Jasmonate Signaling

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Welcome to the Gasperini lab!

Top row: Debora, Yunjing; bottom: Mukesh, Marlene, Andreas, Stefan (September 2019)

In our group, we are enticed by the molecular mechanisms governing plant acclimation to the surrounding environment. By using the model plant Arabidopsis thaliana, we study the jasmonate (JA) pathway which, through the biologically active conjugate JA-isoleucine (JA-Ile), is essential to protect plants against herbivory, necrotrophic pathogens, mechanical wounding and regulate growth. Currently, our work is centered on three interconnected areas of JA biology: initiation of JA biosynthesis, long-distance translocation of JA-Ile precursors, and cell-type

specific variations in JA-Ile responses. With our findings, we aim to enhance the basic knowledge of how plants perceive, transmit and integrate environmental information to prompt adaptive metabolic and growth responses.