



Supplemental materials

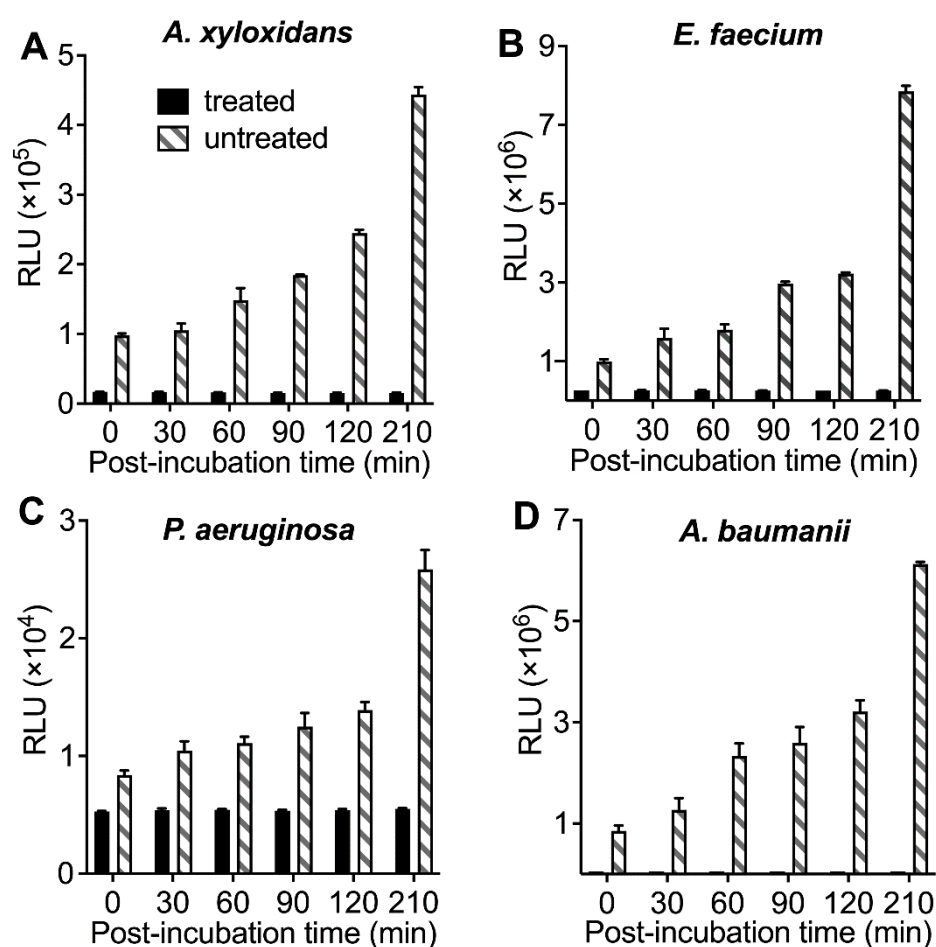


Figure S1. Luminescence of heat-inactivated bacteria compared to active bacteria, dependent on post-incubation time. Bacteria suspended in 50 % BHI broad medium were heat-inactivated or left untreated and incubated at 37 °C, 5% CO₂. The ATP-evoked luminescence was measured on bacterial lysates with the cell viability assay at the indicated timepoints in (A) XDR *Achromobacter xylosoxidans*, (B) VRE *Enterococcus faecium*, (C) MDR *Pseudomonas aeruginosa* and (D) XDR *Actinetobacter baumannii* ($n = 3$ each).

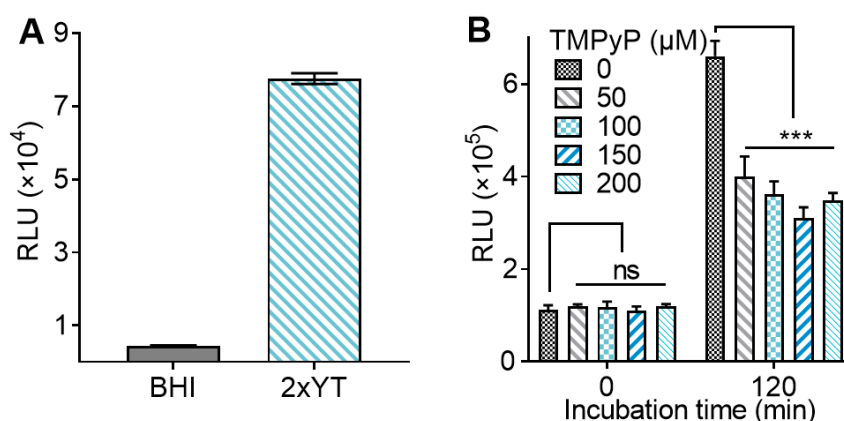


Figure S2. Background luminescence of bacteria growth media and VRE *E. faecium* susceptibility to TMPyP without illumination (A) Background luminescence varies between bacterial growth media. The BHI growth medium has a 17 times lower luminescence compared to 2xYT growth medium, when measured without photosensitizer ($n = 8$). (B) ATP-induced luminescence in VRE *E. faecium* after 0 min and 120 min incubation with TMPyP without illumination at 37 °C, 5% CO_2 (** $p < 0.001$, two-way ANOVA and Bonferroni correction, $n = 3$).

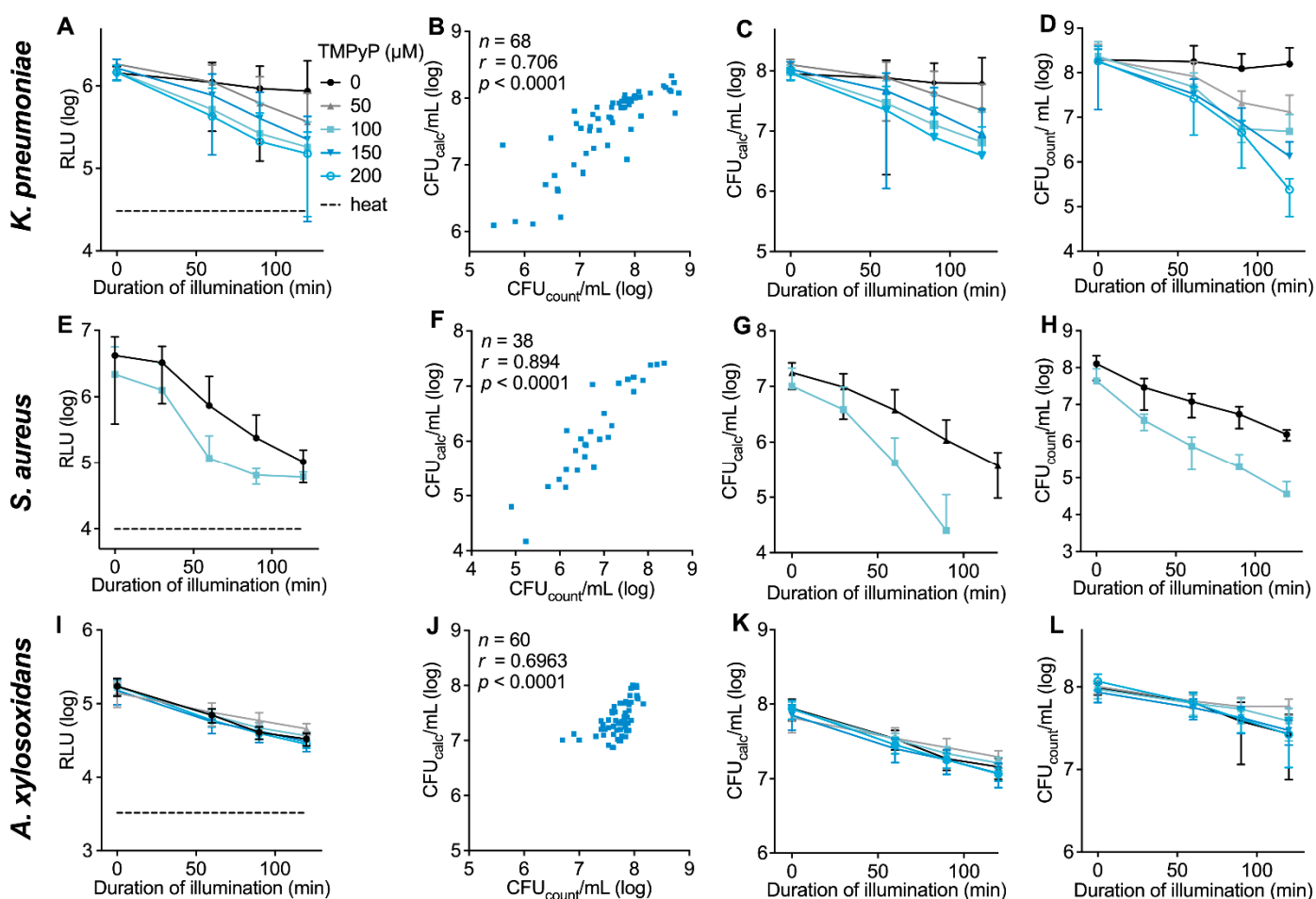


Figure S3. Further evaluation of PDI effects of TMPyP on different bacterial strain as determined by ATP-evoked luminescence and manual counting of bacteria colonies. Data from PDI experiments are presented. TMPyP was illuminated with 13 mW/cm² results in 0 J/cm² (0 min) 46.8 J/cm² (60 min), 70.2 J/cm² (90 min), 93.6 J/cm² (120 min) at $\lambda_{\text{cent}} = 420$ nm, dashed line shows the luminescence of heat-inactivated bacteria. (A) ATP-induced luminescence by CRE *K. pneumoniae*

after PDI. **(B)** Correlation between calculated (CFU_{calc}) and manually determined bacterial density (CFU_{count}) in CRE *K. pneumoniae*; r = correlation coefficient. **(C)** CFU_{calc} of CRE *K. pneumoniae* based on luminometric measurements. **(D)** CFU_{count} of CRE *K. pneumoniae* after PDI. **(E–H)** Results for MRSA *S. aureus* as described above for *K. pneumoniae*. **(I–L)** Results for XDR *A. xylosoxidans* as described above for *K. pneumoniae*.