

Department of Biology and Ecology,  
Faculty of Sciences and Mathematics, University of Niš  
Institute for Nature Conservation of Serbia

**13<sup>th</sup> Symposium  
on the Flora of Southeastern Serbia  
and Neighboring Regions**

**Stara planina Mt. 20 to 23 June 2019**



**13. Simpozijum  
o flori jugoistočne Srbije  
i susednih regiona**

**Stara planina 20. do 23. jun 2019.**

**ABSTRACTS  
APSTRAKTI**

**Niš-Belgrade, 2019**

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Faculty of Sciences and Mathematics, University of Niš  
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Abstracts

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## **Structural characterisation and orientation of cell wall polymers in *Arabidopsis thaliana* stem**

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Plant cell walls are composed of a framework of cellulose microfibrils that are interconnected with heteropolysaccharides (lignin, hemicelluloses) in a specific manner. Plant cell walls form a large part of the plant body and define its characteristics. Structural organisation of the cell wall and related polymers is important for both mechanical properties of plants and chemical reactions occurring in the wall space, especially in the response to stress. By using imaging FTIR microscopy, run in transmission mode and at different polarisation modes (from 0° to 90°), it is possible to follow the chemical variability and the orientation of cell wall polymers (cellulose, hemicelluloses and lignin) of the *Arabidopsis thaliana* stem. The polarised FTIR measurements indicated that both xylan and lignin have parallel orientation with regard to the orientation of cellulose. It is believed that this structuring of lignin in the S<sub>2</sub> layer of the cell wall might be a result of the spatial constraints within the cell wall, occurring due to the previous deposition of cellulose/hemicellulose in a strongly oriented assembly.

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## **Genetic variation of camelina (*Camelina sativa* (L.) Crantz) estimated using SRAP (sequence-related amplified polymorphism) markers**

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Camelina (*Camelina sativa* (L.) Crantz), commonly known as false flax, is a diploid oilseed plant in the family *Brassicaceae*. It is a native European species which was cultivated until 19th century when it was replaced by more productive oil crops