



# CHEMICAL COMPOUNDS WITH THERAPEUTIC POTENTIAL FROM SPECIES *SOLIDAGO CANADENSIS* L. GROWN IN THE REPUBLIC OF MOLDOVA

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## INTRODUCTION

*Solidago canadensis* L., with common name Canadian goldenrod, is a wild plant, and known as an invasive species in many European countries, but in the Republic of Moldova it is cultivated in private gardens as a decorative plant. Recent research has highlighted its potential as valuable medicinal resource, prompting interest in its phytochemical properties and pharmacological activities.

## RESULTS



- The phytochemical data revealed that Canadian goldenrod aerial parts extracts are characterized by the following values of key secondary metabolites: total polyphenol content – 96.40 mg GAE/g DW, flavonoids – 66.4 mg RE/g DW and saponins – 500 mg SE/g DW.
- The analysis of volatile oils in flowering aerial parts highlighted monoterpenes and sesquiterpenes as being the dominant hydrocarbon groups, with the major constituents, as follows: limonene (22.81%), germacrene D (19.73%), and  $\alpha$ -pinene (19.03%).
- These compounds are associated with strong antioxidant, anti-inflammatory, antimicrobial (phenolic compounds, volatile oils), and diuretic activities (saponins, flavonoids).

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## AIMS AND METHOD

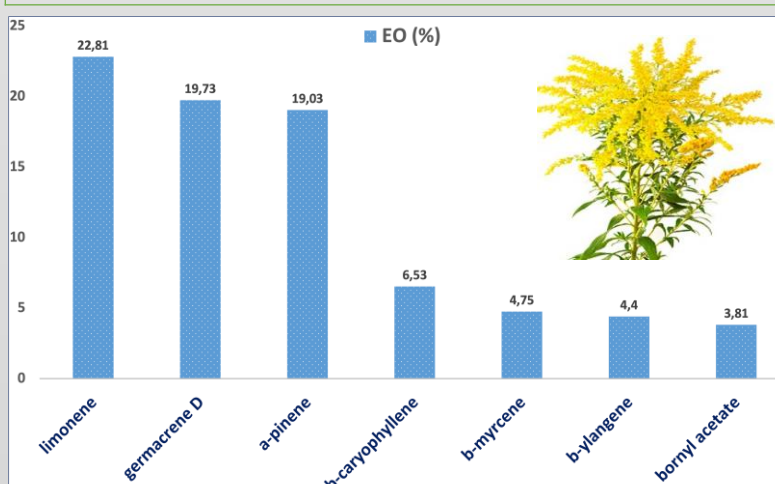
This study aimed to investigate the chemical compounds with therapeutic potential from species *Solidago canadensis* L. (Canadian goldenrod), grown in the Republic of Moldova.



*Solidago canadensis* in the collection of Scientific-Practical Centre in Domain of Medicinal Plants of Nicolae Testemitanu SUMPh

### CHEMICAL COMPOUNDS IN *S. CANADENSIS* DRY EXTRACT

TOTAL POLYPHENOL CONTENT	FLAVONOIDS	SAPONINS
96.40 MG GAE/G DW	66.4 MG RE/G DW	500 MG SE/G DW



The major compounds in the essential oil of *S. canadensis* (%)

## CONCLUSIONS

The presence of diverse classes of bioactive compounds within *S. canadensis* from the Republic of Moldova flora suggests the potential for tailored medicinal use. This rich phytochemical profile, supports its consideration as a promising medicinal plant, being a sustainable and cost-effective local source of phytopharmaceutical raw material.