



My final year project (FYP) topic is about the evolution of steroid hormones in animals. I particularly focused the study on cnidarians, which is a group of animals including jellyfish, corals and sea anemones. I was interested in the biosynthetic pathway of steroid hormones in a chosen sea anemone species, *Aiptasia pulchella* and its physiological role in the regeneration of damaged tissues.

Being a FYP student, I have learnt that self-initiation and time management are the two most important aspects in research. Though supervisors would not be hesitant to provide valuable suggestions but they usually would not guide me step by step while undergoing the project. Therefore, I would have to be initiative to find solutions for a problem through reading scientific papers or actively seek help from other senior postgraduate students. Moreover, balancing the time between doing research and having lessons is essential since the whole research plan was designed by ourselves. It would be great to utilize the time wisely as more reliable data could be generated and deeper findings might be discovered if more time can be put in the scientific study. FYP was the first opportunity in my undergraduate study that I had to fully incorporate the skills and knowledge that I had learnt in lectures and lab sessions. Besides, I had hands on experiences on beginning a scientific study from proposing the plan to obtaining the results. This complete research experience could only be found in FYP but not in other courses.

During my research period, the most difficult thing I faced was the animal husbandry. My experimental sea anemones were all obtained from the Tolo Harbour and I faced a challenge in keeping them in a culture tank, which it should have a similar living environment as their original habitat. I almost tried two months to find a suitable combination of food sources, the supply of light and oxygen and the quantity of microorganisms in the tank. I overcame this problem by reading various books and scientific papers, which they have fruitful experiences in keeping similar model organisms. Through this learning process, I realized the importance of the maintenance of organism supply in a research as without the organisms, I would have nothing to work on.

If you ask me what was my unforgettable moments, I would definitely tell you it was the time that I was analyzing the genes of the sea anemone. There are full of 'A', 'T', 'C' and 'G' (nucleotides) on the computer screen and I had to check them one by one in different organisms to observe the evolution patterns in the chosen genes. I used almost one-third of the research time to analyze the genes, compare them with other model organisms in the database located on the Internet and plot a putative steroids biosynthetic pathway in my chosen sea anemone. I remember after I finished analyzing all the data and drew the possible biosynthetic pathway, I felt a great sense of satisfaction indeed.

I would like to show my greatest gratitude to my FYP supervisor, Professor Jerome Hui Ho Lam for offering this inspiring and amusing topic to me, as well as his valuable advice throughout the project. Besides, I would also like to thank our lab technician, Yin, for his generous support on the supply of various equipment and the maintenance of the quality of the lab facilities. Last but not least, I also want to show my appreciations to my other lab mates, including both the postgraduates and other FYP undergraduates. They all had provided precious help and suggestions throughout my FYP period.

