

**ANTIFUNGAL ACTIVITY OF SAPONINS FROM AERIAL PARTS
OF *MEDICAGO ARABICA* AGAINST SOME ORNAMENTAL PLANT PATHOGENS****Saniewska A.¹, Jarecka A.¹, Bialy Z.², Jurzysta M.²**¹Research Institute of Pomology and Floriculture, Pomologiczna 18, 96-100 Skierniewice, Poland²Department of Biochemistry and Plant Quality, Institute of Soil Science and Plant Cultivation,
Czartoryskich 8, 24-100 Pulawy, Poland

Total saponins from aerial parts of *Medicago arabica* were tested *in vitro* against nine species of pathogenic fungi. The total saponins viz. triterpene glycoside derivatives of hederagenin, byogenin and 2- β -hydroxyoleanolic acid (Bialy et al., 2004) were used at 0.01%, 0.05% and 0.1% concentrations. Fungicidal activity of the saponins was positively correlated with their concentrations and the fungi investigated showed different susceptibilities to the saponins. The most sensitive fungi were *Rhizoctonia solani* Kühn, *Botrytis tulipae* (Lib.) Lind, *Phoma narcissi* Aderh., *Pestalotia* spp. and *Fusarium oxysporum* Schlecht. f. sp. *tulipae* Apt., with their linear growth limited in 86.6%; 83.3%; 65.5%; 64.3% and 63.4% respectively at 0.1% saponin concentration. Less susceptible were *Phoma poolensis* Taub. (59,3%), *Botrytis cinerea* Pers. (51,8%), *Pythium ultimum* Trow. (43,3%), *Fusarium oxysporum* Schlecht. f. sp. *narcissi* Syd. et Hans. (41,6%), *Fusarium oxysporum* Schlecht. from *Muscari armeniacum* (36,1%), *Alternaria alternata* (Fr.) Kreisler (34,0%) and *Fusarium oxysporum* Schlecht. sp. *callistephi* (Beach) Syd. et Hans. (21,5%). Higher saponin concentrations (0,2% and 0,3%) inhibited the growth of *P. poolensis* and *B. cinerea* to a higher degree but there was no influence on the growth of *P. narcissi* and *B. tulipae*. It should be noted that the total saponins from *M. arabica* possess higher fungicidal activity in comparison to the saponins from aerial parts of *M. sativa*.

REFERENCES

- Bialy Z., Jurzysta M., Mella M., Tava A.: Triterpene saponins from aerial parts of *Medicago arabica* L. J. Agric. Food Chem. 52(5): 1095-1099 (2004).