



# Thermal adaptation in corals from the world's hottest reefs

**THE CENTER FOR SUSTAINABLE ECOSYSTEM SOLUTIONS  
PRESENTS:**

Dr Emily Howells, VC Fellow, UOW, Australia

Date: Monday 28<sup>th</sup> May

Time: 16:00 – 17:00

Venue: Building 20 Theatre 5 (20.5)

Refreshments will be provided

## **ABSTRACT**

Did you know that some corals are thriving under temperatures not expected on the Great Barrier Reef for at least another 100 years of climate warming? These corals can help us understand mechanisms of thermal adaptation and explore options to accelerate adaptation under rapid sea temperature rise. My recent research discovered traits that enable Persian Gulf corals to withstand temperatures of  $\sim 36^{\circ}\text{C}$  and demonstrated their suitability for heat tolerance selective breeding. I will share some highlights, focusing on genetic and epigenetic variation in the brain coral, *Platygyra daedalea*, and its microbial symbionts. I will also outline upcoming plans to evaluate the capacity Australian corals to adapt to future warming.

## **BIOGRAPHY**

Dr Emily Howells recently joined UOW as a Vice Chancellor's postdoctoral fellow. Her research focuses on ecological and evolutionary responses of corals to climate warming using a combination of field, experimental, breeding, and molecular approaches. Emily completed her PhD at James Cook University and the Australian Institute of Marine Science in Townsville, followed by a postdoc at New York University in Abu Dhabi.



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