PP29. PROTEIN PROFILE OF MEDICINAL PLANTS

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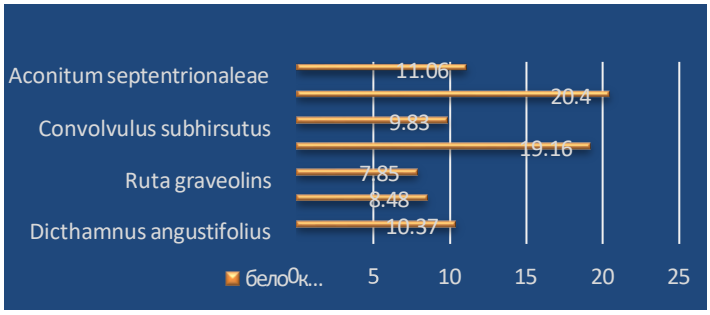
It is believed that biologically active molecules obtained from plant sources, mainly including secondary metabolites, are of great value for the treatment of various human diseases. However, some unavoidable limitations associated with these secondary metabolites, such as high cytotoxicity, low bioavailability, poor absorption, low content, improper metabolism, etc., have forced the scientific community to investigate medicinal plants in search of alternative biologically active molecules. It has been shown that a large number of proteins isolated from medicinal plants exhibit antimicrobial, antioxidant, anti-HIV, anti-cancer, and ribosome inactivating and neuromodulating activity. Despite these developments and the fact that proteins are potential candidates for medicinal products, to date, no systematic review article has documented the therapeutic potential of the available biologically active proteome of a medicinal plant. Thus, the present work was developed to describe the current state of therapeutically active proteins/peptides of medicinal plants in comparison with their potential as future protein-based drugs for the treatment of various human diseases [1]. In our study, the aboveground parts of the selected plants were used, namely: *Dictamnus angustifolius, Haplophyllum perforatum, Ruta graveolens, Mentha longifolia, Convolvulus subhirsutus, Arundo donax* and the roots of *Aconitum septentrionale*. The purpose of this work is to study the protein substances of these plants. The determination of protein substances in these samples was carried out by colorimetric method on a V-5000 Metash spectrophotometer with Nessler reagent at a wavelength of 400nm [2]. It was found that the total protein content in *Dicthamnus angustifolius* is 10.37%, in *Haplophyllum perforatum* 8.48%, in *Ruta graveolens* 7.85%, in *Mentha longifolia* 19.16%, in *Convolvulus subhirsutus* 9.83%, in *Arundo donax* 20.40% and in the roots of *Aconitum septentrionale* was 11.0%. The difference in the protein content in plants may be due to the ability of plants to fix nitrogen in the soil, which, in turn, helps in protein synthesis. The results were determined as the average of three repeated determinations.

Fig. A graph showing the protein content in the selected plants



When comparing seven selected medicinal plants, it was found that the protein content in *Arundo donax* and Mentha longifolia was the highest, while the lowest protein content was found in Ruta graveolens plants. Further in-depth protein studies should be conducted where the protein content is relatively high, which may be useful for the development of a new drug.