

Peer Review

Review of: "Isolation of a Novel Plant Growth-Promoting *Dyella* sp. from Danish Natural Soil"

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The results included in the report by Dethier *et al* are sufficiently novel to warrant publication. The experiments were well conducted, and the conclusions were adequately supported. However, some minor aspects, highlighted in the attached document, should be corrected to improve the quality of the presentation. In particular, the electronic addresses of the databases/websites consulted should be included, all acronyms should be properly and timely defined, and the limits of statistical probability should be referred to, both in the text and in the supplementary material, as $\leq$ (less than or equal to) instead of simply as less than, as they actually are ($<$). An additional comment is that the quality of the report would be substantially improved if experiments were performed to determine whether the growth-promoting effect of the bacteria is associated with diffusible or volatile compounds. This would be achieved by performing experiments in divided dishes (specifically to evaluate the effects of volatiles) or direct confrontations. For the latter case, the bacteria are striated at the base of the dish, while the seedlings are placed on top; the dishes are kept vertical, allowing root growth toward the bacteria. Indeed, this experimental condition would also clearly establish whether the roots can be directly colonized by the bacteria. Finally, given that the bacterial strain under study lacks the complete pathway for auxin synthesis, it would be worth including in the discussion alternatives that, despite this "limitation," function as plant growth promoters. On this particular point, the authors could review the following article:

Orozco-Mosqueda MDC, Santoyo G, Glick BR. (2023) Recent Advances in the Bacterial Phytohormone Modulation of Plant Growth. *Plants* (Basel). 12(3):606. doi: 10.3390/plants12030606.

Attachments: available at <https://doi.org/10.32388/I35WXR>

Declarations

Potential competing interests: No potential competing interests to declare.