

## Internship Report – Magdalena Borecka

**Duration:** 2 months (June–July 2025)

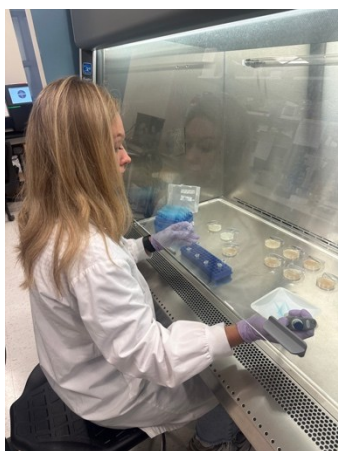
**Topic:** Characterization of physicochemical and functional properties of seed proteins from selected *Cucurbitaceae* plants

**Objective:** To gain research experience and develop laboratory skills in the analysis of the structure and functionality of proteins



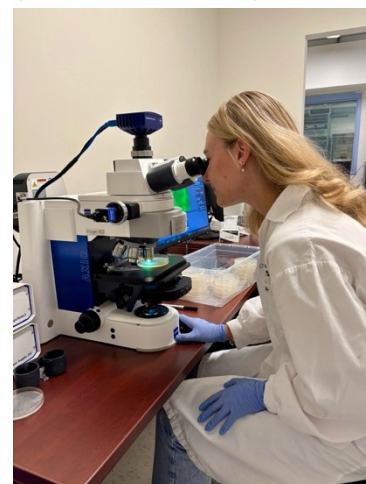
In the period of June–July 2025, I completed a research internship at the **University of Ottawa in Canada**, within the framework of cooperation with **the School of Nutrition Sciences**, located on the Health Sciences / Alta Vista campus. This university, one of Canada's leading research institutions, is known for its high level of education and its interdisciplinary approach to issues related to nutrition sciences, public health, and bioactive food components.

My internship was directly related to the subject of my doctoral dissertation entitled “Isolation and characterization of bioactive peptides from seeds of selected *Cucurbitaceae* plants.” The research project focused on the analysis of physicochemical and functional properties of protein isolates and hydrolysates obtained from the seeds of selected *Cucurbitaceae* species. The aim of the research was to assess their potential as functional ingredients in the context of food applications.



The research work concentrated on the practical application of methods for assessing the structure, stability, and functional properties of plant-derived proteins. I participated in designing experiments, preparing samples, and conducting analyses in a modern, well-equipped laboratory. The activities required knowledge of protein chemistry, rheology, and the assessment of the bioactivity of food components.

The internship enabled me to develop practical laboratory skills, gain valuable research experience, and broaden my knowledge of current trends in nutrition sciences. Collaboration with an international research team was also an excellent opportunity to exchange knowledge and experience, as well as to develop communication skills in an English-speaking environment.



The stay in Ottawa was not only professionally valuable but also culturally inspiring. The capital of Canada impresses with its diversity, architecture, and calm lifestyle. In my free time, I had the opportunity to visit Parliament Hill, the Rideau Canal, and the National Gallery of Canada. A special place was also the ByWard Market – a historic commercial district full of local products, cuisine, and art.

The experience gained during the internship will have a direct impact on the quality of my doctoral research and will provide a solid foundation for further scientific cooperation between my home institution and the research team at the University of Ottawa. Participation in this program was an extremely valuable stage of my professional and academic development.



**The internship is carried out as part of the STER NAWA Project “Actions towards the internationalization of the Doctoral School of the University of Life Sciences in Lublin (I-SDUPL)”.**