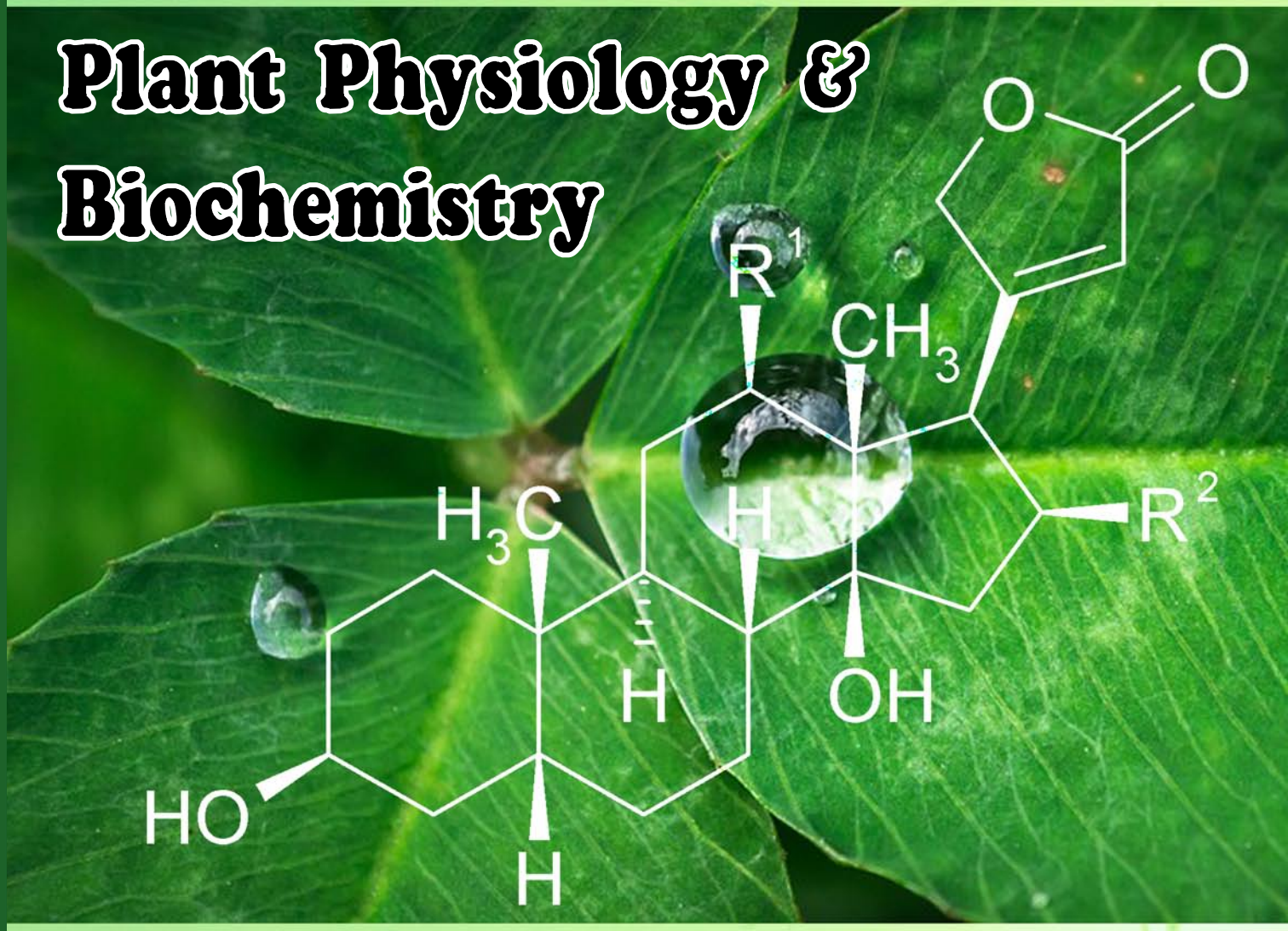
VISCEA

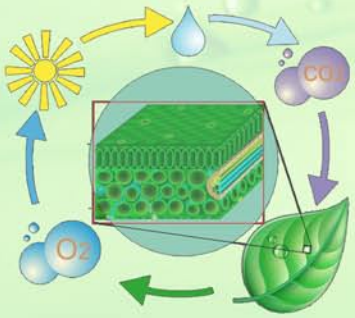
Vienna International Science Conferences and Events Association

International Conference

Plant Physiology & Biochemistry



Programme and Abstracts



Vienna, Austria
July 9-10, 2018

VISCEA
Vienna International Science
Conferences and Events Association

International Conference

Plant Physiology & Biochemistry

Programme and Abstracts

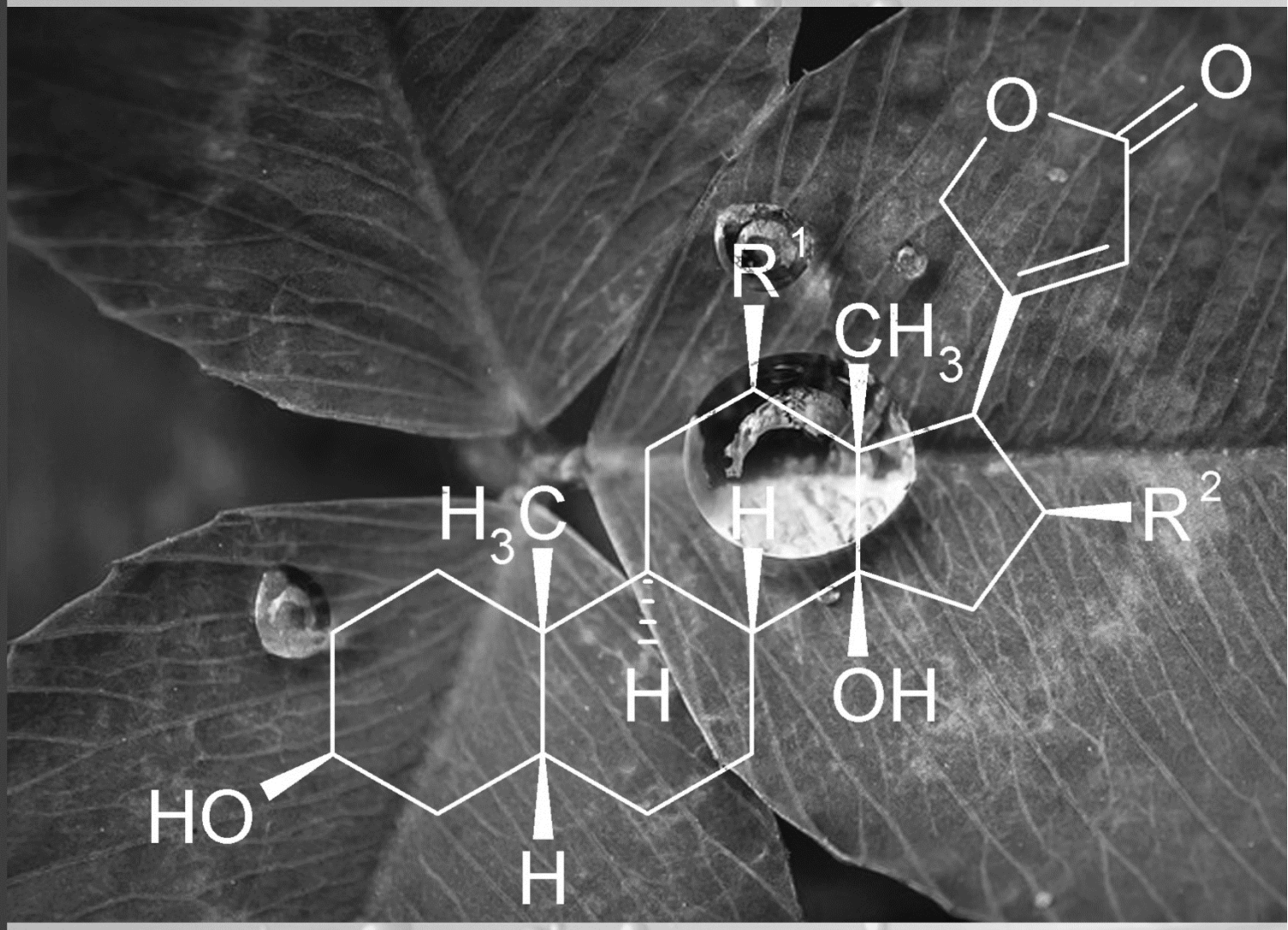
Vienna, Austria

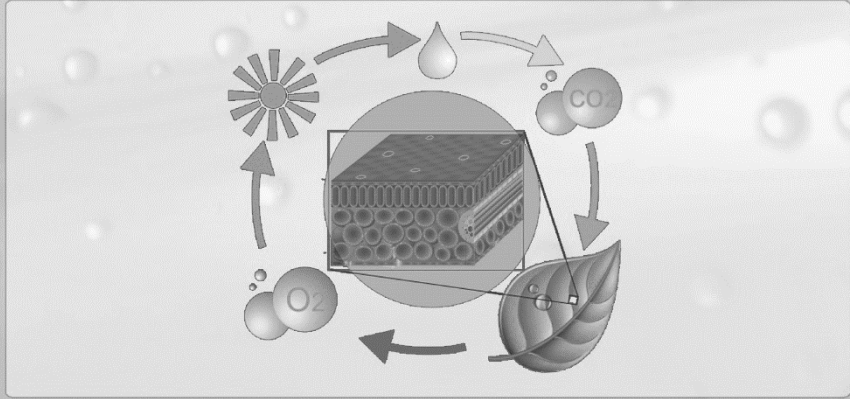
July 9-10, 2018

VISCEA

Vienna International Science Conferences and Events Association

Abstracts of Poster Presentations





***Poster №3*: Unconventional Protein Secretion of Helja, an Apoplastic Lectin**

Fassolari M., Pinedo M. and De la Canal Laura

Instituto de Investigaciones Biológicas, IIB-CONICET-UNMdP, Funes 3250, Mar del Plata, Argentina. Correspondence to: sfassolari@gmail.com

Proteins following unconventional protein secretion (UPS) bypass the RE-Golgi system to reach the apoplast. They use vesicular and no vesicular routes for their transport. Vesicular UPS can encompass different pathways not fully characterized. In these work we analyze the route of Helja secretion, a sunflower lectin lacking signal peptide but immunodetected extracellularly. Transient expression of recombinant Green fluorescent Helja (GFP-Helja) in Nicotiana Benthamiana leaves allow its apoplastic observation verified by partial co-localization (Pearson r Value= 0.65) with the specific marker sec-RFP. Florescent intracellular punctate and mobile structures were also visualized. They did not co-localize with the Golgi marker Sialyltransferase -RFP and their distribution was not affected by Brefeldin A, the inhibitor of RE-Golgi transport.
Additionally, GFP-Helja neither co-localize with the multivesicular bodies marker Rha-RFP nor with the endocytic marker FM4-64. Our results support the UPS secretion of HELJA to the apoplast by a yet unidentified vesicular pathway.

***Poster №4*: Zn / Cd Dependent Root-Specific Expression of NtZIP1 in Tobacco (Nicotiana Tabacum)**

Małgorzata Palusińska, Anna Barabasz and Danuta Maria Antosiewicz

Department of Plant Anatomy and Cytology, Faculty of Biology, University of Warsaw, 1 Ilji Miecznikowa Str., 02-096 Warsaw, Poland. Correspondence to: m.palusinska@biol.uw.edu.pl

Cadmium (Cd) and zinc (Zn) are transported in planta by ZIP (Zrt-Irt-like Proteins) family transporters. It is known that Zn and Cd root/shoot distribution pattern depends on a combination of Zn/Cd concentrations in the medium. Contribution of the individual parts of the root to these phenomenon and underlying molecular mechanisms remain unknown.
The aim of this research was to determine contribution of NtZIP1 in the Zn/Cd dependent translocation to the shoot of both metals, and to shed more light on the role of the apical and basal root segments in this phenomenon.
Tobacco plants were grown under varying combinations of Zn/Cd concentrations in the medium. Concentration of Zn and Cd in the roots (apical, middle, basal segment separately) was measured by AAS.
Moreover, in the apical, middle and basal root segments expression of NtZIP1 was evaluated by real-time q-PCR.
Funding: project OPUS-8 no. 2014/15/B/NZ9/02303 financially supported by the National Science Centre, Poland.