

Séminaire de Biologie des Plantes

Les séminaires ont lieu sur le Campus Montpellier SupAgro/INRA de La Gaillarde
(2, place P. Viala Montpellier)

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ATTENTION JOUR INHABITUEL

Mardi 18 mai 2010
Amphi 206 (Cœur d'Ecole) à 14h00

Michael Riemann

(Universität Karlsruhe, Karlsruhe, Deutschland)

Jasmonates function in phytochrome signaling in rice

Plant photomorphogenesis is the developmental program that is mediated by phytochrome (phy) and other photoreceptors. It involves changes in expressions of many genes, as studied most extensively in the model plant *Arabidopsis*. Using rice, another model plant, we isolated a group of mutants that react differentially to darkness and light. In this group of mutants, the growth of coleoptiles is promoted by light, while that of wild-type coleoptiles is inhibited by light. One of those mutants, called *hebiba*, was shown to be deficient in jasmonic acid (JA). Furthermore it could be demonstrated that JA deficiency is responsible for the photomorphogenic phenotype of *hebiba*. Two more rice mutants, *coleoptile photomorphogenesis 2 (cpm2)* and *kamakubi*, showed very similar phenotypes to *hebiba*. We identified the responsible genes by map-based cloning and complementation tests. Those genes were found to be involved in JA biosynthesis. *Tos17*-insertion lines of the rice orthologue of *JASMONATE RESISTANT 1 (JAR1)*, which encodes an isoleucine-JA conjugating enzyme, showed a clear photomorphogenic phenotype, although it was somewhat distinct from that of JA biosynthesis mutants. Together these results demonstrate that photomorphogenesis in rice seedlings involve JA and/or its derivatives as signaling components.

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Séminaires à venir :

- Jeudi 27 mai : Andreas Weber (contact Alicia Sivitz, sivitz@supagro.inra.fr)
- Jeudi 3 juin: Alain Vavasseur, Cadarache (contact Rémy Gibrat, gibrat@supagro.inra.fr)