

ANATOMICAL RESEARCH OF LEAVES AND SHOOTS OF PLATYCODON GRANDIFLORUS

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Platycodon grandiflorus is a species of herbaceous flowering perennial plant of the family Campanulaceae, popular and promising plant in Chinese medicine, belong to perspective sources of medicinal plant raw material for obtaining medicines with the anthelmintic, anti-inflammatory, expectorant, astringent, analgesic actions. *Platycodon grandiflorus* characterized by such an important feature of the presence of biologically active substances – triterpenoids, flavonoids, anthocyanins, phytosterols, carbohydrates etc. According to the aim of present work, anatomical investigation of leaves and shoots has been carried out. In the process of our investigation the diagnostic features of vegetative organs have been determined.

During of the study of the anatomical structure of leaves was found that cells of the epidermis the upper side is slightly sinuous, thin-walled, tightly closed. The stomatal apparatus is of anomocytic and tetrocytic types. Occasionally, along the veins encountered multicellular hairs consisting of 5 cells. It was found that the main cells of the lower epidermis there are small, polygonal, with stomas of anomocytic and tetrocytic types. Along the veins the epidermal cells is elongated, wall-sided, polygonal. There is a large number of simple unicellular hairs of different lengths, located along the veins. Two layers of columnar parenchyma and five layers of spongy parenchyma represent leaf mesophile. A cross section of the shoot has round shape. The stem is covered with epidermis presented by small, elongated, polygonal cells are often found convex papillae with thickened walls. Under the epidermis situated 3-layer angular collenchyma. Bark parenchyma consists of 10-12 layers of large thin-walled cells without intercellular spaces. Under it is pawned pericyclic ring of sclerenchyma that consist of 5-6 layers. Next is situated a narrow ring of phloem consists of 7 layers of cells. The cambium is composed of colorless, thin-walled cells in several layers. In the xylem there are visible single row medullary rays. The central position in the stem takes a well-developed parenchyma presented rounded cells without intercellular spaces.

Conclusions. Anatomical study of leaves and shoots of *Platycodon grandiflorus* has been conducted for the first time. The results of our investigation can be used in developing analytic and regulatory records intended for incorporation of the additional sources of medicinal herbal raw materials in the practical fields.