

LACTON-CONTAINING PLANTS IN ONCOLOGY

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Malignant neoplasms are the most formidable among the existing diseases. They are known to mankind from time immemorial, mention of them is found already in the Egyptian papyrus of Emers, written in 3730 BC. The funds used to treat cancer can be found in the literary sources of China, India, Greece, and Ancient Rus. Until the eighteenth century. The main means for their treatment were plants.

Plants containing lactones are interesting as anticancer agents. The roots of *Podophylum peltatum* L. and *P. Emodi* W. contain resinous substance podophyllin. In its composition there are lignones of lignan series – podophyllotoxin, α - and β -peltatin and other mitotic poisons, inhibiting cell division in metaphase.

In the form of a 30% oily solution, podophyllin is used for laryngeal papillomatosis, bladder papillary fibroepillatomatosis, causes resorption of benign tumors and does not relapse for more than 16 months, and for breast cancer and myeloid leukemia – leads to complete recovery.

As a result of modification of individual lactones – podophyllotoxin, α - and β - peltatin, pikropodofillin, less toxic preparations SPG-827 (in capsules) for internal use and SPJ-77 in ampoules for intravenous administration used abroad. The antitumor effect of these lactones is due to the presence of a tetrahydronaphthalene nucleus and a lactone ring in their molecule. The plants containing sesquiterpene lactones are of considerable interest as a reserve of antitumour agents.

In animal experiments, high activity was demonstrated by: *Eupatoria sp.* (eupatholide, etc.), *Gaillardia sp.* (gaylyardin), *Helenium sp.* (gelenalin), *Vernonia amygdalina*, etc.