

## CeMiSt lecture and reception on 29<sup>th</sup> November at 15:00 in building 221 room 137

Becoming a bodyguard:

The evolution of defensive symbiosis between plant-associated bacteria and a beetle

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Symbiotic microorganisms can have profound effects on key aspects of animal and plant biology, including defense against natural enemies. Why is protection outsourced and how can a long-lasting alliance with a microbial symbiont emerge and persist? We are addressing these questions in *Lagriini* beetles, which live in symbiosis with *Burkholderia* bacteria belonging to a clade of plant pathogens and known for their potential to produce bioactive secondary metabolites. Using a combination of manipulative assays, chemical and genomic analyses, we describe the defensive potential of the symbionts, the genomic consequences of the association and the role of plants in the emergence and maintenance of this protective symbiosis.

### References

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- Flórez LV, Scherlach K, Gaube P, Ross C, Sitte E, Hermes C, Rodrigues A, Hertweck C, Kaltenpoth M (2017) Antibiotic-producing symbionts dynamically transition between plant pathogenicity and insect-defensive mutualism. *Nat Commun* 8:15172
- Flórez LV, Biedermann PH, Engl T, Kaltenpoth M (2015) Defensive symbioses of animals with prokaryotic and eukaryotic microorganisms. *Nat Prod Rep* 32:904-936

