Bongale Dr. Satish Kumar Dr. Hemanth Kumar C	Symbiosis Institute of Technology, Pune	Engineering	Drone based air quality monitoring system using Multi-Modal Deep Learning framework	2023-24	1000000.00
43	Dr. Navendu A. Chaudhary Dr. Deepa Naik	Symbiosis Institute of Geoinformatics, Pune	Engineering	Geospatial framework for water security assessment with special reference to groundwater for Pune city.	2023-24	580000.00
44	Dr. Anuradha Vaidya	Symbiosis School of Biological Sciences, Pune	Medical and Health Sciences	Examining the role of leukemic cells-derived extracellular vesicles in modulating the bone marrow stromal cells to their advantage	2023-24	1000000.00
45	Dr. Ejaj K. Pathan	Symbiosis School of Biological Sciences, Pune	Medical and Health Sciences	Molecular studies of chitin synthase A potential target for antifungal therapy	2023-24	1000000.00
46	Dr. Ram Kulkarni	Symbiosis School of Biological Sciences, Pune	Medical and Health Sciences	Assessment of lactic fermented mango juice through the metabolomic and genomic lenses	2023-24	1000000.00
47	Dr. Satyajeet Khare Dr. Anuradha Khadilakr	Symbiosis School of Biological Sciences, Pune	Medical and Health Sciences	Latent profiles in children with T1DM and their association with the development of diabetic complications	2023-24	1000000.00
48	Dr. Ashwini Kamble Dr. Ruchika Kaul-Ghanekar Dr. Kalpana Angadi	Symbiosis School of Biological Sciences, Pune	Medical and Health Sciences	Elucidating in vitro probiotic potential and anticancer activity of different strains of Weissella cibaria against cervical cancer cell lines	2023-24	1000000.00
49	Dr. Sheetal Barde Dr. Sheela Upendra- P. I of Projects Dr. Jasneet Kaur Ms. Betsy Sara Zacharias	Symbiosis College of Nursing, Pune	Medical and Health Sciences	Enhancing Cognitive Vitality: Exploring the Influence of Intergenerational Programs on Older Adults' Cognitive Functioning	2023-24	760000.00
50	Dr. Kuldeep Mishra Dr. Anirban Sur	Symbiosis Institute of Technology, Pune	Engineering	Development of prototype room temperature sodium-sulfur (RT Na-S) battery using the novel heteroatom doped sulfur-carbon cathode	2024-25	1000000.00



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51	Dr. Paresh S Nasikkar Dr. Akash V Fulari	Symbiosis Institute of Technology, Pune	Engineering	Halide Perovskite-Silicon Tandem Solar Cells	2024-25	1000000.00
52	Dr. Yogesh Patil Dr. Sanjay Pohekar Dr. Ruchika Kaul-Ghanekar Dr. Manikprabhu Dhanorkar Dr. Om Prakash Dr. Anand Shindikar Dr. Prasoom Dwivedi	Symbiosis Center for Research and Innovation, Pune	Engineering	Developing a Demonstrative Prototype Model for Waste Resource Recycling: Based on a field study of the SIU Lavale Campus	2024-25	800000.00
53	Dr. Chandrakant R. Sonawane Dr. Atul Kulkarni Dr. Amol Vedpathak	Symbiosis Institute of Technology, Pune	Engineering	Scalable Fabrication of Next-Generation Supercapacitors and Performance Optimization, Life Cycle analysis for Automotive Applications	2024-25	860000.00
54	Dr. Girish Kumthekar Dr. Atul Kulkarni Dr. Suresh Babu Kondaveeti Dr. Shruti Patil	Symbiosis Medical College for Women, Pune	Medical and Health Sciences	Smart Optical Technology for Lab and Bedside Noninvasive Creatinine Detection in Urine for Risk Stratification in Patients with Acute Kidney Injury	2024-25	1000000.00
55	Dr. Sunil Dasharath Saroj Dr. Atul Kulkarni Dr. Santosh Koratkar	Symbiosis School of Biological Sciences, Pune	Medical and Health Sciences	Development and assessment of nanoparticle – bacteriophage conjugate for theranostic application in combating multidrug resistant ESKAPE pathogens	2024-25	1000000.00
56	Dr. Seeta Devi Dr. Rupali Gangarde Dr. Kalyani S	Symbiosis College of Nursing, Pune	Medical and Health Sciences	Early Detection of Post-Partum Hemorrhage (PPH) among postnatal mothers: A Comprehensive Device Solution	2024-25	1000000.00