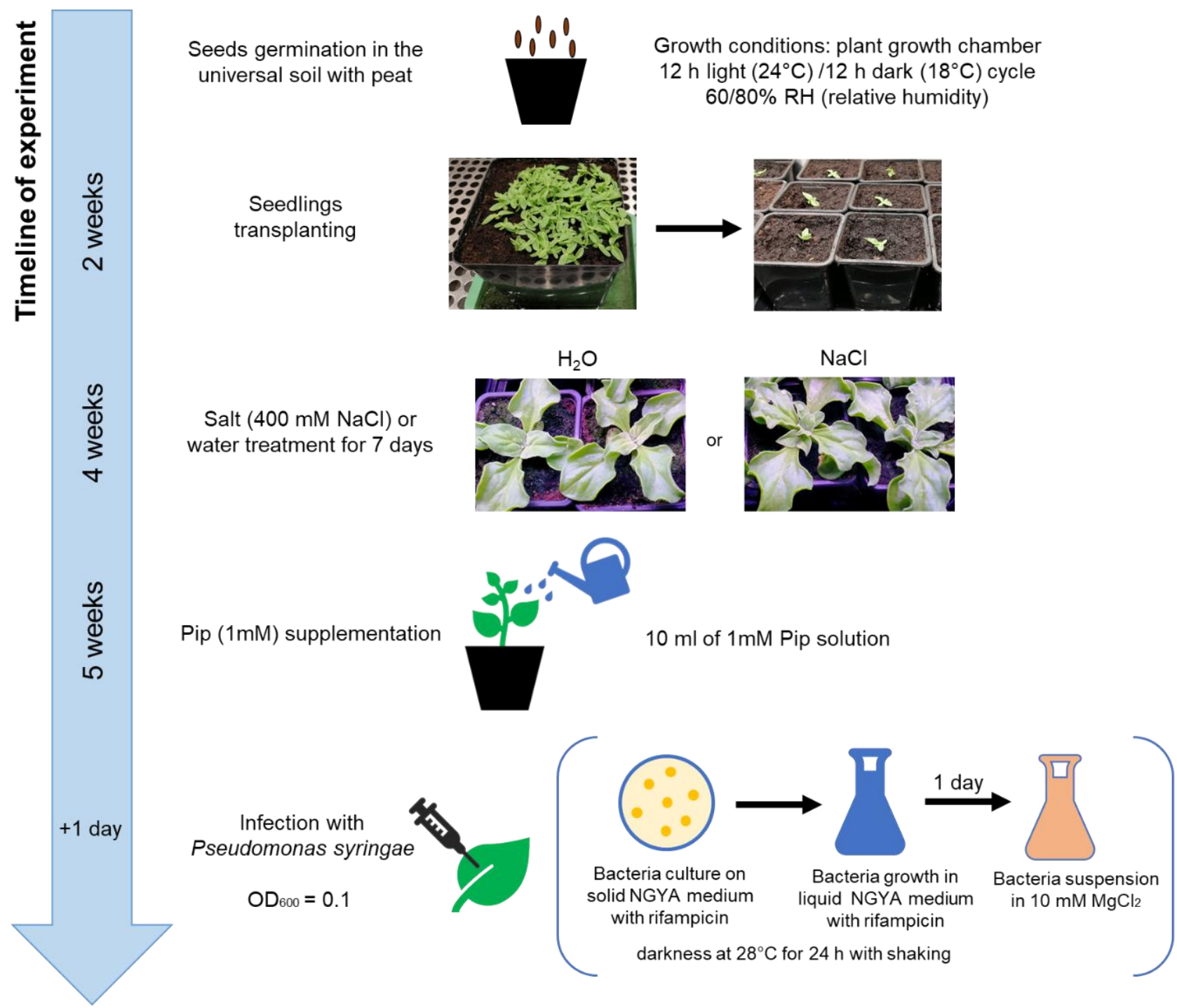
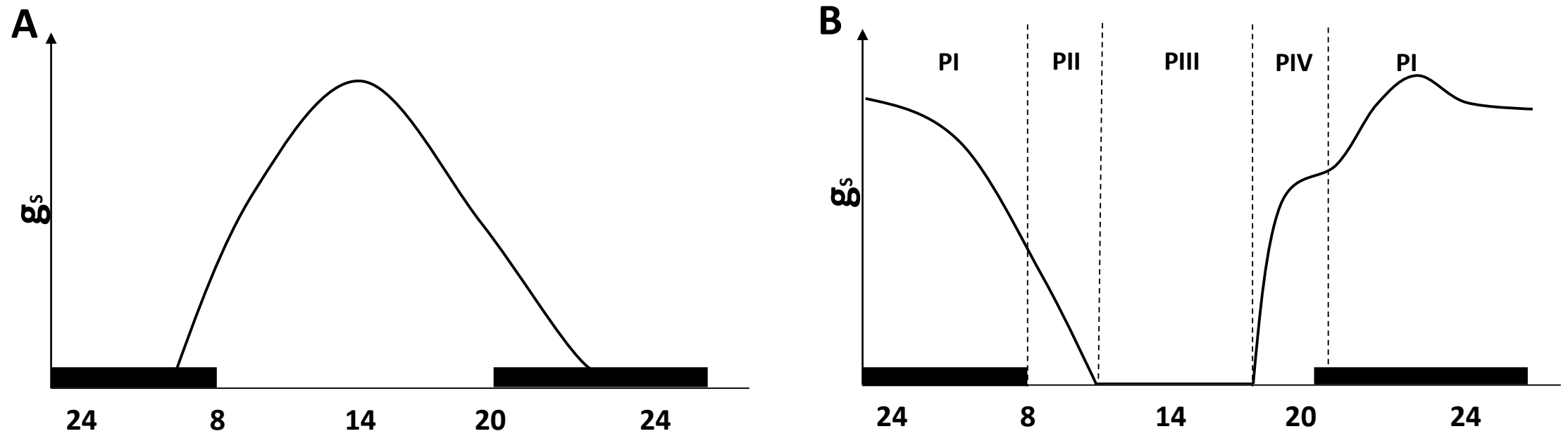


Pipecolic Acid Modulates Physiological Parameters and Biotic Stress Resilience in *Mesembryanthemum crystallinum* in a Photosynthetic Mode-Dependent Manner

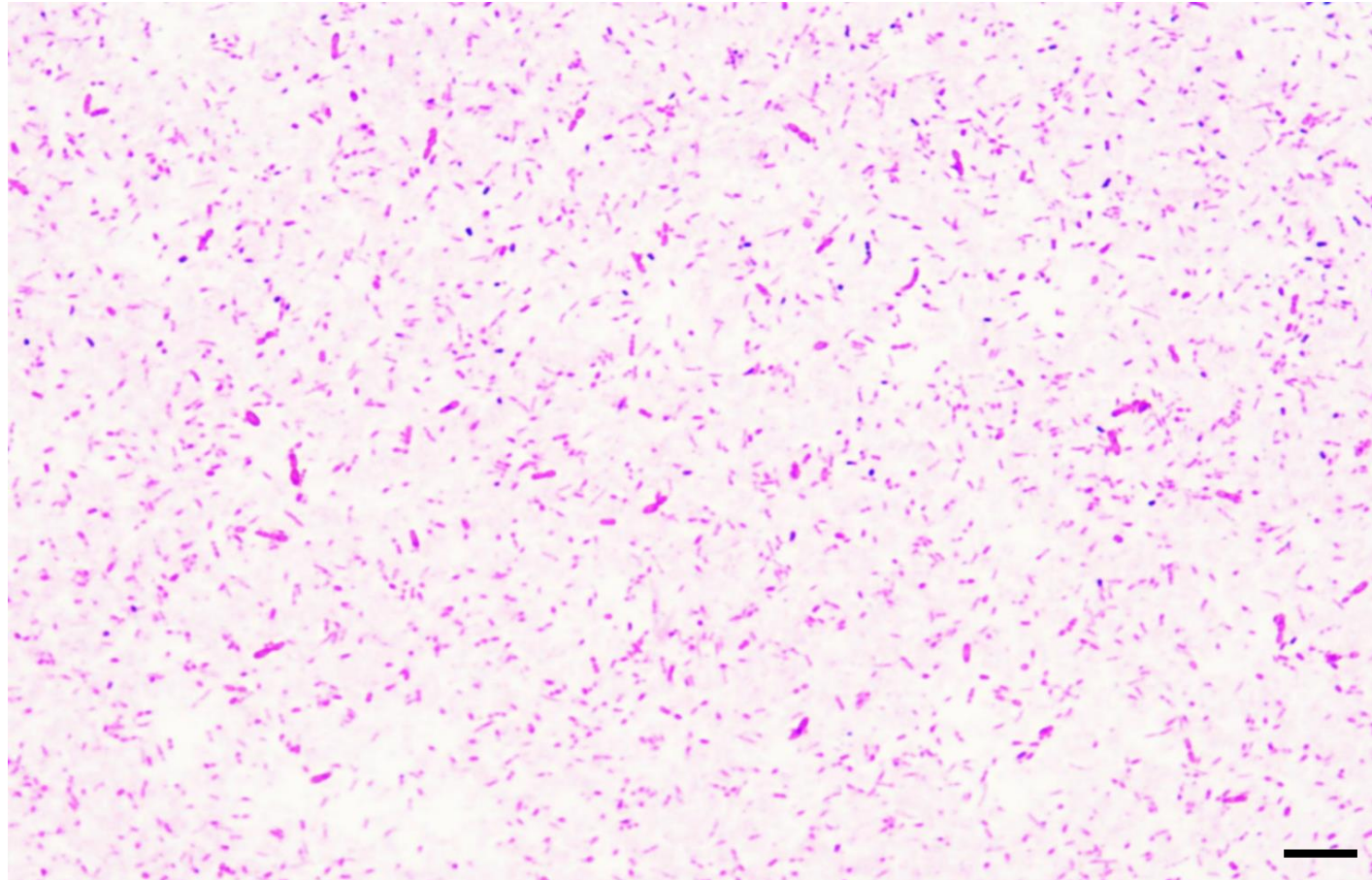
Emilia Gula, Agnieszka Ostrowska, Elke Reinartz, Jürgen Zeier, Ewa Pocięcha, Monika Tuleja, Bartosz J. Plachno, Ewa Niewiadomska, Marta Libik-Konieczny



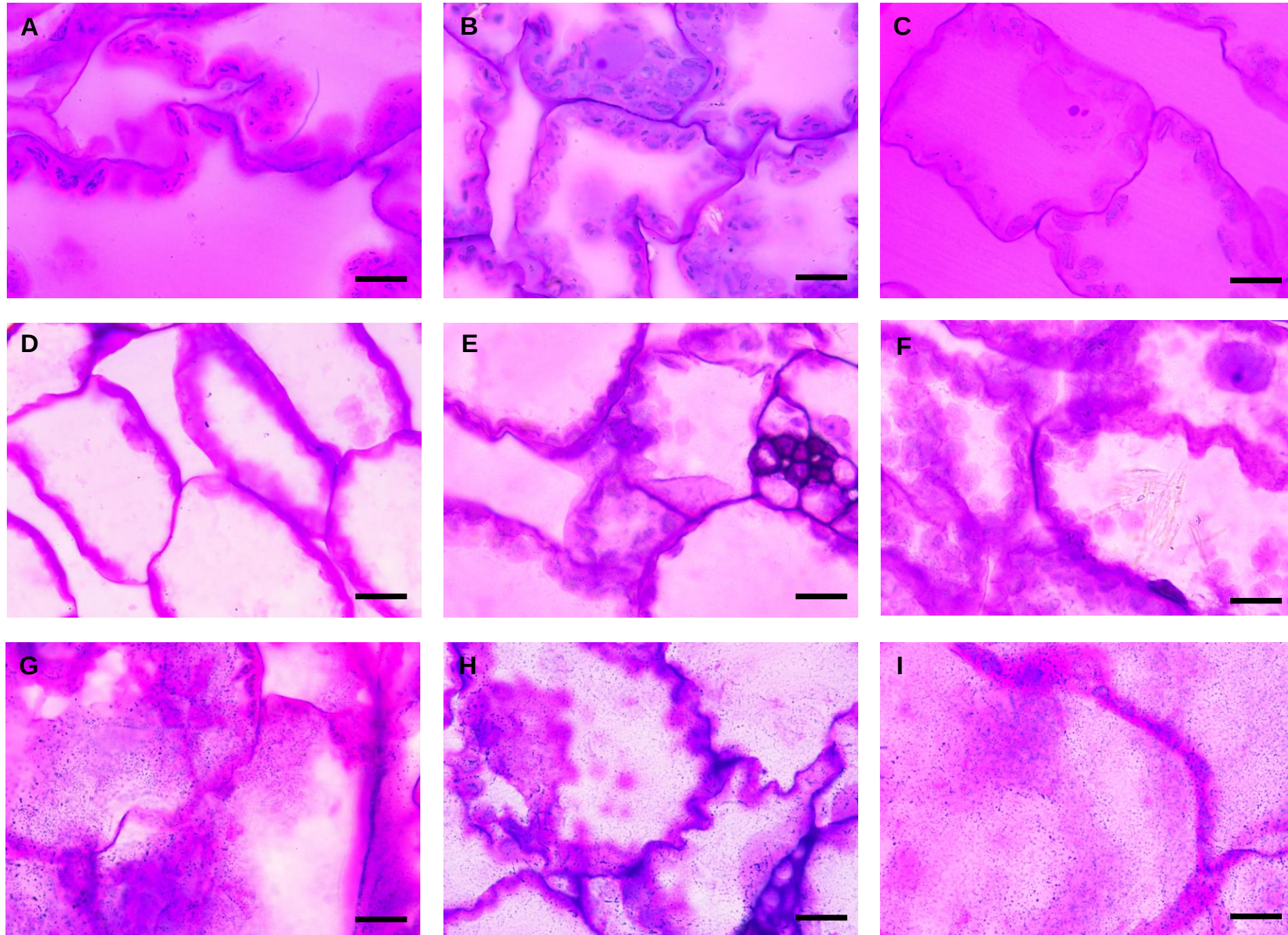
Appendix S1. Experimental design and sampling details according to **Gula et al. (2024)**.



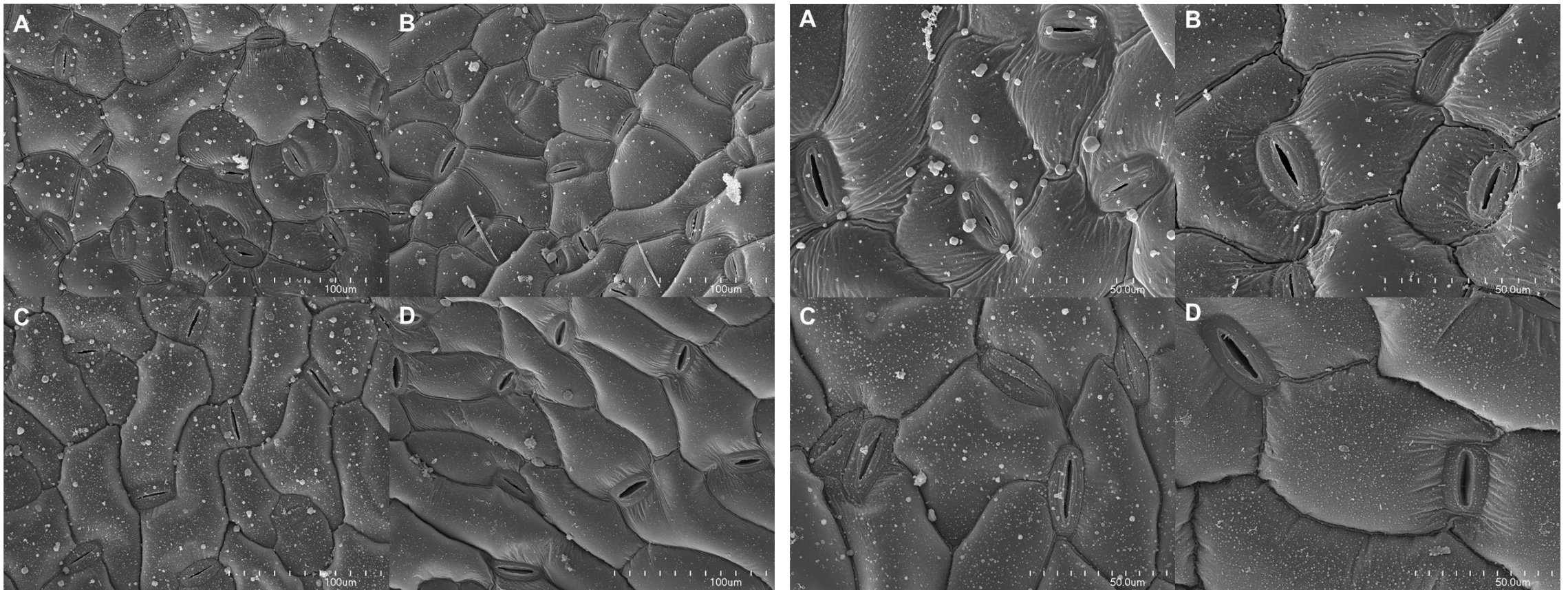
Appendix S2. Diurnal Cycle of Photosynthesis **A**-in C_3 plants, **B**-in CAM plants based on **Borland and Taybi (2004)**; **Heyduk (2022)** and **Wang et al. (2023)**.



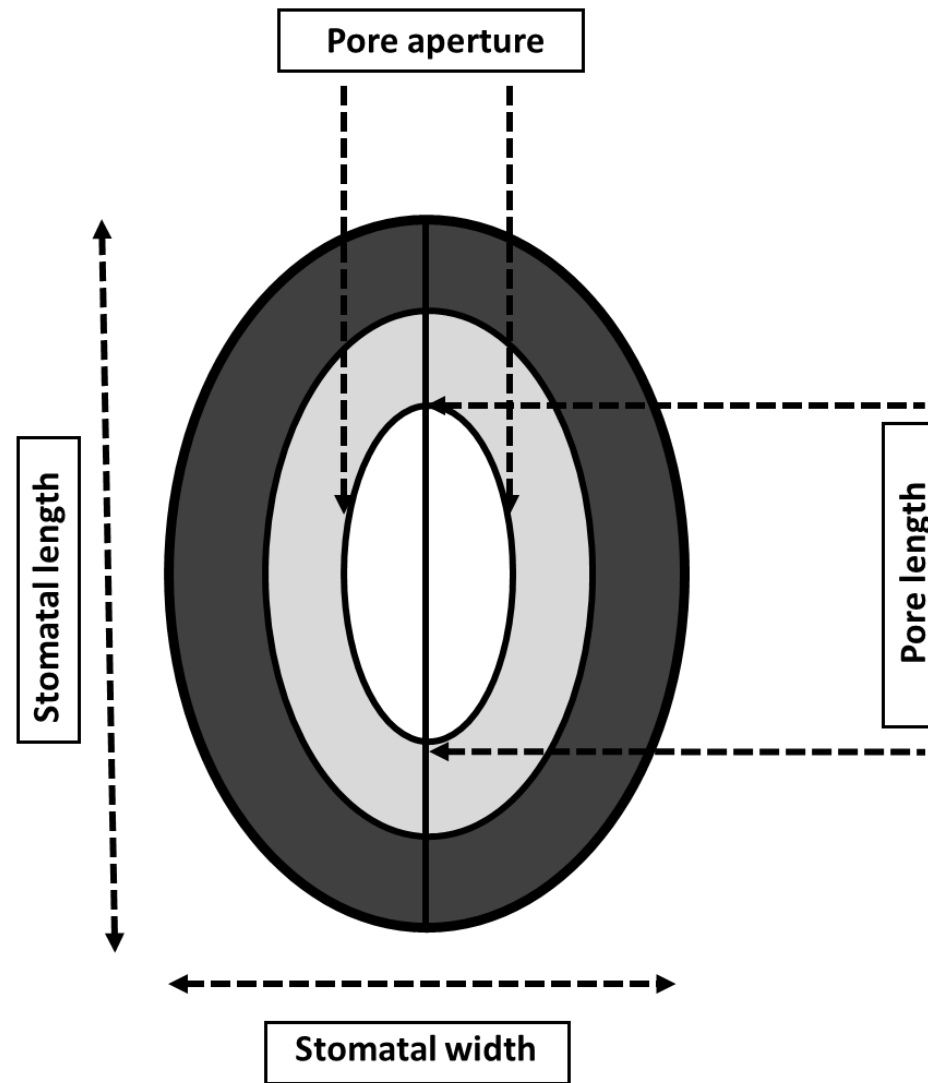
Appendix S3. *Pseudomonas syringae* from solid culture (24 hours growth). The preparation was obtained by Gram staining (PREVI® COLOR GRAM, bioMérieux, France). Scale bar=10 μm .



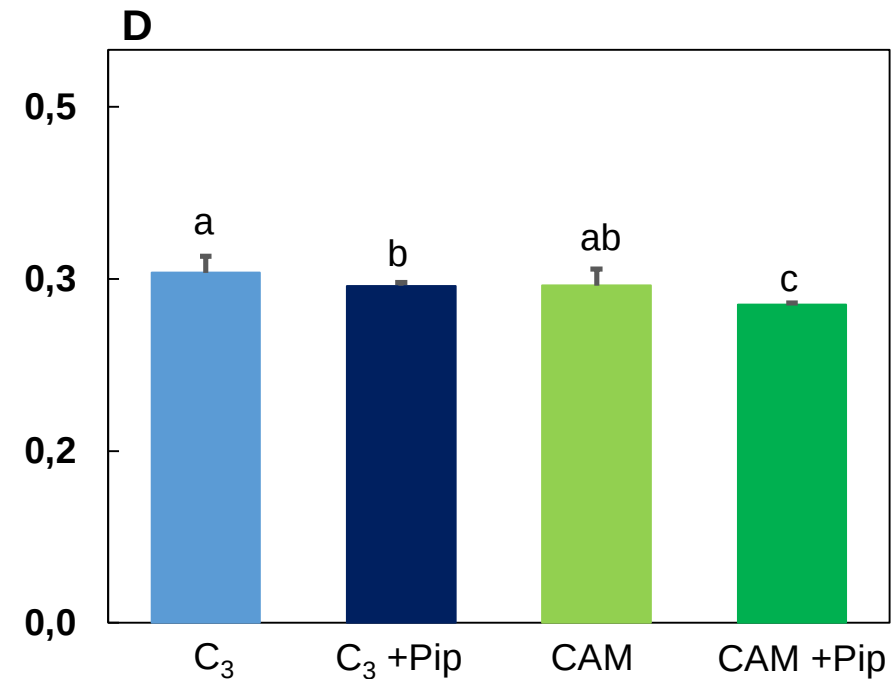
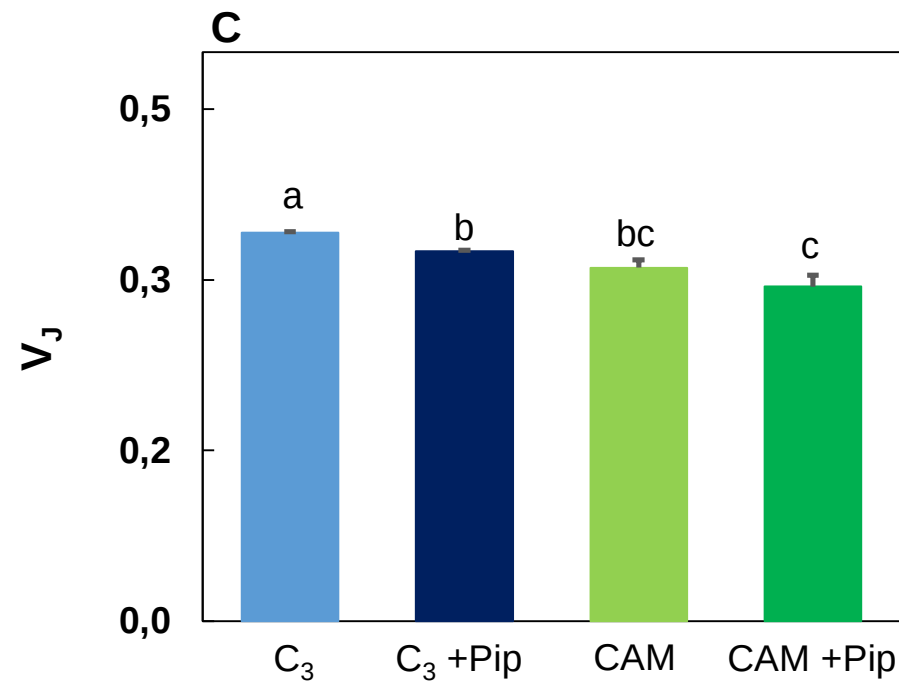
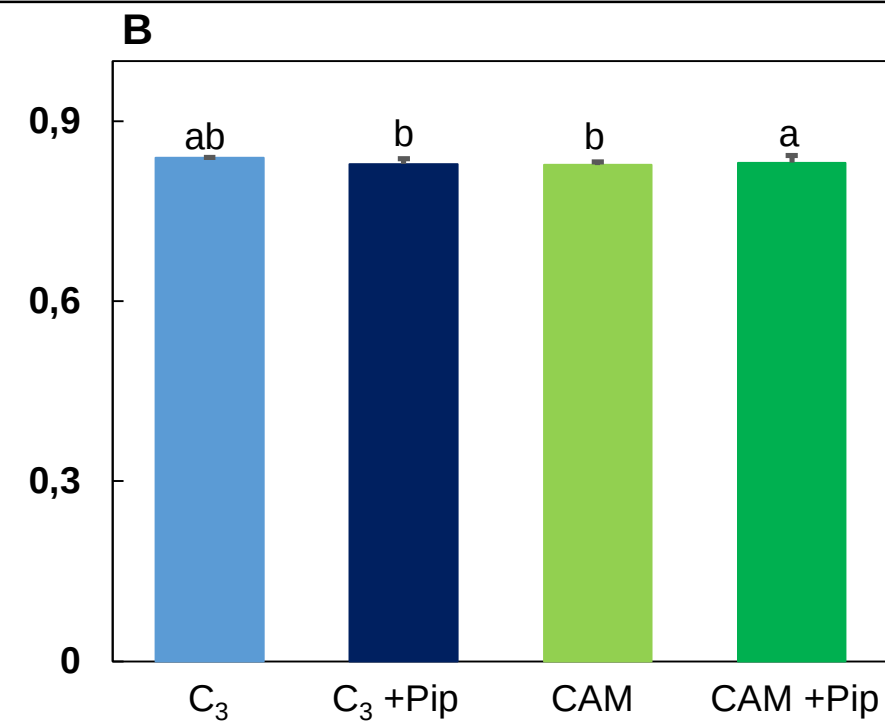
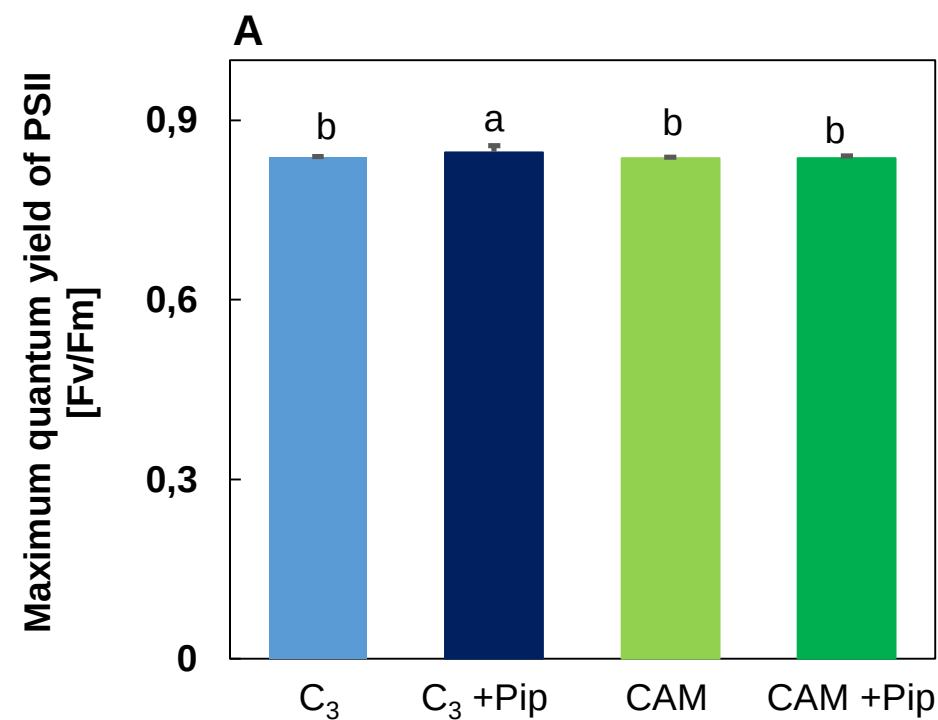
Appendix S4. *Mesembryanthemum crystallinum* (C_3 metabolism) tissues after treatment with *Pseudomonas syringae*. **A, B, C** - control plants; **D, E, F** - 12 hours post-bacterial treatment (pbt); **G, H, I** - 3 days pbt. The preparations were obtained by Gram staining (PREVI® COLOR GRAM, bioMérieux, France). Scale bar=10 μ m.



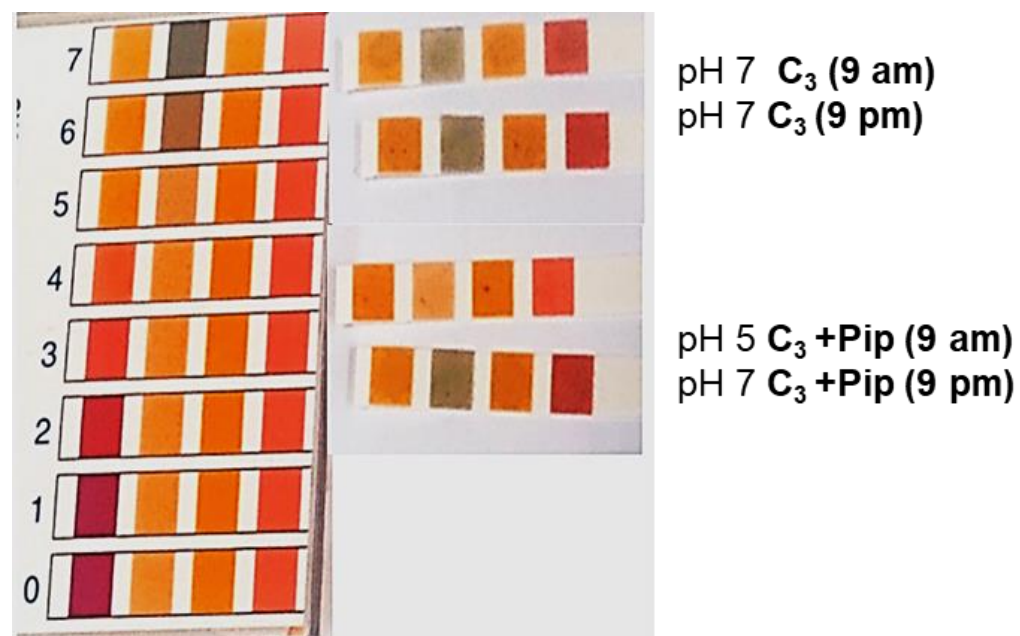
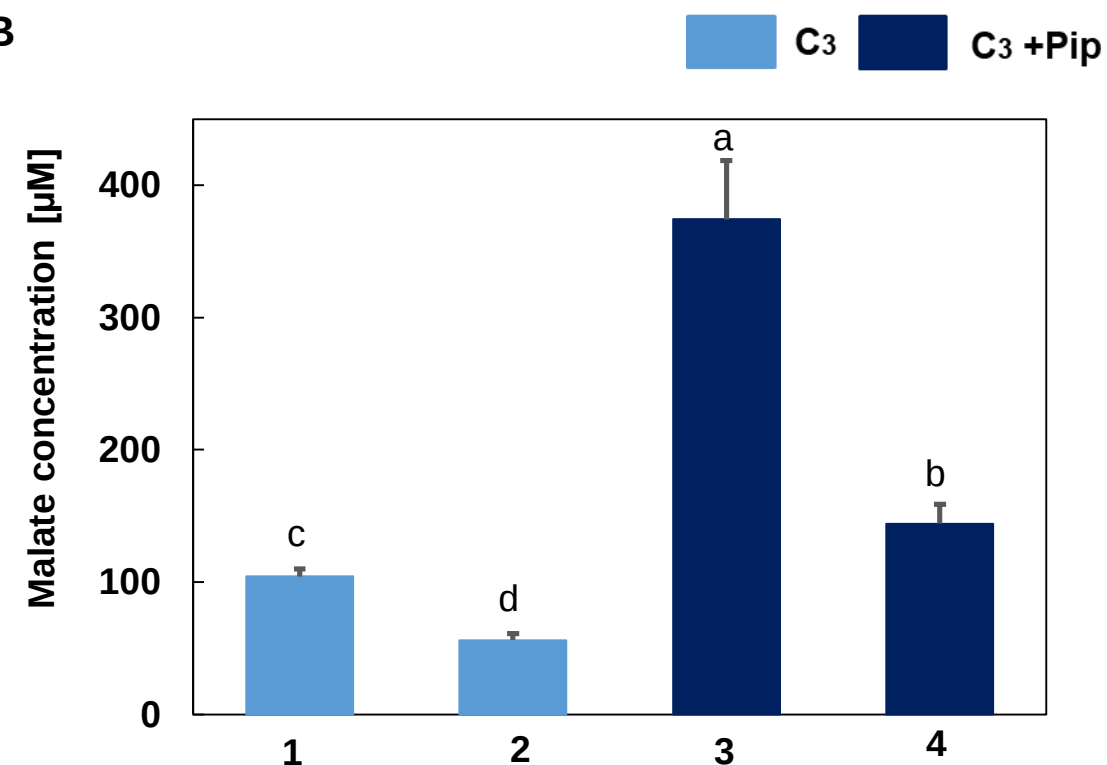
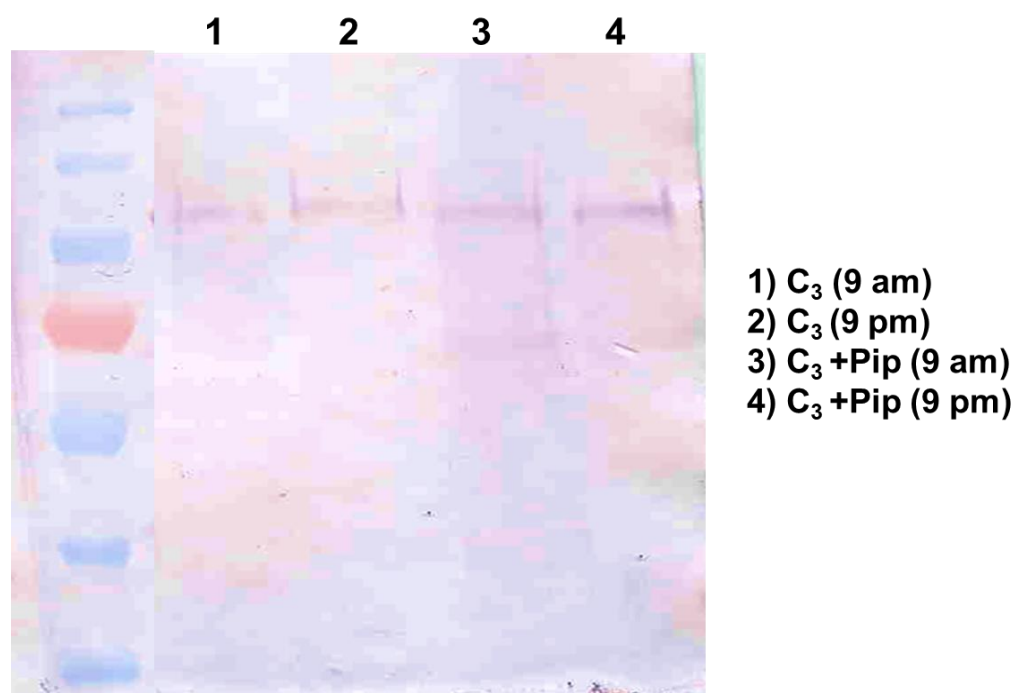
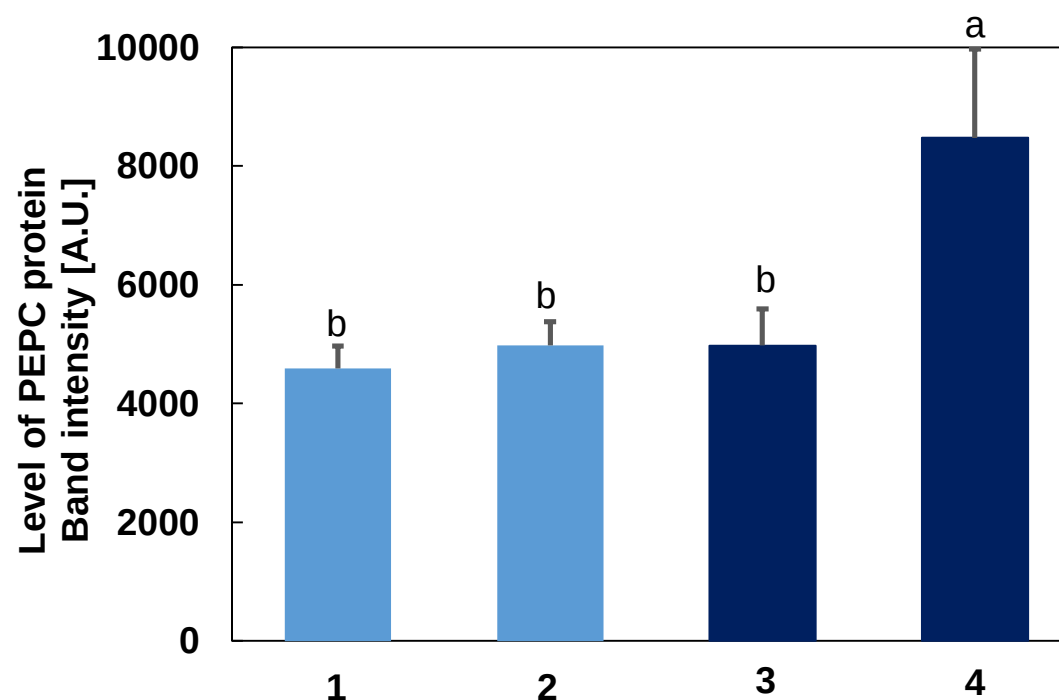
Appendix S5. Visualization of stomata under a scanning microscope at different scales, **A-C₃**, **B-C₃+PiP**, **C-CAM**, and **D-CAM+PiP** plants.



Appendix S6. Scheme of stomata length measurements based on **Savvides et al. (2012)**.



Appendix S7. OJIP test parameters in the **A, C**- control plants, **B, D**-plants 3 days post-bacterial treatment (pbt). **A, B**-Maximum quantum yield of PSII [Fv/Fm], **C, D**- relative proportion of closed PSII reaction centres at the J-step of fluorescence induction (V_j). According to ANOVA, means (n = 3 per treatment ± SE) values marked with the same letters (within each cultivar separately) are not significantly different (Duncan test, p≤0.05).

A**B****C****D**

Appendix S8. **A-** daily differences in pH of cell sap in leaves, **B-** daily differences in malate concentration, **C-** identification of PEP-carboxylase protein on nitrocellulose membrane, **D-** daily differences in PEPC protein levels. According to ANOVA, means ($n = 4$ per treatment $\pm$ SE) values marked with the same letters (within each cultivar separately) are not significantly different (Duncan test, $p \leq 0.05$).