

Title of the project: AP13067774 "Search for biologically active substances and their use in agriculture"

Relevance:

The relevance of the work lies in the fact that many plants growing on the territory of Kazakhstan have not yet been studied. It is also necessary to conduct studies to study their biological activity. It has been established that natural substances have a pronounced biological activity, while they show a low level of toxicity and have a low level of contraindications.

Purpose: study the phytochemical composition of plants containing bioactive substances, isolate the target components, establish their composition, structure and biological activity. Replenishment of scientific data on the composition of plants and the possibility of using essential oils, extracts, tinctures and individual components of plants for the treatment and prevention of crops.

Expected and achieved results:

- a literature review and a patent search on the research topic were carried out, a field expedition was conducted to collect potential plants, during expedition were collected: *Chamaenerion angustifolium*, *Dasiphora fruticosa*, *Calligonum aphyllum*, *Limonium gmelinii*, *Sanguisorba officinalis*, etc;

- an apparatus for obtaining extracts was assembled, extractants were selected, primary extracts were obtained, the ash content of the collected plants was determined;

- based on the results of the work, 1 thesis and 2 articles were published.

- in the future, extracts and essential oils of various plants will be obtained.

Phytochemical analysis of extracts, essential oils will be carried out;

- the biological activity of extracts and essential oils will be determined;

Research group members:

Project manager: Ibatayev Zharkyn PhD, Hirsch index - 5.

<https://scholar.google.com/citations?user=HQIVd5IAAAAJ&hl=en>

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Information for potential users:

We invite interested persons and organizations to scientific and practical cooperation.