



national science week 2014

Bianca Deans

Biological Chemist



Science that intrigues and smells delicious? That's just one aspect of biological chemistry.

Understanding how something in nature functions or exists, and appreciating the many small components that are involved has fascinated me since I was very young. From ecosystems to cells, and even to the molecules that react within them, we really do encounter science in every aspect of life.

From an early age I was lucky to have some fantastic teachers who introduced me to many aspects of science. And more importantly, they inspired and encouraged me to investigate nature, and sparked a curiosity within me which still remains. I completed a Bachelor of Science degree at the University of Tasmania, majoring in Chemistry. Within this I was really fortunate to also study many other areas of science which I was also interested in – including zoology, plant

science, ecology and agricultural science. This allowed me to tailor my degree to develop my core interest: linking biological sciences with chemistry.

Currently I am doing research in organic chemistry, focussing on plant natural products. It's fascinating how organisms can create chemicals for different purposes – including for protection, attraction, or for development. Searching for compounds is almost like being an explorer – but instead of new continents, I look for plant compounds, and my tools are a variety of isolation and analytical techniques. It's exciting to explore what a plant has created – like a surprise cocktail of compounds, especially when they have never been researched before.

Hunting for the fragrance compounds from a native Australian plant species is a key focus of my current research. Knowing the chemical components of a cosmetic product such as perfume is really important for health and safety of the public, as they might be hazardous for consumers. Having this application for my research really excites and motivates me, particularly because the final perfume product could be sold globally in the future. Natural product chemistry is a developing field of science and I am looking forward to continuing in this field; and with so many animals and plants on earth, there still remains a lot to discover and understand.

For more information: www.utas.edu.au/chemistry

www.YoungTassieScientists.com