Chem 4600: Ethics Case study – Created by Alejandro Ruiz Caballero

Smarticle, a fourth-year undergraduate student, is elaborating a research project that consists of synthesizing a magical potion from a mysterious Hibiscus sp. Flower at the underwater world of mermaids that was located on the Waikiki islands of Hawaii. With the help of the supervisor, Dr. Penelope Peach, the flower was extracted successfully and safe within a sealed jar and brought in a lab at The University of Personable in Canada. The pollen in the flower was the main chemical that was required to develop the potion. Therefore, the supervisor let know the student that according to sources of the MSDS, the chemical contained in the pollen has high irritation and mutation effects when touched to the skin. The supervisor advised the student that gloves should always be worn during the handling of this flower. In the following week, a lab research assistant, Dr. Angel-O came to replace the shift of the supervisor and informed her what was done the previous week so that the lab assistant could monitor Smarticle. When Smarticle was reaching out for the flower to perform the experiment, Smarticle touched the pollen with its bare fingers, without wearing any gloves whatsoever. After 10 minutes had passed, an itchiness and pink-colored spot formed in the skin of his hand. The student had no choice but to reach for the sink to wash with warm water and soap for 60 minutes. The lab assistant watched all the scenario and informed immediately the supervisor about the incident. An ambulance arrived shortly at the lab on the same day.

Identification of any ethical issues involved.

-Lack of responsibility when handling chemicals and materials in the laboratory for experimental purposes.

-Improper training for handling the pollen by the supervisor and lab assistant. (Smarticle grabbed the pollen with his bare fingers)

Code of conduct statement related to this scenario (ACPBC Code of conducts)

1) Duties of the member to the public:

-protect the public welfare by acting responsibly at all times and by cooperating with government and consumer agencies;

- ensure that environmental and ecological concerns are taken into account in the performance of his or her work;

2) Duties of the member to employers and clients:

- be honest, diligent, and conscientious in the performance of his or her duties;

Code of ethics statement related to this scenario:

From **American institute of chemists code of ethics**

To perform all professional work in a manner that merits full confidence and trust; to be conservative in estimates, reports, and testimony, especially if these are related to the promotion of a business enterprise or the protection of the public interest, and to state explicitly any known bias embodies therein; to advise client or employer of the probability of success before undertaking a project;

Why such scenario is relevant to an undergraduate student?

This is because exposing the student itself to harmful chemicals and materials by mistake can create a big issue for a lot of people in a laboratory. All people that were harmed, they need to find a solution immediately and try to keep the area clear and safe from any potential and dangerous trace of toxic materials to be released outside the boundaries of the university lab. Its important to consider that even though technology is advancing exponentially faster through time; diseases, fire hazards, infections and viral exposure tends to travel even faster and people should act fast by remaining enclosed. The student must be conscious, know and share their intentions, aware of what they are doing, and thinking that the student wants something for the best of humankind.