

## UNEARTHING CRYPTIC NATURAL PRODUCTS

### AT THE HOST-MICROBE INTERFACE

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The vast structural diversity of secondary metabolites has evolved over millions of years to address specific needs of the producing microorganisms in their niches. Thus, microbial natural products are not only highly specific mediators of microbial interactions, but also a valuable source of molecular tools and therapeutics that have been pre-optimized for particular biological targets. Recent research has led to a massive body of knowledge on biosynthetic mechanisms, structures and functions. Yet, we know only very little about how structural diversity evolved. We are also perplexed by the hugely underestimated biosynthetic potential that remains invisible outside of the specific ecological context. This talk will present some compounds and pathways from various less explored bacteria, highlight the importance of considering ecological aspects in the search for biologically active molecules, and shed light on mechanisms and some evolutionary aspects of natural product biosynthesis.