# Understanding the fascinating world of *Senna spectabilis*'s rhizosphere: Dereplication strategies, biotransformation, co-culture and induction of cryptic antimicrobial secondary metabolites.

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For the past six years, our research group has endeavor significant efforts to study a collection of microorganisms isolated from the rhizosphere of *Senna spectabilis*, aiming the isolation of molecular precursors from piperidine alkaloids. Through several interlaced projects, we were able to study fungal biotransformation of selected molecules, enhanced chemical and biological diversity by co-culture, as well as inducing cryptic antimicrobial secondary metabolites. In addition, this fascinating journey allowed us to develop novel dereplication strategies using MS and NMR in order to understand the complexity of fungal interactions in this intriguing biological niche.