



CAPACITY BUILDING

PROGRAM



Cebrina Nolan

PhD Student (She/Her)
Institute of Molecular Biology | King Group
The University of Queensland

"I had the privilege to receive the CIPPS Capacity Building Grant to support my professional development at the research laboratory of Prof. Jamie Seymour at James Cook University (JCU) in Cairns, QLD. During my visit Prof. Jamie Seymour and Dr. Robert Courtney supervised me in our 'field' exploration of the deep offshore waters where we collected *Carukia barnesi* specimen samples to examine their venom.

Not only did we collect jellies, I also saw the natural wonders that gave life to the ocean. We sighted sea turtles and squids, and we had to fight off fish that jumped into our boat. Sally Turner, taught me how to extract venom from jellyfish tissues and Katrina Kaposi taught me how to identify and characterize different stinging cell types.

During my stay at JCU, I had the opportunity to connect and collaborate with other researchers working on venoms outside of the Seymour group, including Dr. David Wilson and Dr. Yide Wong. Both researchers helped me tremendously. I was taught how to fractionate and prepare my venom samples for mass spec analysis."

Cebrina studied emerald jewel wasp venom (*Ampulex compressa*) with Prof. Michael Adams at the University of California, Riverside, graduating in June 2019. Cebrina then took a quick detour as a laboratory technician with A/Prof. Naoki Yamanaka at the same university, studying the effects of different insect hormones on fruit fly (*Drosophila melanogaster*) behaviour and development. As a Fullbright scholar, Cebrina joined the King Group at UQ, Australia to studying about spider toxins. Cebrina currently remains with the King group in continuation with a Higher Degree of Research.

Cebrina's research is on the functional characterisation of venoms and key toxins from the Australian box jellyfish species, *Chironex fleckeri* (the seawasp) and *Carukia barnesi* (an Irukandji jellyfish). "This is carried out using a variety of *in vitro* and *in vivo* assays and transcriptomic, proteomic, and genomic assembly of the species and their venoms."

Reflecting on her trip at JCU, Cebrina says that "the students attending JCU were friendly, in and outside the workspace. I made many friends and explored the sceneries of Cairns where I visited the Trinity beach walk, the Crystal Cascades falls, and the Cattana Wetlands!

Cebrina had a wonderful time at JCU thanks to the support of the Capacity Building Grant program. She comments that "not only did the grant support me in my PhD, it also allowed me to visit new labs to form new collaborations, and experience new places in Far North QLD."



Cebrina at the dissection scope.
Image by Katrina Kaposi



From left to right: Dr. Robert Courtney, Sally Turner, Cebrina Nolan, Katrina Kaposi, and Emily O'Hara. Image by Sally Macdonald

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