The research group is very international and multidisciplinary, which I really liked.

Avril (my supervisor)’s focus is in the field of synthetic medicinal chemistry, and specifically on dual-action drugs that simultaneously target NLRP3 to reduce inflammation and fight known diseases.

I synthesized a novel oral allosteric inhibitor for inflammatory and neuropathic pain relief, a project I spent most of my internship working on.

**General**: conducted synthetic organic chemistry, characterization (\(^1\)H NMR, \(^{13}\)C NMR, LCMS, mass spec) and purification (GRACE-MPLC, HPLC, silica column chromatography)
Cheesin’ in the Lab
With Lab members!

With Avril, my amazing advisor

Rhia! A PhD student

missing is Nick, who was a wonderful RA (research assistant)
**Most Rewarding Aspect**

- I honestly came into this internship with relatively little organic chemistry knowledge, but I learned so much about how to use and understand the technology and both synthetic and characterization strategies.

- I was very lucky to have successfully synthesized my final product, which was achieved through a fairly large number of steps.

- Our biggest struggle was the final step, an amide coupling, but we finally managed to figure out a way to synthesize the product. I felt such a sense of happiness when the LCMS (liquid chromatography - mass spectrometer) finally showed our product peak as the major product of the reaction.

- But the culmination really was when I presented my project at our group’s chemistry meeting. Not only did all the lab work of synthesizing and purifying my compound come together, I also felt pride at being able to answer the questions the other members asked, showing that I truly understood what I was working on. Not to mention being with the lab members whom I had gotten close to through the weeks I was there.
My Work’s Impact

- My project was a collaboration between the Cooper Group and Professor Trent.
- The compound will be used as a standard in future biological testing and assays to compare activity and effectiveness of similar drugs.
- I was able to successfully accomplish this, freeing PhD students to work on their thesis research and promoting further future collaboration.
- While getting accustomed to the lab, I also helped a PhD student synthesize one of the compounds he’s going forward with in the next stages.
Personal Growth

- Definitely confirmed my decision to be a chemistry major and helped me discover a potential topic for independent work in drug discovery.

- Gained patience and useful skills in problem solving - after all the whole premise of research is that it’s probably not going to work immediately. It’s up to the researcher to find the solution.

- Learned a lot from living alone (well, not completely alone): finding an affordable but safe and convenient place to stay, cooking my own meals, planning trips, taking the initiative to explore and form close relationships with others. Really, just feeling like an adult.

- Definitely took away the worry I initially had of living and traveling in a foreign country.
Exploring Brisbane

Brisbane is such a safe city to live in, and it’s so green. There’s plenty to explore within the city itself (places to eat, nightlife, etc.) and nearby (Lone Pine Sanctuary, and plenty of national parks along the Scenic Rim).
Travels: Sunshine Coast, Gold Coast, Byron Bay, Stradbroke Island

Let me just say that Australia, hands down, has the most beautiful beaches I’ve ever seen. They’re probably the most memorable places I visited. If you advice on any travel, please feel free to get in touch.
Travel: Sydney and Cairns

Sydney was so wonderful and fun with amazing eateries, nightlife, and scenic locations. Snorkeling on the Great Barrier Reef in Cairns was also such a good time - the coral and marine life are so vibrant.