Research and Development Office [Report For 2020-21]

Research at Ashoka spans a diverse range of approaches in various broad areas of basic sciences, humanities, economics and social sciences. The Research Development Office (RDO) has been established to connect faculty and researchers with multiple resources. The office has four major operation areas – Grant Management, Research Infrastructure Management, Scholar Management, and Research Communication.

In the academic year 2020-21, the **Grant Management** vertical of RDO supported the effort of 19 faculty members and researchers on 38 research proposals. 27 of these proposals have received approvals from reputed national/international funding agencies, and 8 are pending decisions. Generous seed fundings have been provided to faculty with the primary goals to achieve excellence in research. These funds have been responsibly spent for the development of various specialised research facilities and workforce. This year, RDO has also initiated "ASHOKA -IITD Collaborative Project Proposal Scheme" and funded 6 start-up research projects involving researchers from both institutes.

List of Active Grants / Fellowships Received in Academic Year 2020-2021

Name of the Faculty	Department	Fellowship/Grant/Award	Project Title
Anup Padmanabhan	Biology	DBT/Wellcome Trust India Alliance – Intermediate Career Fellowship	Actomyosin Cortex Mechanics in Cellular Morphogenesis, Development and Disease.
Imroze Khan	Biology	Science and Engineering Research Board (SERB)	Immunopathology in the context of aging and evolution
Imroze Khan	Biology	Wellcome Trust	Investigating the Effects of Infection and Immunity on Mutation Rate
Rajendra Bhatia	Mathematics	CSIR-Bhatnagar Fellowship.	-
Madhavilatha Maganti	Psychology	DST-CSRI	The development of intersensory perception in infants "at-risk" for developmental delays: A longitudinal follow-up on implications for cognitive and language development at 18 months of age
Shubhasis Haldar	Biology	DBT Ramalingaswamy	Chaperon Assisted Protein Folding at a Single Molecule Resolution
Shubhasis Haldar	Biology	SERB	Elucidating the molecular mechanisms of Hsp70 and Hsp90 under single molecule resolution
Sougata Roy	Biology	SERB	Temporal profiling of mRNA binding proteins to understand circadian regulation of translation in marine phytoplankton
Shivani	Biology	SERB	Structuring of plant-pollinator interactions in a semi-arid community: underlying ecological mechanisms
Bittu	Biology	SERB	The neural basis of communication
Sudha Bhattacharya	Biology	INSA – Senior Scientist Fellowship by Indian National Science Academy	-
Sudipta Tung	Biology	DBT/Wellcome Trust India Alliance	Unfolding ecological and evolutionary responses to nutritional environments and their relationships with diverse biomedical disorders
Kasturi Pal	Biology	DBT-Ramalingaswamy	G Protein Coupled Receptor Expression and Platelet Granule Biogenesis During Megakayryocyte to Platelet Differentiation
Manu Awasthi	Computer Science	Grant from Semiconductor Research Corporation	Fast, Robust, Energy-aware In-Memory Computing Architectures – Ashoka
Manu Awasthi	Computer Science	Grant from Huawei Technologies India Pvt. Ltd.	Exploring Application Driven NVM/PMEM Architectures

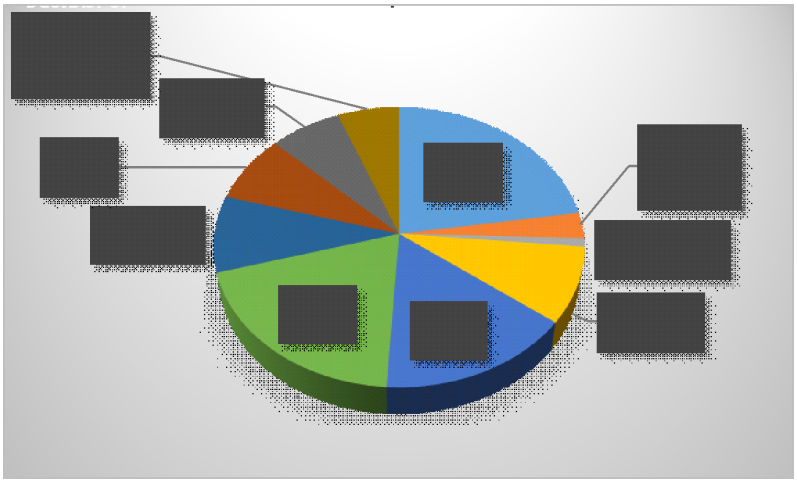
Manu Awasthi	Computer Science	SERB-SUPRA	In Memory Computing for Next Generation Workloads Using Emerging Memory Technologies
LS Shashidhara	Biology	Grant from IIT-Delhi-DRIIV	Delhi S&T Cluster: Thematic Group– Effective Education
Meghna Agarwala	Environmental Sciences	Grant from DRIIV	Delhi Cluster - Delhi Research Implementation and Innovation - Air Pollution
Meghna Agarwala	Environmental Sciences	SERB-POWER	Using past analogues to understand role of fire and climate change in Central India
Amita Baviskar	Sociology and Anthropology	Grant from Research Council of Norway	Transcendence and Sustainability: Asian Visions with Global Promise?
Ashwini Deshpande	Economics	IGC India	The Short-Term Effects of the Covid-19 Lockdown on rural communities and SHG members in particular
Debayan Gupta	Computer Sciences	Facebook (CIPHER)	Forming a coalition on encryption.
Gautam Menon	Biology and Physics	Bill and Melinda Gates Foundation	Agent-based models for COVID-19 spread in India
Manu Awasthi	Computer Sciences	Amuse Lab	Investigation into the reliability, security, performance, scalability and management of the Puzzle Me platform
Manu Awasthi	Computer Sciences	LAM	Architecture Implications on Silicon Devices.
Mphasis (Multiple PIs)	Computer Sciences	Mphasis Foundation	Mphasis Laboratory for Machine Learning and Computational Thinking at Ashoka University
Srijan Seal	Biology	Society for the Study of Evolution	Lewontin Award
Avantika Bhatia	Psychology	Pennsylvania	Online Single Session Intervention to Improve College Student Mental Health: Randomized Students Control Trial with Indian College Students

Recently Awarded Research Fellowships/Grants

- Dr Kritika Garg and Dr. Basudeb Majhi from the Department of Biology (Trivedi School of Biosciences) received a grant from DBT- Ramalingaswamy
- Dr Krishna Melnattur from the Department of Biology and Psychology has been awarded DBT- Ramalingaswamy Fellowship
- Dr. Gautam Menon from the Department of Physics received a grant from World Health Organization for the project related to COVID-19 vaccination strategy.
- Dr Rama Akondy, Dr. Basudev Majhi, Dr. Priyank Narayan, Dr. Imroze Khan, Dr. Munmun Ghosh and Dr. Anup Padmanabhan received a grant from Ashoka-IIT collaborative project
- Dr Guhan Venkat from the Department of Mathematics has been awarded DST-INSPIRE Faculty Fellowship.
- Dr Anirban Chakraborty has received a research management grant, India Research Management Initiative (IRMI) grant funded by the DBT/Wellcome Trust India Alliance

The Research Infrastructure Management vertical of RDO provides organisational and administrative support in setting up and developing research laboratories. At Ashoka, we promote a culture of common lab facilities. Many faculty across the departments such as Biology, Physics, Chemistry, Psychology share common research facilities and overlap intimately, which allows a truly interdisciplinary environment within the university. In 2020-21, the team provided support to set up much-needed chemistry lab, computational facilities, insect facilities with centralized CO_2 channels and CO_2 controlled working stations, Type II A2 biosafety facility, tissue culture facility, and imaging facilities with complete dimensions and following proper lab safety guidelines. Other notable instruments include Flash chromatography, Nucleofector, Qubit, Fluorescent microscopy etc.The initial work for setting up an Archaeology lab, Media lab, Maker-Space have been started. The equipment purchase for developing the Trivedi School of Biological Sciences (TSB) has also been initiated.

Ashoka started a well-structured **PhD programme** during the academic year 2017-18 to pursue its goals of being a leading research university. The **Scholar Management** vertical of RDO is currently facilitating 102 PhD students, 6 post-doctoral researchers, and 86 research-project staff across various departments. Scholars in the programme include both Ashoka funded and external government-funded (UGC, CSIR). Our PhD scholars come from various Indian states, and women comprise 53% of the cohort. All scholars receive a monthly stipend, house rent allowance, and an annual contingency grant. The university also provides medical insurance and generous financial supports to PhD scholars for attending international conferences. During the Monsoon of 2021, Ashoka admitted 37 PhD scholars across nine departments – Biology, Computer Science, Economics, English, History, Psychology, Physics, Chemistry, Sociology and Anthropology. All PhD scholars at Ashoka actively engage in teaching as graduate assistants.



Research Communication is the latest vertical of RDO. It aims at bridging the gap between science and society and creating an impact for Ashoka's research by making it accessible for all. The focus of the Research Communication unit is also on effective liaising between Research, Business and Outreach Offices for smooth running of outreach and fundraising events. RDO is regularly updating Ashoka's marketing collaterals and is significantly contributing to the conceptualisation and execution of Ashoka's flagship public engagement initiative, Scientifically Speaking. Scientifically Speaking series helps in connecting with high school students and anyone who is keen to learn with interdisciplinary scientists exploring complex problems. The series has been helping decode the most pressing scientific questions of our time in a simple, introductory format, while highlighting fresh perspectives grounded in interdisciplinary research. The first 2 seasons of SS conducted during the last academic year, have seen whopping 85,000 registrations with more than 12,500 attendees from across the country.