

Investigating the enniatin B effect on a promising biocontrol agent active against *Fusarium graminearum*

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Enniatin B (ENB) is among the frequently emerging mycotoxins produced by *Fusarium* species. It is present in all cereals, but its toxicological and biological effects are not completely deciphered.

Existing biocontrol strategies include the application of *Streptomyces* spp as biocontrol agents (BCAs) producing bioactive compounds, effective on plant pathogens.

Considering the multiple interactions among different microorganisms and molecules on the cereal plants, we investigated the influence of ENB on our promising *Streptomyces* strain, which previously showed the ability to reduce the deoxynivalenol (DON) accumulation on wheat spikes, contrasting the *Fusarium graminearum* disease. Additionally, the ENB ability in modulating drug efflux transporters, arising from literature, is an important factor that could affect the activity of our BCA during field application. In this regard, we investigated the effect of ENB exposure (1 µg/ml) on the metabolome of our *Streptomyces* BCA employing a high-resolution mass spectrometry analysis (UHPLC-HRMS). Overall, a limited number of metabolites shifted upon ENB exposure. Importantly, the metabolome of ENB-exposed-BCA conserved the ability to repress DON biosynthesis in *Fusarium graminearum*, suggesting our bacterial strain can cope with ENB exposure, maintaining its BCA characteristics. Further investigations will be focused on the fate of ENB after the BCA exposure.