

## Biologically Active Caffeic Acid-Derived Biopolymer

**Authors :** V. Barbakadze, L. Gogilashvili, L. Amiranashvili, M. Merlani, K. Mulkijanyan

**Abstract :** The high-molecular water-soluble preparations from several species of two genera (Symphytum and Anchusa) of Boraginaceae family Symphytum asperum, S. caucasicum, S.officinale and Anchusa italica were isolated. According to IR, 13C and 1H NMR, APT, 1D NOE, 2D heteronuclear 1H/13C HSQC and 2D DOSY experiments, the main chemical constituent of these preparations was found to be caffeic acid-derived polyether, namely poly[3-(3,4-dihydroxyphenyl)glyceric acid] (PDPGA) or poly[oxy-1-carboxy-2-(3,4-dihydroxyphenyl)ethylene]. Most carboxylic groups of this caffeic acid-derived polymer of A. italica are methylated.

**Keywords :** Anchusa, poly[3-(3,4-dihydroxyphenyl)glyceric acid], poly[oxy-1-carboxy-2-(3,4-dihydroxyphenyl)ethylene], Symphytum

**Conference Title :** ICBBE 2014 : International Conference on Biophysical and Biomedical Engineering

**Conference Location :** London, United Kingdom

**Conference Dates :** May 26-27, 2014