

Chapter 1

Introduction

1.1 Introduction to Indonesia International Institute for Life Sciences (i3L)

Indonesia International Institute for Life Sciences (i3L) is an institute located in East Jakarta, Indonesia. It was established in 2014 and was the first international institute in Indonesia with life sciences as its base and core. i3L's vision is "To become a leading interdisciplinary higher education institution that is globally connected and directly impacts the society through science and innovation." i3L believes in 3 core values which it wishes to implant in every of its staff and students which are grit, role-model, and integrity. The mission that i3L assigns to fulfill their vision includes:

1. To deliver an inter-, multi-, and transdisciplinary education in life sciences at an international level, as well as to support the development of our students' scientific and entrepreneurship thinking in accordance to their disciplines.
2. To conduct collaborative research and development activities in life sciences and business with other higher education institutions, the business sector, and the government.
3. To develop innovations in life sciences and implement to improve Indonesia's quality of life.
4. To maintain a continued collaboration with the government and both local and international higher education institutions in order to implement the Tridharma activities.

Through this vision and mission, i3L seeks to produce future leaders and entrepreneurial scientists. i3L also provides a complete and advanced laboratory as well as a library with a complete book collection that would allow students to enhance their study while in i3L. Higher education and research in life sciences are the main priorities of the Indonesia International Institute for Life Sciences. Six undergraduate programs in bioinformatics, biomedicine, biotechnology, food science and nutrition, food technology, and pharmacy are available through the i3L School of Life Sciences.

i3L offers advanced laboratory resources and interdisciplinary partnerships to compete with international research and innovation. The organizational structure of i3L includes a rector which overlooks all departments in i3L, followed by the vice-rector of different departments, head of study programs, and finally the faculty members of all the faculties. Through this vision and mission, i3L seeks to produce future leaders and entrepreneurial scientists.

1.2 Department Description

The author was assigned under the biomedicine department and was working under the supervision of Sir Richard Sutejo, S.TP., Ph.D. The author was working alongside three other members which included Khiem, Anastasia Musung, and Sultan. The work cycle of the author is tentative in which the author would go to i3L whenever it was necessary, such as when an experiment would be performed on that day or if it was necessary to observe the cells. The author was tasked to handle HeLa cells and was assigned to assess the anti-cancer effects of *Laportea decumana* extract. The experiments that the author was tasked to complete includes to test the effect of different concentration of *L.decumana* extract towards HeLa cells migration as well as to assess the effect of *L.decumana* extract towards expression level of EMT markers which includes Vimentin, Fibronectin, and E-Cadherin in HeLa cells. Outside of the experiment, the author was also tasked with material procurement in which the author was sometimes assigned to pick-up materials and equipment that have been procured either from i3L or from external sources. Lastly, the author was also tasked with report writing and to report his findings.