

STUDIES ON AGRIMONIAE HERBA SELECTIVE EXTRACTS; POLYPHENOLS CONTENT, ANTIOXIDANT AND ANTIMICROBIAL POTENCY, MTS TEST

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Abstract. Romanian folk medicine recommends agrimony, *Agrimonia eupatoria* L. (*Rosaceae* family) as natural treatment for different respiratory and eye infectious and inflammatory diseases, but also for genital and digestive illnesses, mainly liver diseases, as well as for varicose vein and ulcer leg condition. The work presented hereby was aimed at evaluating the general profile (polyphenols content, antioxidant potency, potential antimicrobial effects and the effects on cell culture in vitro) of some polar, water and ethanol, extracts obtained through the processing the aerial part of common agrimony. The results indicated an abundance of luteolin, quercetin, apigenin and kaempferol derivatives as well as good antioxidant potency, a weak effect against *P. aeruginosa* ATCC 9027 bacteria strain and no toxicity on the cell culture (MTS test).

Key words: *Agrimonia eupatoria* L., polar extracts, antioxidant, antimicrobial, MTS test

Introduction

Agrimonia eupatoria L. (fam. *Rosaceae*), commonly agrimony, is generally described as a mild antiseptic and astringent phytomedicine mainly recommended for sore throat and gastrointestinal ailments, also known for antiviral properties. Concerning scientific data, studies on different agrimony derived products and plant parts indicated important antioxidant effects, proved through both chemical and biological tests. For example, studies on healthy volunteers indicated that the consumption of agrimony's tea *has potential in improving markers of lipid metabolism, oxidative status and inflammation in healthy adults* [1].

Chemiluminescence studies [2] as well as DPPH assays [3] indicated augmented radical oxygen scavenger activity of the agrimony's water and ethanolic extracts, similar to those demonstrating superoxide anion, peroxy and hydroxyl radicals, hydrogen peroxide, hypochlorous acid and peroxy nitrite selective scavenging efficacy [4], generally attributed to polyphenol content.