

Defects in Fatty Acid Activation Affect Fertility in Arabidopsis

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Fertility in plants is based on appropriate pollen-stigma communication to ensure species-specific interaction. In Arabidopsis, lipids in the exine of the pollen are crucial for the interaction with the stigma and the hydration of the pollen. Several mutants defective in the synthesis of these lipids were shown to be male sterile. We identified a new mutant, impaired in the activation of fatty acids which is conditional sterile. As described for several *cer* mutants before, the fertility of the isolated *lacs* mutant can be restored by growth in high humidity. Besides the modified pollen coat lipids, the mutation results in severe changes in the composition of the epicuticular wax. The requirement of fatty acid activation for certain constituents of wax might help to understand the complex network of the wax biosynthetic pathway.