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# FROM PLANTS TO PHARMACY SHELF

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# BOOK OF ABSTRACTS

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# DIARYLHEPTANOIDS FROM GRAY ALDER

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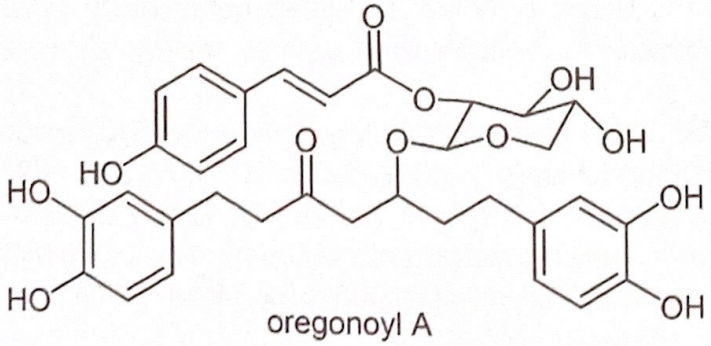
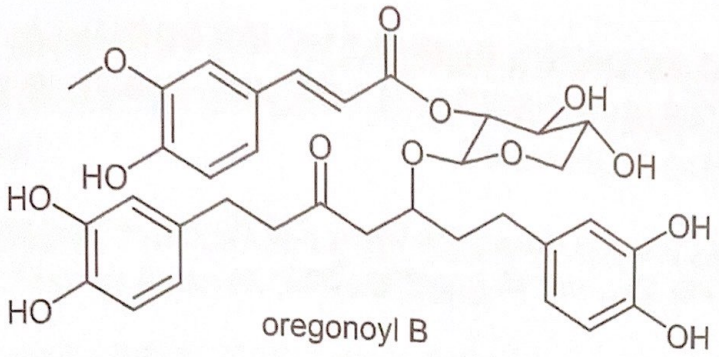
*Alnus incana* (L.) Moench (gray alder) is one of the three *Alnus* species wild-growing in Serbia, along with *A. glutinosa* (L.) Gaertn (black alder) and *A. viridis* (Chaix) DC. subsp. *viridis* (green alder). Characteristic secondary metabolites for this genus, found mostly in leaves and bark, are diarylheptanoids, compounds structurally related to curcumin, one of the most investigated natural products. Three types of diarylheptanoids were previously found in *Alnus* species: simple diarylheptanoids, diarylheptanoid glycosides, and complex diarylheptanoids composed from diarylheptanoid, saccharide and phenolic acid moieties [1, 2].

In this investigation nine known diarylheptanoids, namely platyphyllenone, hirsutenone, alnuside A and B, platyphylloside, oregonin, platyphyllonol-5-*O*-β-D-xylopyranoside, oregonoyl A and oregonoyl B have been isolated from the bark of *A. incana* using dry column flash chromatography followed by semipreparative HPLC chromatography. The structure elucidation has been performed using 1D and 2D NMR, as well as, IR and UV spectroscopy.




oregonoyl A



oregonoyl B

Although all isolated compounds are known, four of them have been found for the first time in *A. incana* – alnuside A, alnuside B, oregonoyl A and oregonoyl B.

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**References:**

[1] Novaković M, et al. (2014) Phytochemistry 97: 46-54.
[2] Novakovic M, et al. (2014) Chemistry and Biodiversity 11: 872-885.