

Regional Collaborations Programme Round 1

Five researchers have been awarded funding under Round 1 of the Regional Collaborations Programme.

The grants will support Australian researchers and businesses who are collaborating with partners in our immediate region to develop innovative solutions to shared challenges.

The projects will build strong regional partnerships across a wide range of fields including agricultural and environmental sciences, transport and construction, health, manufacturing and materials sciences.

This funding initiative is part of the Australian Government's [Global Innovation Strategy](#) under the [National Innovation and Science Agenda](#).

For more information on the Regional Collaborations Programme visit www.science.org.au/opportunities/travel/grants-and-exchange/regional-collaborations-programme.

University of Wollongong

Dr Sarah Hamylton, School of Earth and Environmental Sciences (\$45,000 over three years)

Partners

- University of Queensland, Australia
- University of Hasanuddin, Indonesia
- Ministry for Maritime Affairs and Fisheries, Indonesia
- Numerical Optics Ltd, UK
- Agency for the Assessment and Application of Technology (BPPT), Indonesia

Research Title

Developing institutional capacity for regional monitoring of coastal climate change impacts through remote sensing technologies.

Project Summary

Our limited understanding of the extent of coastal climate change impacts, such as coral bleaching episodes, is emerging as a major issue in the Indo-Pacific region. This project will benefit Australia and Indonesia by developing institutional capacity for monitoring their many isolated reefs using a recently launched satellite. Infrastructure will be developed that improves capacity for an effective environmental management response.

The University of Melbourne

Associate Professor Tuan Ngo, Department of Infrastructure Engineering (\$210,000 over two years)

Partners

- Institute for Building Science and Technologies (IBST), Vietnam
- Surrey Engineering Pty Ltd, Australia
- Institute for Civil Engineering, National University of Civil Engineering, Vietnam
- Lakatoi Constructions Limited, Papua New Guinea
- Buro Happold Engineering, India
- Civil and Structural Engineering Consultants Ltd, Sri Lanka
- Benjamin Gideon & Associates, Indonesia
- Khon Kaen University, Thailand
- Shuima Qinghua Architecture Ltd, China - business

Research Title

Asia-Pacific Research Network for Resilient Affordable Housing (APRAH)

Project Summary

This project will establish an Asia-Pacific research network on sustainable materials and prefabricated systems for Resilient Affordable Housing (APRAH) to address the housing crisis in the region. APRAH will create a knowledge-sharing network for government, universities and the private sector in Australia, India, Vietnam, China, Papua New Guinea, Sri Lanka, Indonesia and Thailand to unlock the potential growth of the prefabricated building industries. The network will assist Australia in becoming an international leader in off-site manufacturing of prefabricated affordable housing.

The University of Melbourne

Professor Sharon Lewin, The Peter Doherty Institute for Infection and Immunity (\$83,000 over 1.25 years)

Partners

- Peking University, China
- The Science of HBV Cure/UHS Singapore, Singapore
- Saint Louis University, USA
- Toronto Centre for Liver Disease, Canada
- Indiana University, USA
- ANRS/CRCL, France

Research Title

The International Coalition to Eliminate HBV (ICE-HBV)

Project Summary

ICE-HBV supports the discovery of a safe, affordable, scalable and effective cure for Hepatitis B. We are creating an international, independent, research-based and patient-centred forum to coordinate and foster collaborative partnerships working towards a cure, with a strong focus on the Asia-Pacific region. The funding will be used to support the leadership of regional researchers in the development of a comprehensive multidisciplinary roadmap for HBV cure research and to promote HBV cure research in Asia-Pacific.

The Walter and Eliza Hall Institute of Medical Research

Professor Alan Cowman FAA FRS (\$379,210 over three years)

Partners

- Eijkman Institute of Molecular Biology, Indonesia
- Ehime University, Japan

Research Title

Understanding mechanisms leading to immunity and resistance to Malaria and severe Dengue fever.

Project Summary

Our research will focus on finding solutions to tackle two of the most devastating infectious Diseases in our region, Malaria and Dengue, which together account for 600 million clinical Cases worldwide.

The project will define critical immune responses and targets of protective immunity to inform in the design of novel anti-malaria vaccines. We will also identify host genes predisposing to the development of haemorrhagic Dengue fever to facilitate the discovery of treatments for severe cases.

University of South Australia

Dr Craig Priest, Future Industries Institute (\$180,000 over three years)

Partners

- MiniFAB Pty Ltd, Australia
- SMR Automotive Australia (SMRA)
- Realtek Australia Pty Ltd
- MacDiarmid Institute, Victoria University of Wellington, New Zealand
- University of Tokyo, Japan
- ULVAC, Inc, Japan
- Juken Kogyo Co, Ltd, Japan

Research Title

Portable Healthcare: High-Value Micro/Nano-Scale Structures and Coatings for Mass Production of Biomedical Devices.

Project Summary

Our Region is facing an aging population that is demanding personal, rapid and inexpensive healthcare, while governments forecast unaffordable public healthcare within decades. Low-cost portable biomedical and analytical devices that are effective outside the clinic or lab offer a promising solution. This collaboration will unlock physical and chemical barriers to mass production of these devices by studying flow, materials, and interfaces relevant to micro/nano-scale advanced manufacturing.