**A high-throughput phenotyping pipeline for quinoa (*Chenopodium quinoa*) panicles using image analysis with convolutional neural networks**

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**STATEMENTS AND DECLARATIONS**

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## Data availability statement

The code used for analysis and images for annotation is available at the GitHub repository: <https://github.com/Flavjack/quinoa_panicle_phenotyping>

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**Conflict of interest statement**

The authors declare that the research was conducted without any commercial or financial relationships that could be potential conflicts of interest.

**Author contributions**

Conception and design of the study by FLI, LK, BIGH, and KS. FLI and LK performed material preparation, data collection, and analysis. FLI and LK wrote the first draft of the manuscript. All the authors commented on previous versions of the manuscript. All the authors read and approved the final manuscript.