# AISRF Round 10 collaborative research projects

| Australian Grant Recipient | Indian Primary Partner | Aust Govt Grant (GST ex.) | Project Title | Project Description | Australian Project Manager |
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| Monash University | Indian Institute of Chemical Biology | $999,894 | Eliminating Visceral Leishmaniasis - An Australian-Indian Partnership | Leishmaniasis is a devastating disease that is endemic in 88 countries across 5 continents affecting around 2 million people and representing a threat for the 350 million people living in the endemic areas. Leishmaniasis is caused by the Leishmania parasite. We will apply advanced medicinal chemistry skills to increase the potency and selectivity of novel, non-cytotoxic, anti-Leishmania molecules in order to develop a cheap and orally efficacious drug for visceral Leishmaniasis. | Professor Jonathan Baell |
| The Florey Institute of Neuroscience and Mental Health | National Brain Research Centre | $999,812 | Novel Imaging Diagnostics for Alzheimer s Disease | Subtle changes in the brain precede a diagnosis of Alzheimer's disease by up to 20 years. We aim to generate an innovative diagnostic tool that takes advantage of this preclinical window and identifies outwardly healthy individuals at risk of an Alzheimer s diagnosis, using current, clinically available MRI technology. If successful, this diagnostic measure will enable rapid, cost effective diagnosis of Alzheimer's before symptom onset thus facilitating early intervention. | Professor Ashley Bush |
| BioQ Devices Pty Ltd | Frontier Lifelong Hospital | $995,550 | An advanced low cost minimally invasive cardiac assist device | QHeart Medical in collaboration with Frontier Lifeline Hospital, UNSW and QUT, are developing a revolutionary heart failure treatment device for heart failure which is highly unserved with cost effective and preventative treatment options and carry a massive economic burden to society. Our cost effective cardiac assist device, the BioQ CA, requires no pump or control system, and aims to improve Quality of Life and reduce healthcare costs for millions of unserved patients worldwide. | Dr Peter Walsh |
| Queensland University of Technology | Indian Institute of Technology Madras | $995,977 | New class of intelligent robotic imaging system for keyhole surgeries | This research proposal aims at developing new class of medical imaging devices for minimally invasive surgeries by combining the latest advancements in miniature camera technology, computer vision, image processing, and 4D-ultrasound sensing. This imaging platform technology is capable of in-situ labelling of soft and hard tissues inside the human body in a fashion that is similar to segmentation of real world scenes by current state of the art sensing technology being used in driverless cars. | Professor Ross Crawford |
| The University of Queensland | CSIR-National Institute for Interdisciplinary Science and Technology (NIIST) | $1,000,000 | Large Area Opto-Electronics (LAOE) for Australia and India | Semiconductor-based technologies are vital for the developed and developing world and are the engines of electronics used in our daily lives. Large Area Opto-electronic (LAOE) organic semiconductors are a rapidly evolving technology because of their unique features such as low embedded energy manufacturing, efficiency, and environmental friendliness. Australian and Indian scientists, and industry, will advance LAOE into the commercial arena in the areas of OLED lighting and photo-sensors. | Dr Ebinazar Namdas |
| University of South Australia | Anand Agricultural University | $973,944 | Enhancing Dairy Milk Shelf Life with PCM Thermal Energy Storage and Renewable Energy | This research will develop a commercialised renewable energy driven energy storage technology for the refrigeration of raw milk, capable of enhancing the productivity of the dairy sector by reducing the energy cost and lowering spoilage of milk during storage. The novel energy storage technology will offer a financially attractive refrigeration solution for both the Australian and Indian dairy industry. | Professor Frank Bruno |
| Deakin University | Indian Institute of Technology Madras | $995,968 | Advanced manufacturing of new high entropy alloys | This project addresses the global demand for new, high-performing materials, driven by demand for improved performance efficiencies. High entropy alloys are a new class of alloys with outstanding potential for providing enhanced durability and energy reductions in energy, aerospace and mining applications. However, manufacturing these alloys in large and complex components is a challenge. This project will pioneer new high-entropy alloy components and compositions using advanced manufacturing. | Dr Matthew Barnett |