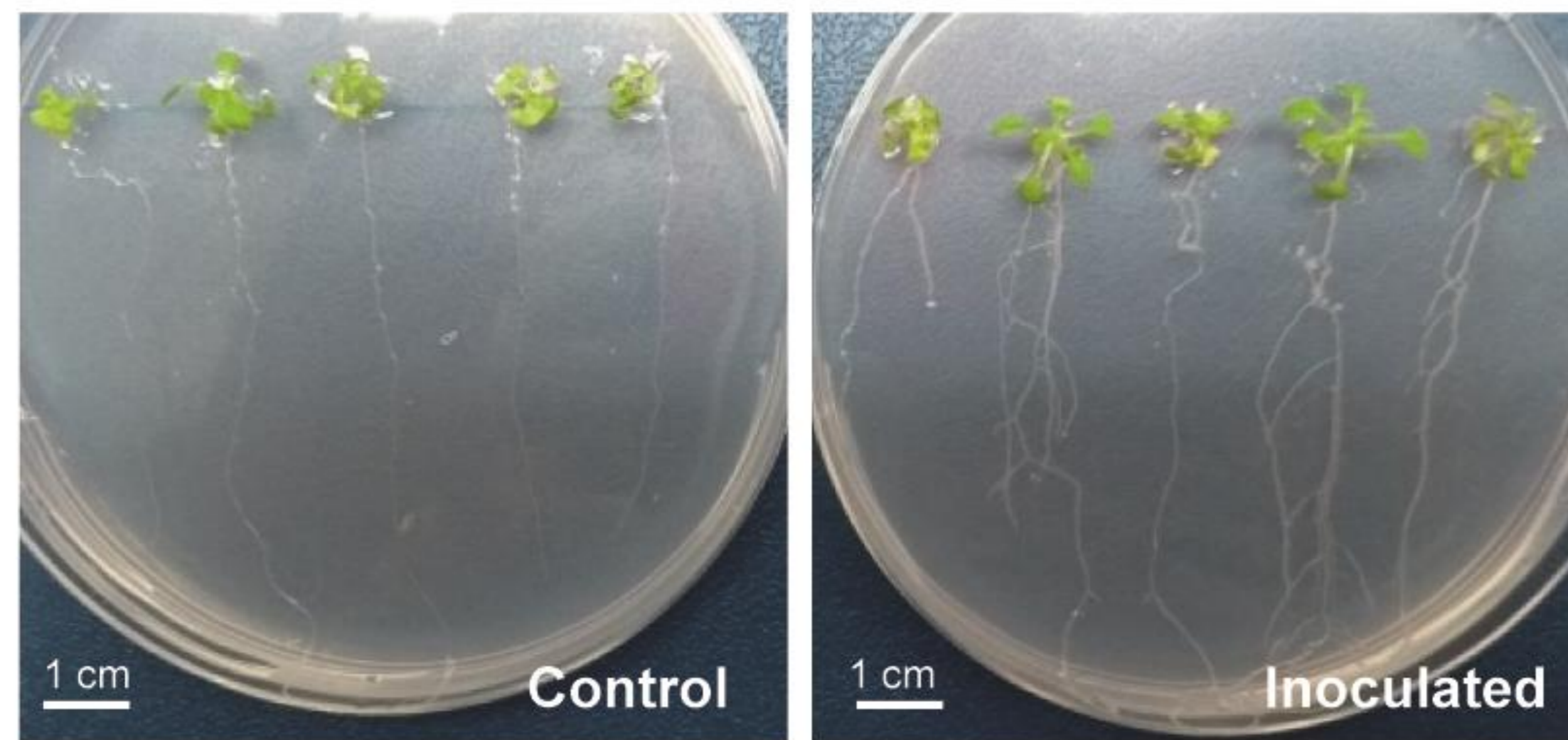
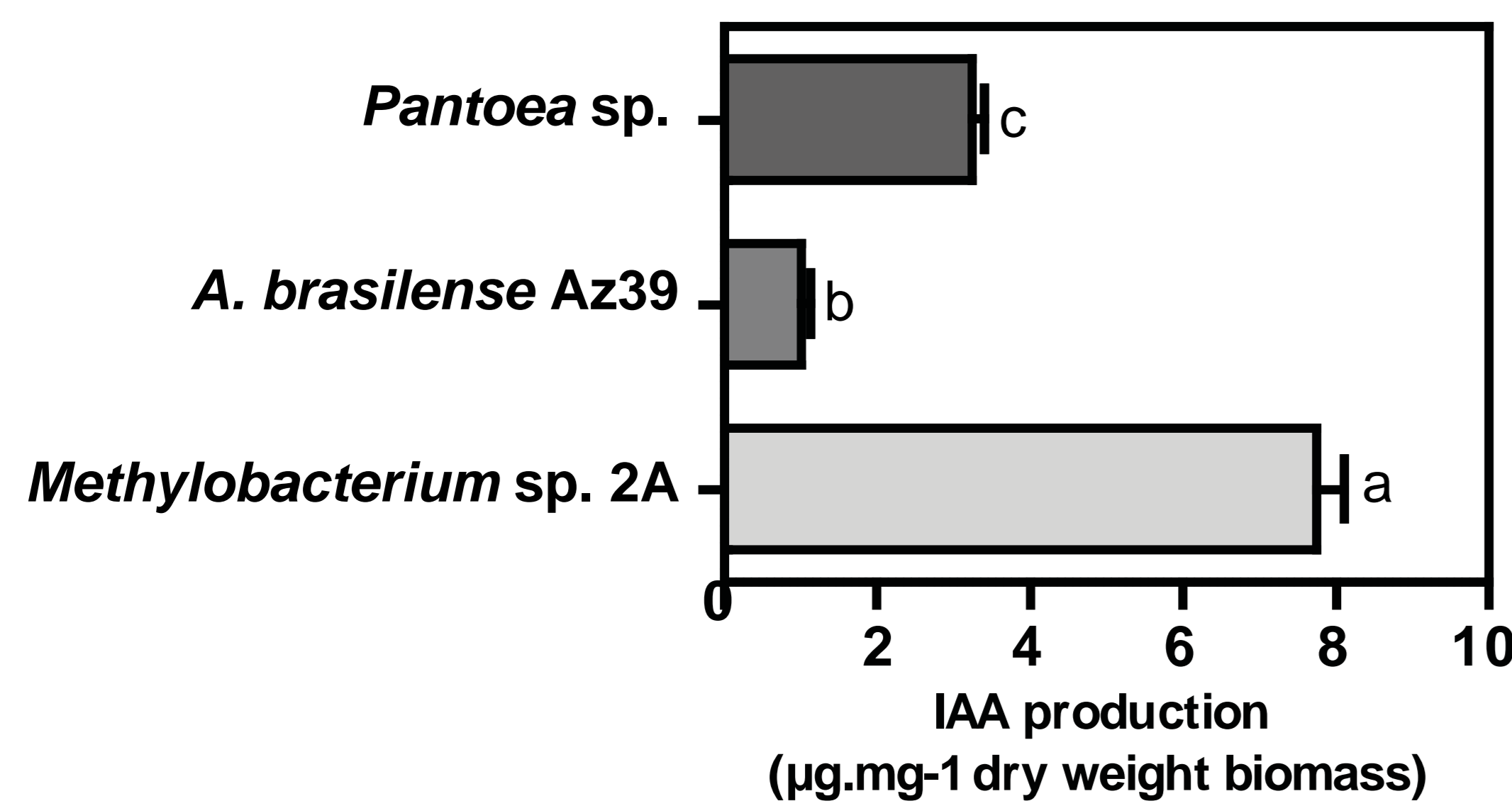


Methylobacterium sp. 2A is a plant growth-promoting rhizobacteria that:

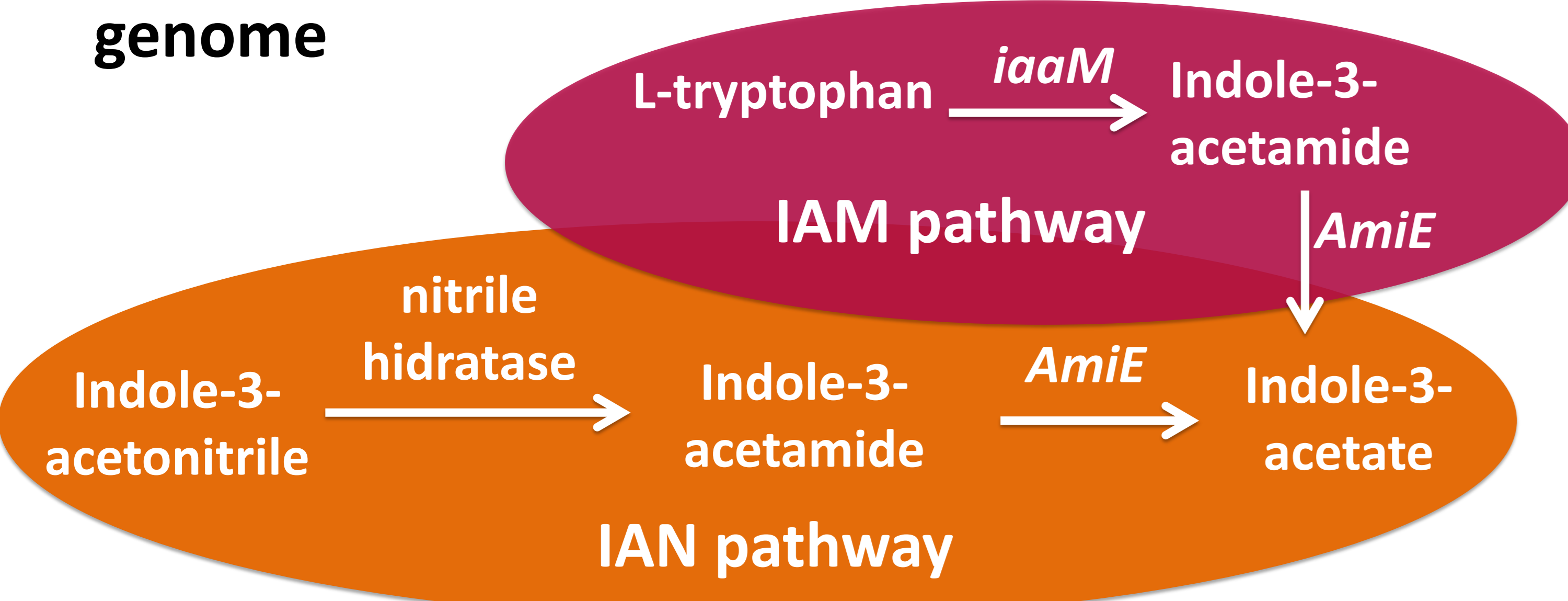
✓ Can stimulate Arabidopsis growth



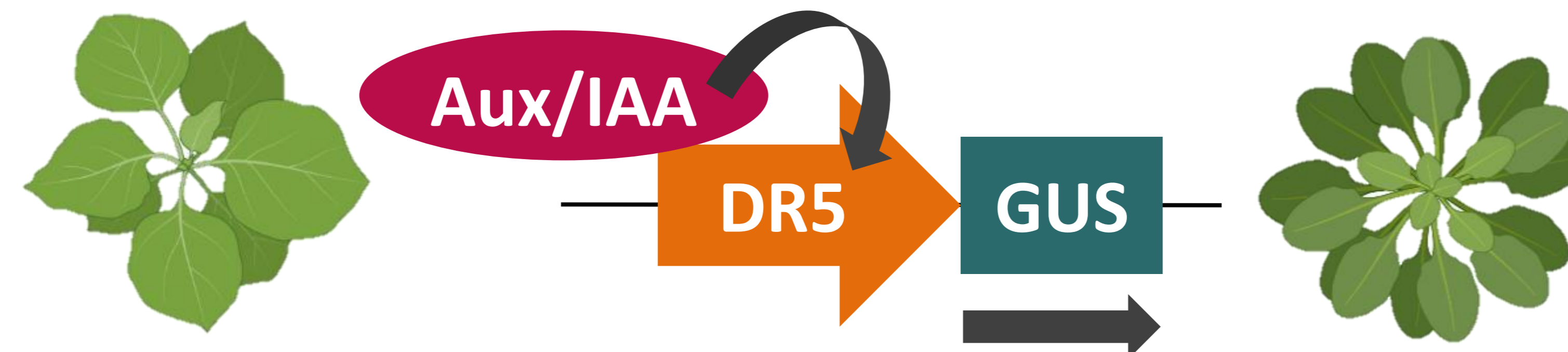
✓ Can produce high levels of the IAA (indole-3-acetic acid) auxin *in vitro*



✓ And encodes two IAA biosynthesis pathways in its genome



The auxin-responsive *DR5* promoter reporter system is functional to monitor auxin response



The *DR5* promoter was induced in the roots of the *DR5:GUS* tomato and Arabidopsis plants upon inoculation with *Methylobacterium* sp. 2A

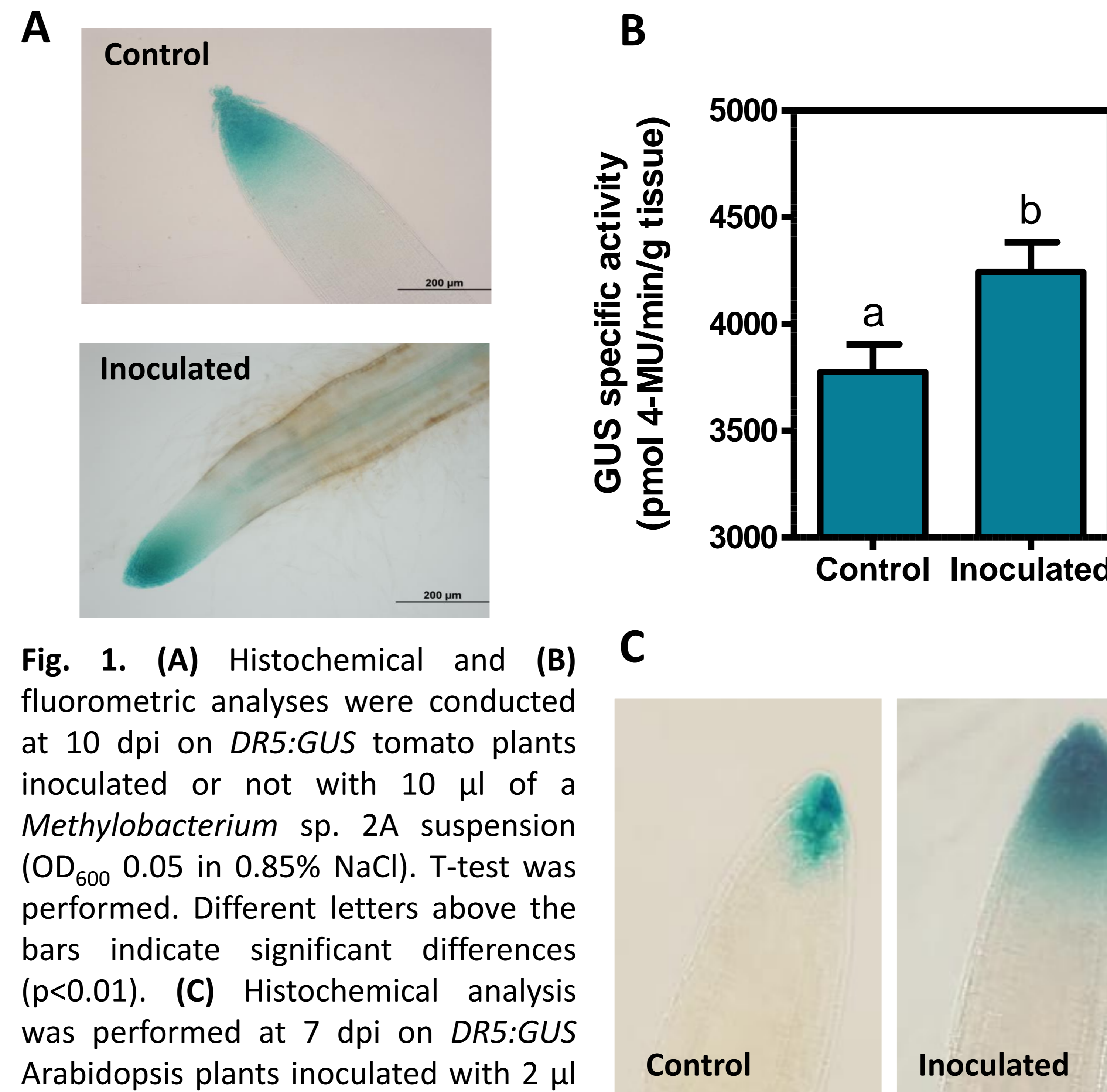


Fig. 1. (A) Histochemical and (B) fluorometric analyses were conducted at 10 dpi on *DR5:GUS* tomato plants inoculated or not with 10 µl of a *Methylobacterium* sp. 2A suspension (OD₆₀₀ 0.05 in 0.85% NaCl). T-test was performed. Different letters above the bars indicate significant differences ($p < 0.01$). (C) Histochemical analysis was performed at 7 dpi on *DR5:GUS* Arabidopsis plants inoculated with 2 µl of the above-mentioned suspensions.

Lateral root formation was improved in the inoculated Arabidopsis auxin mutant *iaa19*, which is defective in lateral root formation

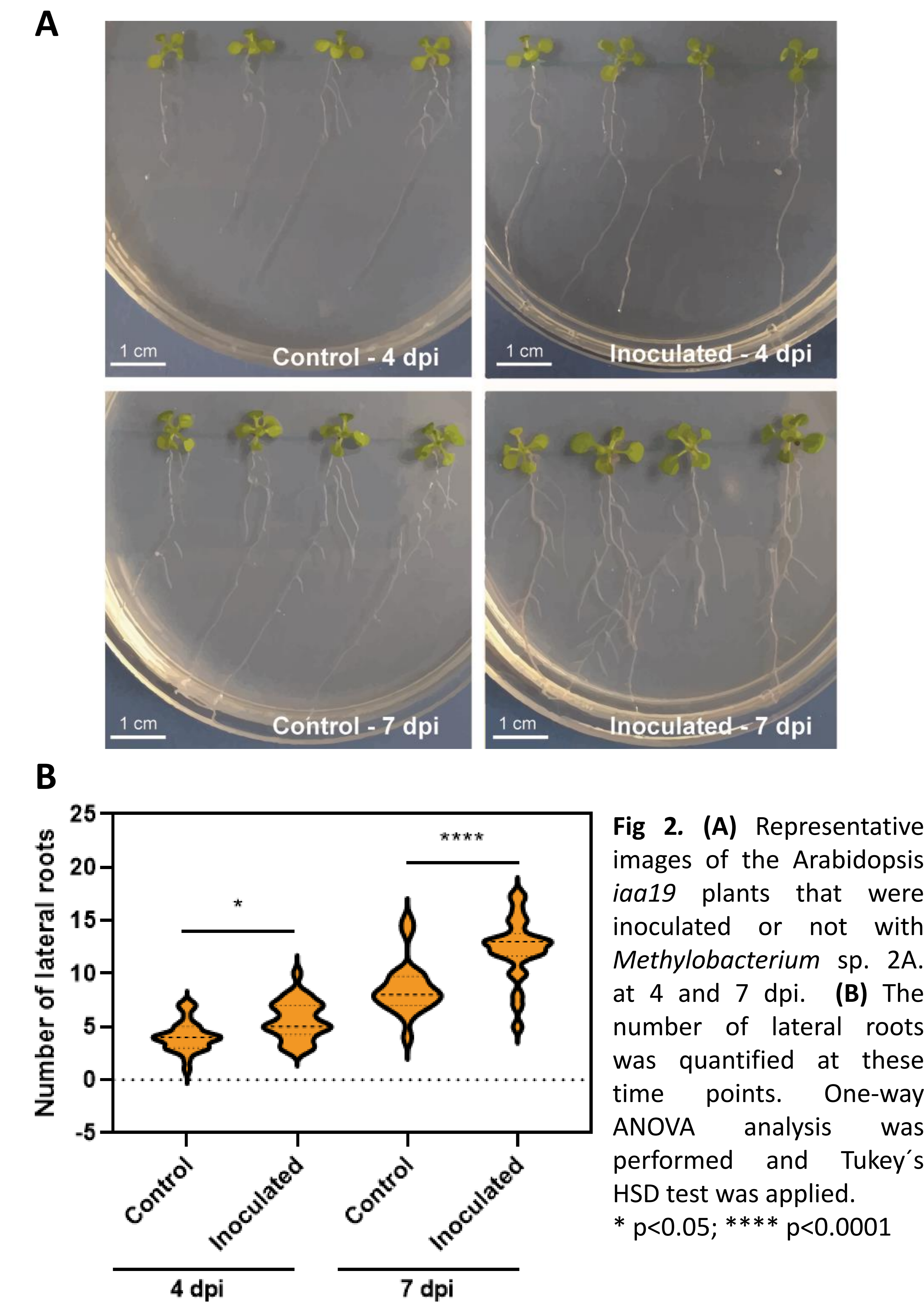


Fig 2. (A) Representative images of the Arabidopsis *iaa19* plants that were inoculated or not with *Methylobacterium* sp. 2A, at 4 and 7 dpi. (B) The number of lateral roots was quantified at these time points. One-way ANOVA analysis was performed and Tukey's HSD test was applied. * $p < 0.05$; **** $p < 0.0001$