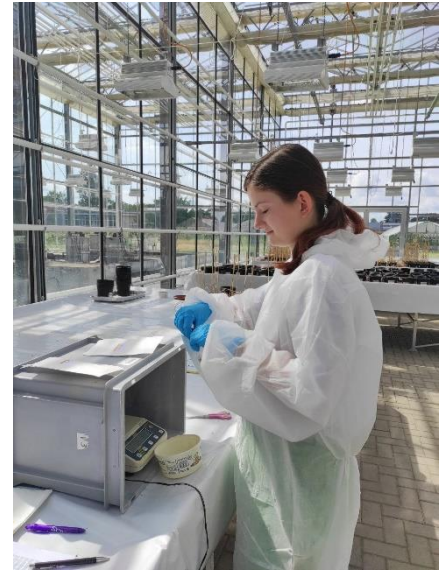


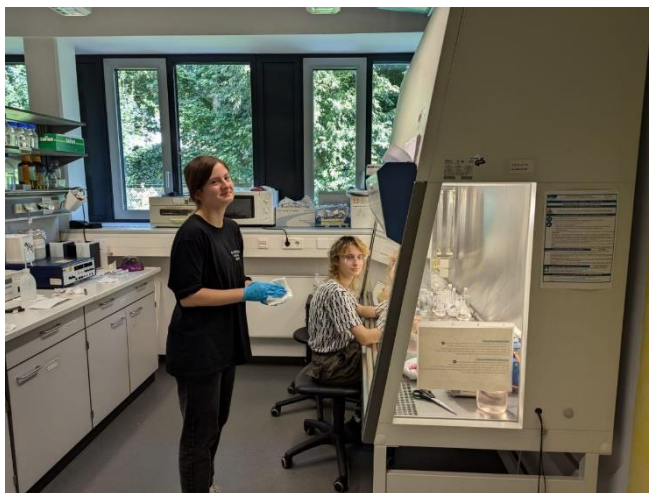
## REPORT

about the internship at the Institute of Botany at Leibniz University of Hannover,  
Hannover, Germany

From 01.07.2024 to 31.08.2024, I did an internship at the Institute of Botany at the Leibniz University of Hannover. The purpose of the internship was to acquire new skills in working in a scientific laboratory, working with new equipment and techniques, improving the level of knowledge and skills in working with scientific literature, setting up an experiment, etc. The internship was also aimed at learning how to set up experimental studies involving explosives, taking part in these studies and trying to set up a similar experiment on their own. Another important part of the internship was the processing and analysis of samples collected in Ukraine.



As mentioned above, the main purpose of the internship was to take part in an experiment involving explosives. First of all, we took part in the processing of the results of the experiment by a working group that was already in progress when we arrived at the institute. At that time, we learnt specific safety precautions when working with explosives and helped to process the biomaterial. In terms of assisting other working groups, we also took part in a germination experiment and improved our knowledge and skills in this field.



As for the experiment we set up, during its design, we improved our skills in working with scientific literature and the calculation stage of the experiment. We also improved our skills in working in a laminar flow box and with liquid chromatography-mass spectrometry (LC-MS). The

participants also mastered the technique of working with a 3D macroscope and the corresponding software. In accordance with this, photos were also taken and biomaterial was selected, and the technique of its processing was improved.

Also, the skills of working with ICP-OES were improved by processing biomaterial collected in Ukraine. It is worth noting that a new method of pretreatment of biomaterial was mastered, which had not been used before.

Unfortunately, we encountered difficulties in the course of our work. In particular, during the experiment, we had to change and improve the methodology for creating samples, as we were constantly faced with terrible contamination. There were also difficulties with the microscope due to a previous software malfunction.



However, despite this, at the end of the internship, we drew conclusions from the work we had done and included the results in our scientific theses. The results of these experiments will be used in the course of writing scientific articles and theses.

05.09.2023

Kateryna Semenova

A handwritten signature in black ink, appearing to be 'K. Semenova'.