

Sweet immunity in CAM plants

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Due to global climate changes, abiotic stress is gaining more and more importance in reducing overall plant production. It is obvious that a better understanding of abiotic stress tolerance of plants adds significantly in improving global plant production in a changing world. Since plants are sessile organisms living in a continuous changing environment, they need to continuously develop novel mechanisms to adapt.

Crassulacean acid metabolism (CAM) is a specialized mode of photosynthesis enabling plants to conserve water and ameliorates effects of drought stress. An important member of this photosynthetic specialization with high socio- economic relevance is the *Phalaenopsis* orchid. Initial experiments are currently performed to study the diel dynamics of important metabolites such as starch, malate, glucose, fructose, sucrose and phosphorylated intermediates. This will help to provide a new level of insight in the role of these metabolites on the regulation of plant physiology, which can lead to a significant contribution in the development of strategies to combat abiotic stresses and as such improving global biomass production.