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Chemistry of Native Plants

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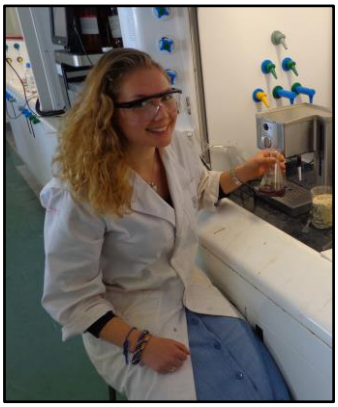
Nature continues to amaze and excite me. From an early age I've been fascinated with both plants and animals, and since studying biology and chemistry at university I've learnt to look deeper. Zooming in from the overall organism, to the tissues, cells and even on a molecular level!

An organism can produce a cocktail of chemicals for different purposes. In terms of plants, these include for protection, attracting prey or pollinators, or for metabolism. However, the application of these chemicals (also known as natural products) can reach far beyond the plant. Natural products are extremely important for the development of medicines, since almost all pharmaceuticals derived or inspired by chemicals from nature. My PhD project sees me analysing the chemicals of native Australian plants, with the extraction process involving a new extraction method – a household coffee machine! This is quick and affordable extraction process, which works surprisingly well! I aim to find new natural products, identify plants as sources of natural products for biological testing, as well as develop family-tree-like connections between species based upon their chemicals.

Searching for compounds is like being an explorer – but instead of new continents, I target plant compounds, and my tools are a variety of isolation and analytical techniques. This project is exciting because you never know what chemicals a plant has created!



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