

Društvo za fiziologiju biljaka Srbije
Serbian Society for Plant Physiology

Institut za biološka istraživanja „Siniša Stanković“, Univerzitet u Beogradu
Institute for Biological Research „Siniša Stanković“, University of Belgrade

XVIII SIMPOZIJUM

Društva za fiziologiju biljaka Srbije

18th SYMPOSIUM

of the Serbian Society for Plant Physiology

Program i izvodi saopštenja
Programme and Abstracts



Vršac, 25-27. maj, 2009.

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Припрему и организацију скупа је финансијски pomoglo Министарство за науку и технолошки развој Републике Србије.
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Structure analysis of *Arabidopsis thaliana* and spruce cell wall by FTIR and fluorescence spectroscopy

One of the most important features of plant cells is the presence of a cell wall. The secondary walls of woody tissue and herbaceous species are composed predominantly of cellulose, lignin, and hemicelluloses. Fluorescence is an intrinsic property of the cell wall and lignin.

Fluorescence spectroscopy is a sensitive analytical tool in the studies of structure of complex molecular structures. Fourier transform infrared spectroscopy (FTIR) has been developed as a rapid, direct, non-destructive, bioanalytical technique. These two techniques play significant role in the monitoring of developmental and compositional changes in the cell wall.

We applied fluorescence and FTIR spectroscopy for investigation of the cell walls isolated from needles of a Serbian spruce tree (*Picea omorika* (Panč) Purkyne) and *Arabidopsis thaliana*. The aim was to obtain more precise structural information about different constituents of cell walls, influence of various types of inter-unit links and other structural characteristics.

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