

# **Bacterial Community and PHB-Accumulating Bacteria Associated with the Wall and Specialized Niches of the Hindgut of the Forest Cockchafer (*Melolontha hippocastani*).**

Alonso-Pernas P, Arias-Cordero E, Novoselov A, Ebert C, Rybak J, Kaltenpoth M, Westermann M, Neugebauer U, Boland W (2017) Bacterial Community and PHB-Accumulating Bacteria Associated with the Wall and Specialized Niches of the Hindgut of the Forest Cockchafer (*Melolontha hippocastani*). *Front Microbiol* 8, 291. [PubMed](#)

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## **Projects**

*Melolontha hippocastani* gut specialized bacterial community: function and structure elucidation  
[Details](#)

## **Abstract**

A characterization of the bacterial community of the hindgut wall of two larval and the adult stages of the forest cockchafer (*Melolontha hippocastani*) was carried out using amplicon sequencing of the 16S rRNA gene fragment. We found that, in second-instar larvae, Caulobacteraceae and Pseudomonadaceae showed the highest relative abundances, while in third-instar larvae, the dominant families were Porphyromonadaceae and Bacteroidales-related. In adults, an increase of the relative abundance of Bacteroidetes, Proteobacteria ( $\gamma$ - and  $\delta$ - classes) and the family Enterococcaceae (Firmicutes) was observed. This suggests that the composition of the hindgut wall community may depend on the insect's life stage. Additionally, specialized bacterial niches hitherto very poorly described in the literature were spotted at both sides of the distal part of the hindgut chamber. We named these structures

## **Identifier**

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