**PP-070 – In vitro anti-herpes activity of Salvia desoleana Atzei & V. Picci essential oil**

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**Abstract (max 350 words, 1 template page)**

*Salvia desoleana* Atzei & V. Picci is an indigenous species in Sardinia island used in folk medicine to treat menstrual, digestive and central nervous system disease. Nowadays, it is widely cultivated for the pleasant smell of its essential oil, whose antimicrobial and antifungal activities have been already screened (Peana et al. 1999, Sokovic et al. 2009).

Within a project aiming to investigate the potential antiviral activity of endemic plants from Sardinia, this study evaluated the *in vitro* anti-Herpes Simplex Virus (HSV-2) activity of *Salvia desoleana* essential oil (EO) and its main components: linalyl acetate (25%), alpha terpinyl acetate (16%) and germacrene D (18%).

The results showed that *S. desoleana* EO inhibits both acyclovir sensitive and acyclovir resistant HSV-2 strains with IC\(_{50}\) values of 23.72 μg/ml for the former and 28.57 μg/ml for the latter. Moreover, a significant suppression of HSV-2 replication was observed with an EC\(_{50}\) value of 33.01 μg/ml (95% CI: 26.26 to 41.49) when the EO was added post-infection.

A bioassay-guided fractionation procedure was therefore adopted to identify the active fraction(s) and/or compounds in *S. desoleana* EO. Among the fractions resulting from flash column chromatography on Silica gel, that containing 84% of germacrene D showed a similar spectrum of activity of *S. desoleana* EO although increased because of the germacrene D enrichment (EC\(_{50}\) of 10.19 μg/ml against HSV-2 and 6.58 μg/ml against HSV-2 acyclovir resistant) and with a stronger suppression in post-infection stage.

In conclusion, *S. desoleana* EO and germacrene D can be of interest to develop new and alternative anti-HSV-2 products also active against acyclovir-resistant HSV-2 strains.

**Keywords**: *Salvia desoleana*, Germacrene D, antiviral activity, HSV-2

**REFERENCES**
