

The rhizobacterium *Pseudomonas chlororaphis* PCL1606 doesn't have PGPR activity as additional mechanism to biocontrol

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Pseudomonas chlororaphis PCL1606 was isolated from rhizosphere of healthy avocado trees, growing in an area affected by white root rot (caused by *Rosellinia necatrix*), which is one of the most important diseases for avocado crops. PCL1606 revealed strong antagonist activity against *R. necatrix*, mainly due to the production of the antifungal compound 2-hexyl, 5-propyl resorcinol (HPR). HPR is crucial for the biocontrol activity, and is involved in bacterial colonisation of the avocado root surface. In this work, we elucidated if PCL1606 also presents plant-growth promoting (PGPR) activity as an additional mechanism involved in biological control. To study such PGPR activity, in vitro assays with tomato seedlings and commercial 6-month-old avocado plants were performed. Additionally, activities related with PGPR activity, such as 1-aminocyclopropane-1-carboxylate (ACC) deaminase activity, indole-3-acetic acid (IAA) production, phosphate solubilization or production of siderophores, were also tested. The obtained results showed that *P. chlororaphis* strain PCL1606 does not present plant growth promoting activity as an additional trait to its biocontrol ability.

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