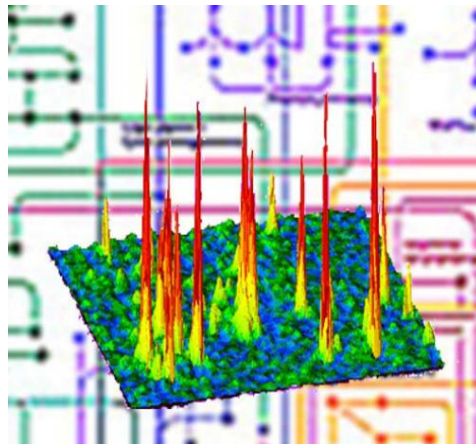


## POSTHARVEST METABOLOMICS OF POME FRUIT STORED UNDER CONTROLLED ATMOSPHERE CONDITIONS

Apple and pear are often stored under controlled atmosphere conditions to increase their storage life. Too extreme conditions may induce a fermentation metabolism leading to off-flavours and internal browning. The Postharvest Research Group at the MeBioS division of the Catholic University of Leuven aims at understanding physiological changes in fruit during postharvest storage under controlled atmosphere conditions via a systems biology approach and has a vacancy for a PhD student in this area.

The research will address metabolomic changes related to the central carbon metabolism during postharvest storage of apple and pear. Fruit cells will be exposed in bioreactors to different gas mixtures and the changes in metabolite levels will be monitored using FT-ICR-MS. Based on these high-throughput data, metabolic pathway models will be constructed. Such models are based on the stoichiometry of the main biochemical reactions occurring in the cell. For the most important pathways, including those of the central respiration metabolism, this knowledge is readily available in the literature and in systems biology databases. The pathway models will be coupled to gas transport models which have been developed previously by the research group.



### PROFILE

We are looking for an enthusiastic candidate with preferably a Master degree in exact sciences, with a keen interest in biochemistry and who is able to combine experimental skills with advanced data analysis techniques. International candidates with a MSc degree who have distinguished themselves during their education are encouraged to apply.

### CONTACT

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