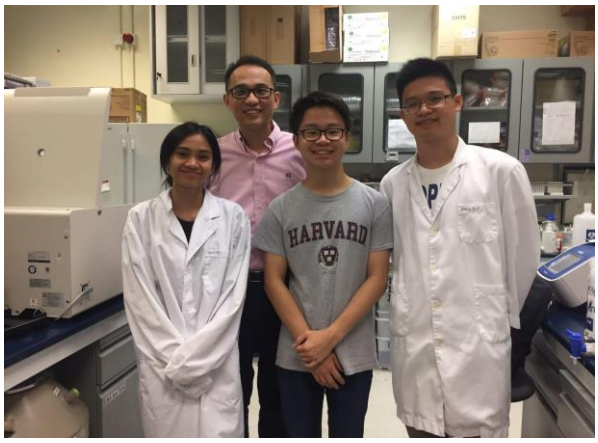
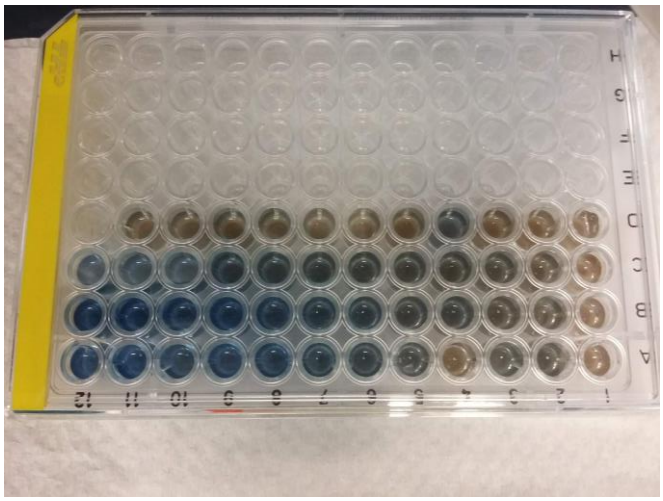
Shadowing the researchers at CUHK

Veronica 6A

I am honored to have had the chance to shadow at the science faculty at Chinese University of Hong Kong. I was assigned to two different laboratories, Mr. Wong's and Mr. Lam's. The former specifying in stem cell research while the latter in soybean. I got to work along students and professors and I am so grateful for them.



On the first week and a half, I shadowed at the stem cell laboratory. In the beginning, I was required to do research as to familiarize myself with new concepts. The laboratory itself was a mystery. There were equipment and apparatus that a normal high schooler wouldn't get in touch with and it was intimidating at first to be surrounded by them. I then got to watch students treating their cell cultures. They grew cells in a petri dish and put them in incubators to facilitate their growth. After a couple of days, they would look at the colony through a microscope. From two days alone, I was able to witness how many the cells have multiplied. Thousands. It was very compact and therefore required to be transferred to another petri dish with growth medium to ensure it grows in a good condition.



A simple procedure that all scientists should know how to do is doing a protein assay. We used the Bradford Protein Assay. The purpose of it is to help indicate the concentration of protein within a sample.

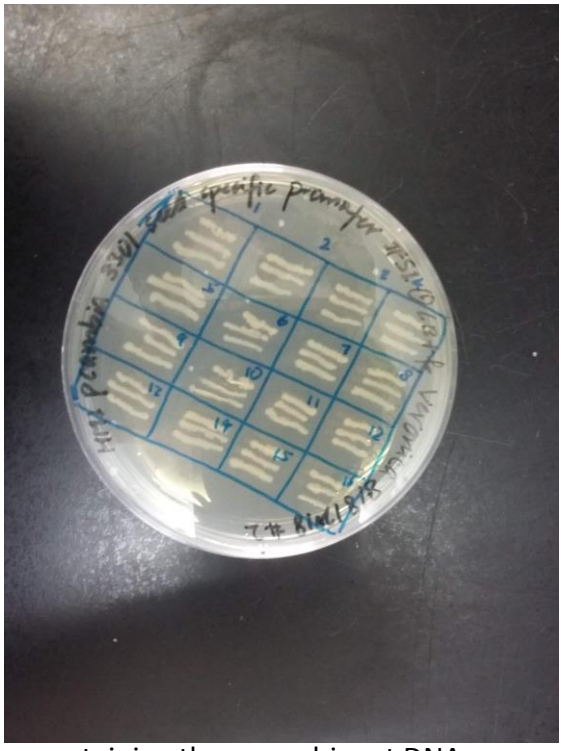
It was fascinating enough watching professors and students doing their own experiments. No one supervising, it really does show how independent and task-oriented they were. That is why when it was my turn to do an experiment and an experiment that is way beyond my

skillset, I was beyond petrified yet there was that ecstatic feeling. Along with my fellow interns, I got to do a Western Blot. It's an experiment that helps detect proteins. Even till now, I cannot fully say that I understand it since it was such a long procedure.

Not only was I limited to the laboratory, I also got the chance to go to the mice room. Students and professors used the mice for various experiments, such as testing for diabetes. I got to witness how they obtained raw samples from the mice. It was very intense.

Moving on to the other laboratory, the atmosphere was nonetheless the same but there were some differences in terms of the set-up. Some pipettes were restricted for specific usage only. Some meant for DNA, some meant for RNA.

In the soybean lab, I got to do more practical work. My mentor, Sam, taught us the method of ligation which binds a fragment of DNA to a plasmid. In our experiment, we were required to bind the E. coli with a plasmid. Afterwards, we would transfer the cells into a petri dish and store them in the incubator at a temperature of 37 degree Celsius for them to carry out cell division. In order to further study the cell, it had to be amplified. I would say that I am most familiar with the Polymerase Chain Reaction protocol since I had to do it several times throughout the week in this lab.



The photo above shows the E. coli bacteria that I grew containing the recombinant DNA.

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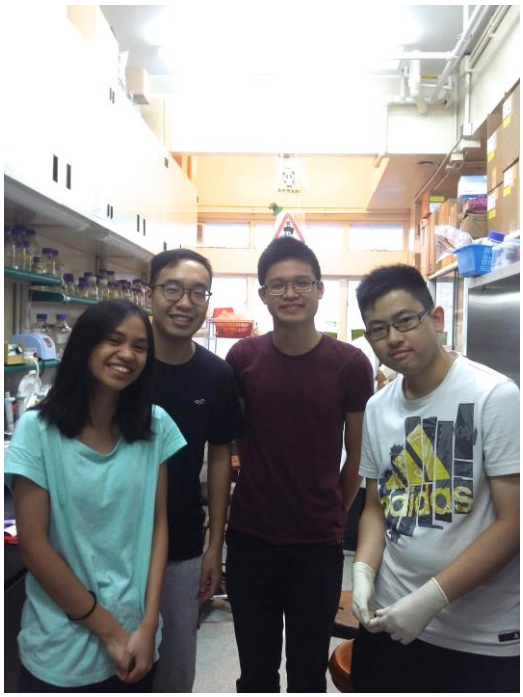

After 3 weeks in CUHK, I still have many questions in my head but I can confidently say that my mentors have provided me with so much knowledge and this experience has totally inspired me. The lab meetings have also given me an insight as to how strict the standards in the science field are. It is however justifiable. Overall, I am very satisfied with the CUHK Shadowing the Researchers.

Paul 6A

Being a part of this programme was by far one of the best experiences I have had in my entire high school life. An experience I used to only dream about when I was a child. Getting to experience what it was like to work in a laboratory was so surreal.

Of course, at first, the whole thing felt daunting. Huge imposing buildings, people in lab coats working with chemicals foreign to me, strangers looking at our group with a certain curiosity.

Even so, I had an unexplainable excitement.

On our first day, wearing gloves and donning our lab coats felt weird, and working with actual research material felt even weirder.

But faster than I thought it would take, with the help of the people who mentored us, we settled in. Soon everything started to feel natural. Like we've been working with these people for years.

For the month where we worked in both labs, the amount of experiences and things we learned amounted to something more than just an internship. My dreams of getting to mess with chemicals in an actual lab, using apparatus very few high schoolers would even be able to see, experiencing the fun times and difficulties of what a scientist experiences.

Aside from work in the lab, we gained newfound friends, bonding with them during lunch and exploring as much of the campus as we could. Pranks, stories, games,

mishaps and misadventures filled our breaks. These are experiences and people I will forever treasure.

If I could restart my summer and experience all this again, I would do it in a snap.