



Fund “Nauka” Project № 25007 Resume – Competition-based Session 2025:
“Investigation of the enzymatic activity of extracts from Pelargonium radula and Geranium macrorrhizum”

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The present project aims to investigate the biological activity of extracts from cultivated *Pelargonium radula* and *Geranium macrorrhizum* with a focus on their effects on key enzyme systems. Although these plant substances are well known in traditional and modern phytotherapy, their mechanism of action at the molecular and cellular levels remains insufficiently studied.

The main focus of the study will be the analysis of enzyme activity using ELISA (Enzyme-Linked Immunosorbent Assay) kits, which provide high sensitivity and specificity in determining changes in key biological enzymes (e.g. acetylcholinesterase, alpha-amylase, alpha-glucosidase, tyrosinase). Providing the necessary ELISA kits is a key condition for the implementation of the project, as they guarantee reliability and reproducibility of the results.

The study will provide new scientific data on the biological activity of extracts from *Pelargonium radula* and *Geranium macrorrhizum* and will lay the foundation for their potential application in the development of innovative dosage forms. The results are expected to make a significant contribution both in the field of pharmacognosy and phytochemistry, as well as in modern pharmaceutical technologies, by linking traditional natural resources with modern biological evaluation methods.

The expected results of the project include obtaining new scientific data on the biological activity of extracts from *Pelargonium radula* and *Geranium macrorrhizum*. By applying ELISA methodology, changes in enzyme activity will be quantified, which will allow for an in-depth evaluation of the plant extracts. Thus, the project will simultaneously contribute to expanding fundamental knowledge in the field of pharmacognosy and phytochemistry.