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In-vitro baby corals may cope with temperature rise thanks to science

The answer to protecting coral reefs from bleaching, may be found in the genes of the first ever tiny hybrid coral babies to be rehomed on the Great Barrier Reef.

This research is part of a larger approach led by the Australian Institute of Marine Science (AIMS) into reef restoration and adaptation science to help coral reefs adapt, recover and survive warming ocean conditions.

The three-month-old corals were raised in Australia's National Sea Simulator, at AIMS, and were last week settled at a reef in North Queensland.

Madeleine van Oppen, an ecological geneticist and Australian Research Council Laureate Fellow at the Australian Institute of Marine Science and the University of Melbourne, is leading a project which utilises in-vitro fertilisation techniques to help reef-building corals adapt to rising sea temperatures.

"Most corals in the wild are now living at the very top of their survival limit in terms of temperature," Prof van Oppen said.

"But these corals are showing promise; we have seen some coral hybrids grow and survive better under elevated temperature and acidity levels, compared to their parents.

"They have shown resilience in the lab so now we have placed them back on reef where their parents were originally collected, to see how they survive in their natural environment.

"Controlled field testing is an important next step when assessing the benefits and risks of intervention methods aimed at increasing resilience, and for future coral reef restoration," van Oppen said.

Prof van Oppen said hybridisation is the fertilisation of organisms of different varieties or species to create a hybrid, which does sometimes occur in the wild.

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This five-year project has been undertaken in Australia and Hawaii, with a \$4-million funding grant from the Paul G. Allen Family Foundation, and additional funding from AIMS.

Prof van Oppen is a key speaker at the World Science Festival Brisbane today on a panel discussion entitled Our Jewelled Seas: Future-proofing the Great Barrier Reef.

Find out more about this research published in *Nature Scientific Reports* today: www.nature.com/articles/s41598-019-41190-5

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Photos/footage: <https://cloudstor.aarnet.edu.au/plus/s/yFbtCmVQwRjEOXb>
AIMS researchers rehome hybrid baby corals on the Great Barrier Reef.
Interviewee on location in video: Ms Annika Lamb, PhD Candidate, Australian Institute of Marine Science and University of Melbourne