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Allelopathic influence of aqueous extracts from tissues of *Drimys brasiliensis* on development of metaxylem cells in seedlings of *Sesamum indicum*

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Workshop Information

I Workshop of Plant Biology (I Workshop de Biologia Vegetal) was held in the Bioscience Institute – UNESP, campus of Rio Claro, Brazil, during August 20 and 21, 2012. Workshop was a scientific event organized by Post-graduate students from that Institute aiming to integrate Post-graduate and Graduate students from different areas related to Plant Biology (Anatomy, Ecology, Evolution, Morphology, Physiology, and transitional areas) from different Universities. Workshop Organization offered a large number of speaking activities, scientific discussions, and extra short-courses to improve the knowledge and formation of students in Plant Biology.

Scientific Committee

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Allelopathy is a topic of great interest within the chemical ecology. Is most commonly defined as a direct or indirect effect by one plant, including microorganisms, on another, through the action of chemical compounds. The objective of this study was to evaluate the allelopathic effects of aqueous extracts from differents organs of *Drimys brasiliensis* on the size of metaxylem cells in seedling roots of *Sesamum indicum* (sesame). In a clear plastic boxes, sesame seedlings grown in the presence of aqueous extracts of leaves, roots and stems of *D. brasiliensis*, at concentrations of 25, 50 and 75% (w / v), and the control (distilled water). After four days, the seedlings were removed from the plastic boxes, and the primary root segment was detached to perform staining, according to the modified Fuchs method. After staining, the material was mounted on glass slides with the roots in Apathy's syrup for observation under an optical microscope coupled with a camera. Were used four primary roots of sesame seedlings grown in each treatment. One-half of the length of each root was photographed, from the central region upward. From each photograph ten central cells of the metaxylem with 20x magnification were measured. In all concentrations, the extracts of the three organs reduced to 50% the average size of the metaxylem cells compared to control group. However, concentrations of the leaf extract had more significant effects when compared to stem and root extracts. The aqueous extracts of *D. brasiliensis* reduced the root growth of sesame seedlings, indicating that this inhibition may be associated with a decrease in elongation of the metaxylem cells.

Review process and quality of English writing is responsibility of Workshop Scientific Committee.