

Peer Review

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

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Dear Editor,

The study isolated and identified a new species of *Dyella* bacteria from Danish natural soil, which promotes plant growth. The researchers conducted experiments with *Arabidopsis* and tomatoes, finding that the bacterium enhances biomass and elongates lateral roots. Genomic analysis of *Dyella* sp. A4 revealed genes related to nutrient mobilization and phytohormone production. Despite promoting growth, the bacterium does not directly colonize roots, indicating an exogenous mechanism of action.

Comments/Suggestions to the authors:

In the introduction, the abbreviation "PGP" (Plant Growth-Promoting) could be explained the first time it is used, although it is made clear from the context.

In Figure 1C, it is indicated that the data represents the mean $\pm$ 95% confidence interval, but on the y-axis, there is no clear indication of these intervals. It would be useful to include error bars illustrating the 95% confidence interval for each strain.

Sometimes the syntax is a bit complicated and could be simplified for greater clarity. For example, in the introduction, the transition from general references to soil microbial communities to more specific examples could be smoother. It would be useful to reword some sentences to make them more direct and easier to understand.

While the use of scientific terms is essential, there could be more consistency in terminology or brief explanations for certain specialised terms when they first appear, to make the text more accessible to a wider audience.

Note that some experiments were repeated (e.g., Figure 1E, 1F), which adds to the reliability of the results. However, it would be useful to more clearly indicate the number of biological and technical replicates for each experiment in the 'Materials and Methods' section and in the explanations of the graphs.

Add measurement scales directly to the figures where necessary.

Declarations

Potential competing interests: No potential competing interests to declare.