

# BOOK OF ABSTRACTS



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# YOUNG RESEARCHERS MEETING



U. PORTO



## TÍTULO | *TITLE*

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## 22062 | Effect of a soil biofertilizer in the functional profile of the soil microbial community through the Biolog Assay

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**Background & Aim:** The dependency on crops of products with chemical compounds, whether fertilizers or pesticides, for saving the development and yield has been a challenge to the environment, and new alternatives are being sought to change this reality. The excessive use of chemicals affects human health and soil quality. There is a significant need to produce green compounds that are environmentally sustainable, improving or restoring microbial activity in the soil. Biofertilizers are compounds that contain biological substances and may be capable of stimulating plant development, by providing nutrients and other plant-growth promoting compounds and by increasing soil microbial activity, and reducing the impacts generated by mineral fertilizers. The objective was to verify the effects of applying a biofertilizer, Vitasoil™, which contains rhizospheric microorganisms that positively interact with plants, on the functional profile of the soil microbial community. **Methods:** The first evaluation was conducted one month after the application of the compound, using Biolog EcoPlates. **Results:** Its composition includes two types of bacteria: *Azotobacter* sp. and *Azospirillum* sp. We chose kale (*Brassica oleracea*) for the tests, with direct application of the compound diluted in the proper proportion to the plant's root, so that we could compare the inoculated soils with the non-inoculated ones. **Conclusions:** This method was able to show the effects of the inoculant application on the soil with and without *B. oleracea* plants and inferring about the positive/negative effects on the non-target bulk soil microbial community.

**Keywords:** Soil Health, Functional Biodiversity, Beneficial Microorganisms.

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