



## ***ABSTRACT***

### ***“JASMONATE SIGNALLING MOVES TO THE RHYTHM OF JAZs”***

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Jasmonates (JAs) are essential phytohormones structurally similar to metazoan prostaglandins. In spite of their importance for plant development and survival the molecular details of their signalling pathway remain largely unknown. The identification of COI1 as an F-box protein almost a decade ago suggested the existence of a repressor of JA responses targeted by SCF<sup>COI1</sup> for degradation by the proteasome in response to JA. Another important step in the pathway is represented by the transcription factor MYC2, which regulates several responses to JA. However, the link between these two steps in the pathway (MYC2 and SCF<sup>COI1</sup>) remained unknown. We have recently identified a novel family of JA-regulated nuclear targets of SCF<sup>COI1</sup>, named JAZ (Jasmonate ZIM-domain proteins). JAZ proteins are repressors of AtMYC2, linking the previous known steps in the pathway. Moreover, the identification of JAZ repressors has also opened the way to identify the jasmonate receptor and the bioactive form of the hormone. How these discoveries help to understand the molecular mechanisms underlying JA-signalling will be discussed during the seminar.