Thomas Davies Research Grant for Marine, Soil and Plant Biology

2022 recipients

- **Dr Tatiana Soares da Costa, La Trobe University:** *Using supercomputers in the search for herbicides that inhibit amino acid production in plants*
- **Dr Orpheus Butler, University of Sydney:** *Uncovering the key biological role of molybdenum in soil formation*
- **Dr Zoe Doubleday, University of South Australia:** *How will climate change affect the brain functioning of octopuses?*
- **Dr Niloofar Karimian, Southern Cross University:** *Arsenic and antimony co-behaviour in soil under a changing climate – resolving interactions between microbiology and mineralogy*
- **Dr Akane Uesugi, RMIT University:** *Experimental tests of driver-passenger hypotheses – effects of weeds, fire, and soil microbes on native plant restoration*
- **Dr Linda Armbrecht, University of Adelaide:** *Probing ancient Antarctic krill populations*
- **Dr Michael Haydon, University of Melbourne:** *Time for growth – integrating metabolic signals in the plant circadian clock*
- **Dr Laura Ryan, University of Newcastle:** *The rainbow connection – the importance of substrate colour on biodiversity in urbanised intertidal zones*
- **Dr Benjamin Schwessinger, Australian National University:** *Deciphering the genomes and genetics of Australian orchid mycorrhizas from the Tulasnella and Serendipita genera*

2021 recipients

- **Bonnie Holmes, University of the Sunshine Coast:** *Investigate the movements, habitat use and population structure of great hammerheads (Sphyrna mokarran) off the Australian east coast*
- **Amelia Wenger, The University of Queensland:** *Improving marine ecosystem health through better wastewater pollution management*
- **Jana Sperschneider, Australian National University:** *The rust genome in 3D: uncovering gene control mechanisms that allow fungi to devastate crops and native species*
- **Antony van der Ent, The University of Queensland:** *Novel trace element hyperaccumulator plant discovery in Australia*
- **Caitlin Byrt, Australian National University:** *Deciphering desalination mechanisms from salt-excreting mangroves*
- **Adam Frew, The University of Southern Queensland:** *How do different mycorrhizal fungal communities affect plant defences against belowground herbivory?*

2020 recipients

- **Dr Jennifer Lavers, University of Tasmania:** *Seabirds as a vector for nutrients and pollutants on islands*
- **Dr Fiona Walsh, Consultant ethno-ecologist:** *What's in and beyond the 'fairy circles'? Investigation of patterns of pavements amongst desert spinifex grasslands*
- **Dr Danielle Verdon-Kidd, The University of Newcastle:** *Unlocking pre-instrumental climate secrets from the wood anatomy and isotopic composition of Avicennia marina*
- **Dr Edwin Lampugnani, The University of Melbourne:** *Marchantia; a simple model to study cellulose biosynthesis*
- **Dr Mark Waters, University of Western Australia:** *Interactions between light and smoke signals in plant development*
- **Dr Elisabeth Strain, The University of Melbourne:** *Assessing the role of restored and natural kelp forests in protecting against coastal erosion and ocean acidification*
- **Dr Simon Williams, The Australian National University:** *Establishing a synthetic biology platform for engineering plant innate immunity receptors*

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2019 recipients

- **Dr Joel Daniel Haywood, University of Western Australia**: *Structure-based investigations into plant growth pathway proteins.*
- **Dr Sambasivam Periyannan, Australian National University:** *Protecting Australia's Eucalypt landscape from myrtle rust invasion by rapid identification of natural resistance*.
- **Dr Adriana Vergés, University of New South Wales Sydney:** *What are the food web implications of temperate reefs becoming increasingly dominated by tropical species?*
- **Associate Professor Tracy Ainsworth, University of New South Wales Sydney:** *The impact of a changing climate to New South Wales coral populations.*
- **Dr Staffan Persson, University of Melbourne:** *Monitoring fungal root wilt disease on canola in real-time.*
- Associate Professor Heloise Gibb, La Trobe University: *Can we restore soil microbial communities by reintroducing digging mammals?*
- **Dr Cindy Gunawan, University of Technology Sydney:** *Does the commercialised use of antimicrobial silver nanoparticles facilitate co-selection and spread of antibiotic resistance genes in marine microbiota? A metagenome study.*

2018 recipients

- **Isaac Santos, Southern Cross University:** *Coral reef calcification in the Great Barrier Reef following widespread bleaching*
- **Manoj Kumar, University of Technology Sydney:** *Identification of the molecular response of seagrasses to heavy metal pollution and ocean acidification*
- **Zoe Richards, Curtin University:** *Enhancing coral threatened species management with integrated phylogenomics*
- **Ashlea Doolette, The University of Adelaide:** *How do Australian native plants survive on low phosphorus soils? New insights using 31P NMR spectroscopy*
- **Allison van de Meene, The University of Melbourne:** *Dissecting mechanisms of cell wall deposition and variability for improved understanding of our crop plants and products*
- **Mark Farrell, CSIRO:** *An innovative method for probing active soil microbial function*

2017 recipients

- **Jan Strugnell, James Cook University:** *Dating the collapse of the West Antarctic ice sheet using next generation sequencing of marine invertebrates*
- **John Morrongiello, University of Melbourne:** ***Marine*** *extremes: understanding how marine heatwaves impact on fishes and fisheries productivity*
- **Jason Grant Bragg, National Herbarium of NSW:** *Climate cycles and blue gum populations: insights from the genome*
- **Peter Vesk, University of Melbourne:** *Testing the functional traits responsible for tree distributions in long separated branches of the eucalypt phylogeny*
- **Vanessa Wong, Monash University:** *Testing the functional traits responsible for tree distributions in long separated branches of the eucalypt phylogeny*
- **Jeff Powell, Western Sydney University:** *Decomposer interactions and carbon flux: termite influences on microbial wood decay within the TERN Australian SuperSite Network*
- **Christopher Fulton, The Australian National University:** *How will marine climate change affect seaweed growth on coral reefs?*

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2016 recipients

- **Martin Francis Breed, The University of Adelaide:** *Adaptive potential in Dodonaea viscosa as a model for plant climate change adaptation*
- **Shu Kee Lam, The University of Melbourne:** *Overcoming the reduction in cereal grain protein under elevated CO2 by the use of a nitrification inhibitor*
- **Peter Macreadie, Deakin University:** *Can overgrazing of seagrass destroy ancient carbon stocks?*
- **Robert Sharwood, The Australian National University:** *Unlocking the diversity of Rubisco catalysis from deep-sea ocean α-cyanobacteria for eventual transplantation into higher plant chloroplasts to improve photosynthetic CO2 assimilation*

2015 recipients

- **Melanie Bishop, Macquarie University:** *Developing indicators of seagrass carbon storage*
- **Jonathan Plett, University of Western Sydney:** *Enhancing root health through a better understanding of plant genetics that enable mutualistic relationships with soil microbes*
- **Rebecca Lester, Deakin University:** *Carbon sequestration by wetlands: A fresh(water) approach to tackling climate change*
- **Shane Powell, University of Tasmania:** *Effect of pH changes on biofilm communities*