Improving apple fruit biological control by microbiota using omics tools

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The development of next generation sequencing has boost plant microbiota profiling

**Potential of the new biological control pattern**

In the classic pattern of biocontrol, a BCA or a molecule is used to control directly a pathogen, or indirectly to induce host defense system. When the microbiota is introduced (Figure 1; Massart al., 2015), new possibilities show up as the use of helper strains or prebiotic of biocontrol.

**Constitution of apple microbiota bank to identify helper strains and prebiotics of biocontrol**

In order to improve *Pichia anomala* strain K efficacy against grey mold (*Botrytis cinerea*), apple samples were collected and the skin microbiota harvested to create a bank of microbiota from 4 locations (France, Belgium, New Zealand and Chili), 17 varieties and three disease management practices (never treated for 35 years, Biological and Integrated treated).

The study is ongoing and the results will further allow us to understand better the interplay between the strain K and the epiphytic microbiota of apple.

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