

GOLDEN ROOT AND ITS COMMERCIAL PRODUCTS: METABOLITE PROFILING AND BIOLOGICAL ACTIVITIES

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Rhodiola rosea L. [also known as *Sedum rosea* (L.) Scop., Golden Root, Arctic Root, Roseroot], is eventually among the most popular medicinal plant species within the family of Crassulaceae, possessing valuable biological properties, such as adaptogenic, anti-depressive, anti-cancer, anti-inflammatory, neuroprotective, cardioprotective, hepatoprotective, and immunomodulating activities [1]. In a number of studies over past 8 years we have examined the biological activities of *R. rosea* extracts and commercial products based on them in different *in vitro* as well as *in vivo* models [2, 3]. Further, we developed a reliable analytical platform (by combing NMR with HPLC-UV) for assessment of *Rhodiola* species [*R. rosea*, *R. kirilowii* (Regel) Maxim and *R. crenulata* (Hook. f. & Thomson) H. Ohba], commercial products and the eventual application of some secondary metabolites as markers for the authentication of *R. rosea*-based products [1]. Moreover, we applied NMR-based metabolomics (1D and 2D) along with multivariate data analysis and HPLC for quantitative determination of the metabolic differences in *R. rosea* rhizomes, roots and aerial parts, grown in Bulgaria [4].

References:

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