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Effects of pesticide exposure and thermal stress in a model tropical reef fish, the damselfish *Acanthochromis polyacanthus*

Emmanuelle was born in the French Alps but grew up close to the ocean. She decided to become a marine biologist from a very early age. She discovered the field of molecular biology during her first year at Univeristy and from then on sought to apply the principles of molecular ecology and biochemistry to ecological questions. She completed her Master degree in France at the Universities of Toulouse and Perpignan, working on genome evolution in primates and virulence of human parasite proteins. In parallel she acquired a background in marine biology and coral reef ecology through courses and internships, working on marine birds and parrotfish population genetics.

Pesticide run off and sea temperature rise are of great concern for the managers of the Great Barrier Reef. Ecotoxicological studies on tropical reef fish were limited, as such, Emmanuelle's research was the first to investigated the impacts of combined factors such as exposure to pollutants (pesticides) and elevated temperature on the physiology of a common reef fish. Her PhD research covered a range of techniques in ecotoxicology, biochemistry, molecular biology and chemistry and used the spiny damsel (*Acanthochromis polyacanthus*).

Emmanuelle showed that the thermal history of the fish has a profound influence on the behaviour of one of the main biomarkers for pesticide exposure. This is of great importance as it shows that careful monitoring of temperature is crucial prior to sampling fish for an ecotoxicology test. The project also identified *A. polyacanthus* as a relevant species to perform ecotoxicology research.

Since 2010, Emmanuelle has been working as a research laboratory technician at the Australian Institute of Marine Science. Over this time, she has worked under the supervision of Dr. Nicole Webster on sponges and marine invertebrates; Dr. David Bourne and Dr. Yui Sato on corals; and Dr. Lone Høj on tropical rock lobsters. This has enabled her to aquire experience in microbiology, next-generation sequencing data analysis, sponge biology, field work and more recently sponge virology.

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