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Does the soil microbiota diversity influence the interactions between *Brassica napus* and its bioagressors ?

Lionel Lebreton, Valérie Chaminade, Anne Marie Cortesero, Stéphanie Daval, Sylvain Fournet, Kévin Gazengel, Anne-Yvonne Guillerm-Erckelboudt, Tom Lachaise, Juliette Linglin, Maria M. Manzanares-Dauleux, et al.

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Does the soil microbiota diversity influence the interactions between *Brassica napus* and its bioagressors ?

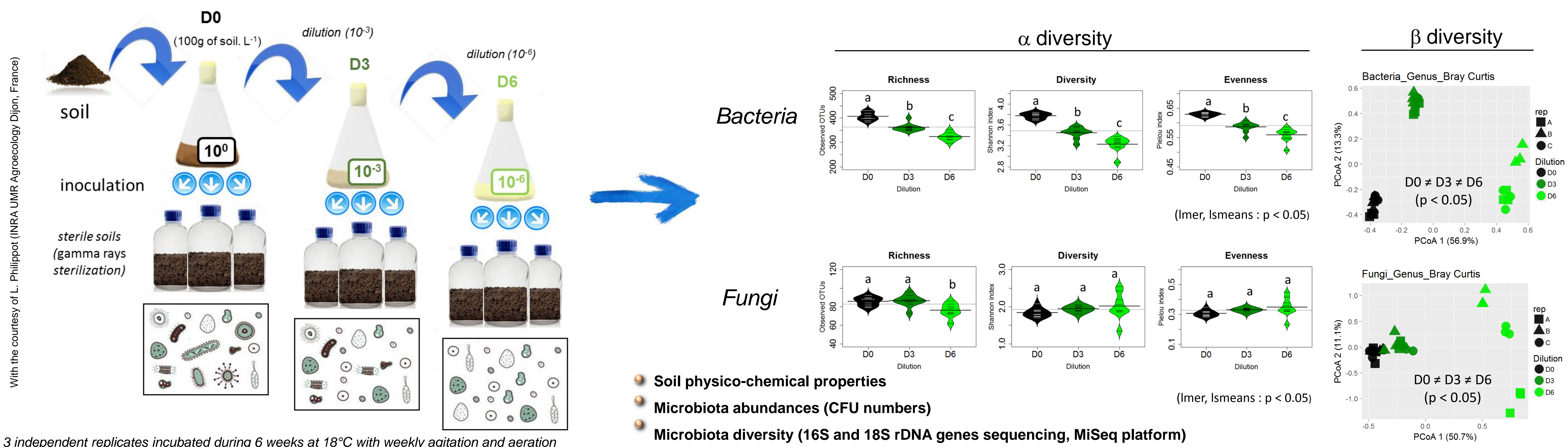
LEBRETON L., CHAMINADE V., CORTESERO A.M., DAVAL S., FOURNET S., GAZENGEL K., GUILLERM-ERCKELBOUDT A.Y., LACHAISE T., LINGLIN J., MANZANARES-DAULEUX M., MONTARRY J., OURRY M., PATY C., POINSOT D., PORTE C. AND MOUGEL C.

lionel.lebreton@inra.fr



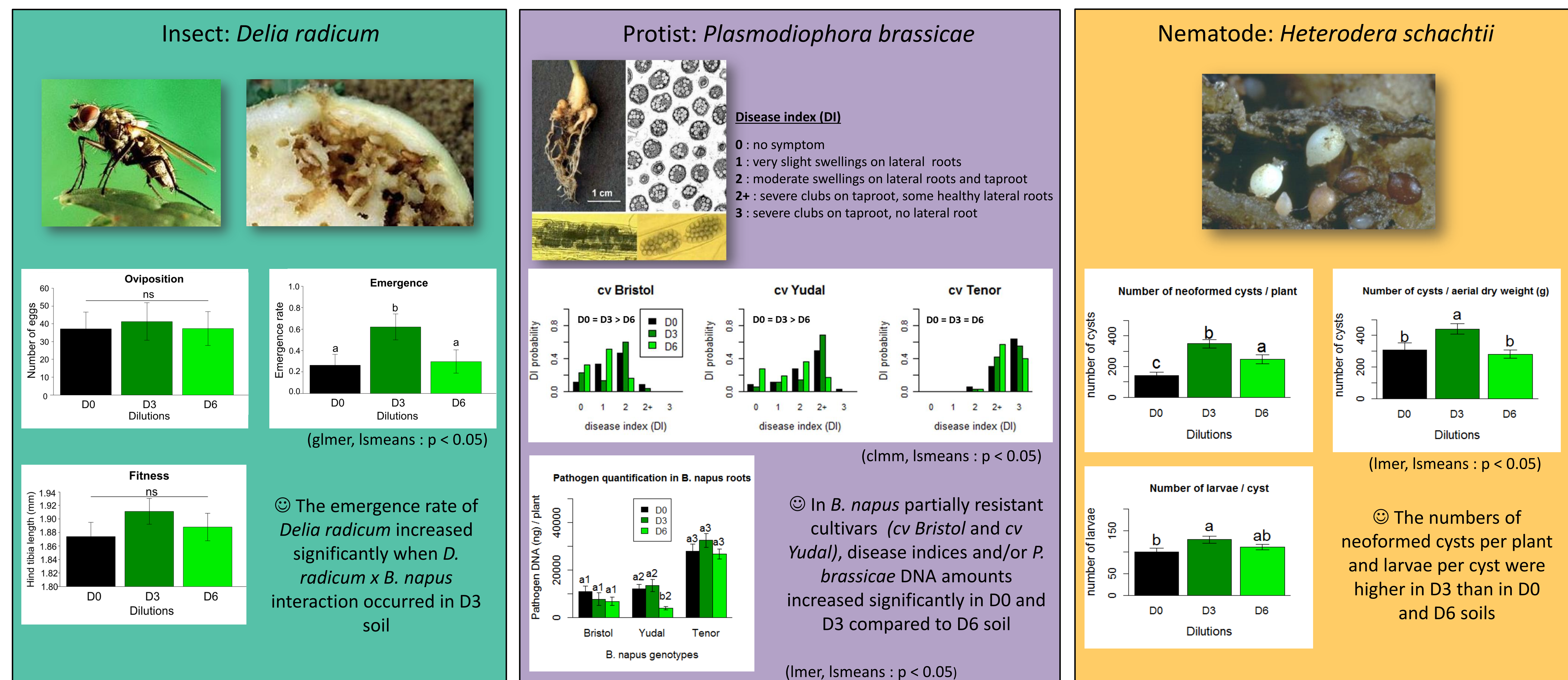
An overall perspective of the holobiont concept is to analyse the consequences of plant * microbiota interactions on plant defenses and bioagressor traits linked to their fitness and parasitism. For this purpose, three soil preparations with different microbial diversities but with the same abiotic properties were obtained from one native soil by a removal/recolonization method. After interaction experiments carried out under controlled conditions between *B. napus* and three of its bioagressors in these three soils, bioagressor traits were compared. The initial diversity of soil microbial communities influences the traits of bioagressors in interaction with *Brassica napus*.

1. EXPERIMENTAL MANIPULATION OF MICROBIAL DIVERSITY, *i.e.* THE SAME ABIOTIC ENVIRONMENT WITH DIFFERENT DIVERSITIES OF MICROBIAL COMMUNITIES



Three soils with three initial microbial richness and diversity levels were obtained through a removal/recolonization method
A better dilution effect on diversity parameters for bacteria than fungi communities

2. [BRASSICA NAPUS * SOIL MICROBIOTA] * BIOAGRESSORS INTERACTIONS: KEY RESULTS



The fitness of bioagressors increased when the interactions were carried out in soils of intermediate diversity compared to the soils of weak and strong diversity

Modification in the soil microbial diversity was associated with modification in plant metabolite profiles (Lachaise *et al.*, 2017)

Our results highlighted the holobiont concept and we need now a broader view of the link between diversity and function of microbial communities modulating traits related to plant defenses against bioagressors in relation with the genetics of plant

