

## Antibacterial activity of silver camphorimine coordination polymers

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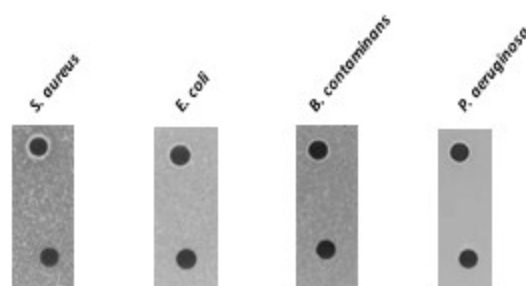
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### Supplementary Information

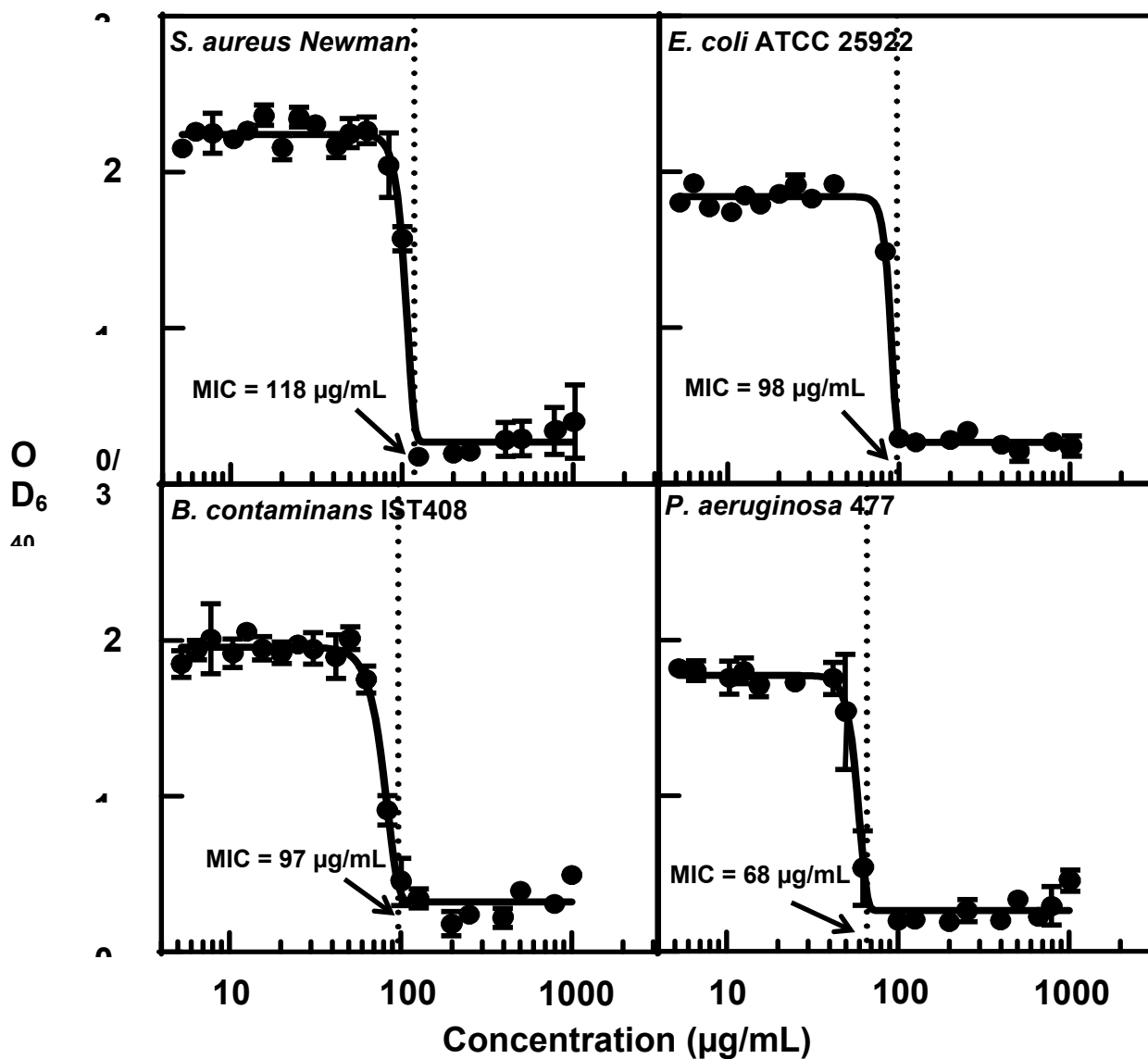
The antimicrobial properties of compounds **I**, **II**, **III**, **IV** and **V** were assessed by evaluating their activity against the Gram-positive *Staphylococcus aureus* Newman and the Gram-negative *Burkholderia contaminans* IST408, *Pseudomonas aeruginosa* 477, and *Escherichia coli* ATCC 25922.

A first screening of antibacterial activity was carried out by using the disk diffusion method as exemplified for **III** (Figure S1).

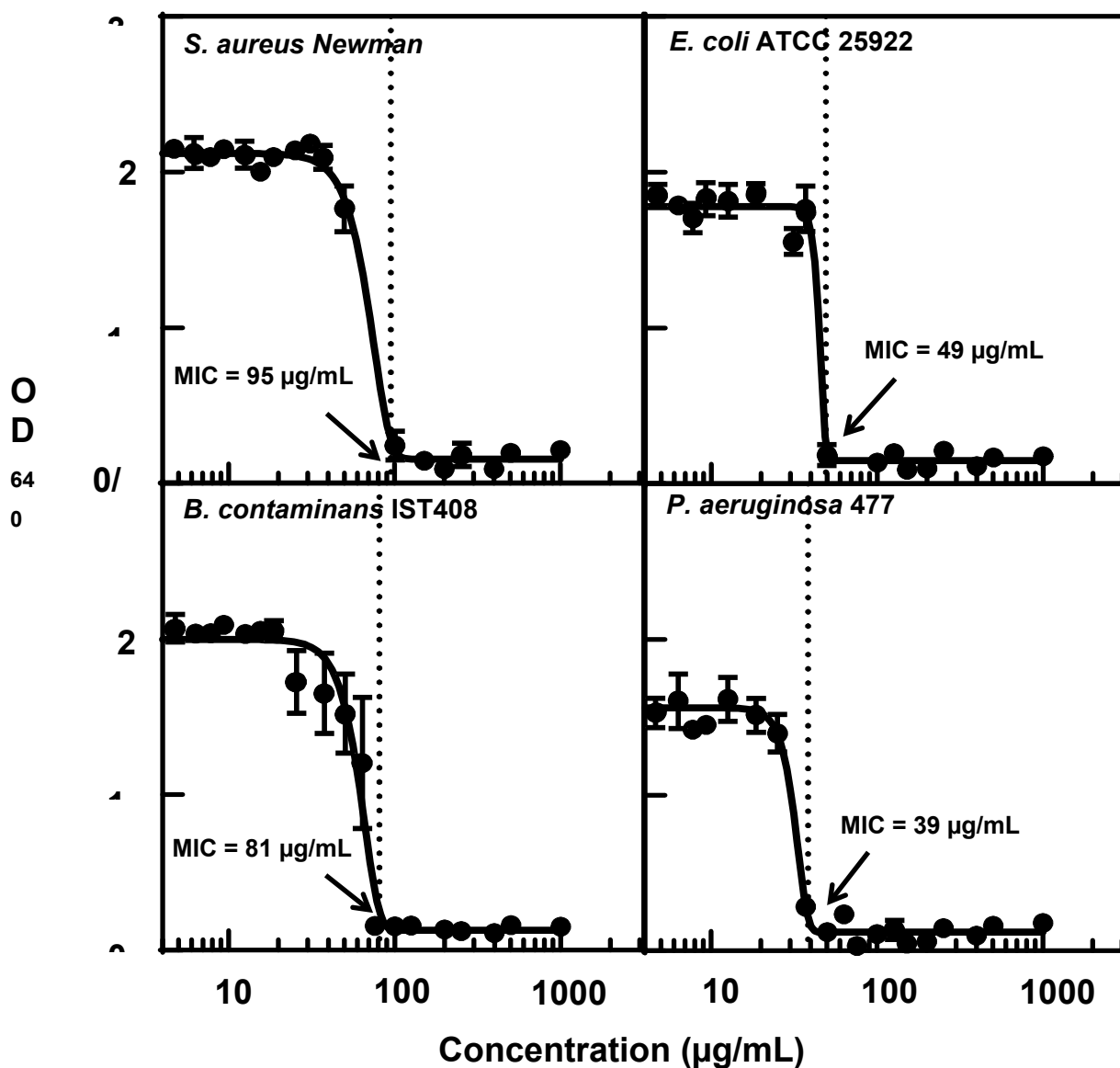


**Figure S1** – Hallos of growth inhibition towards *S. aureus* Newman, *E. coli*, *P. aeruginosa* and *B. contaminans* detected for **III** after 24 h of incubation at 37 °C.

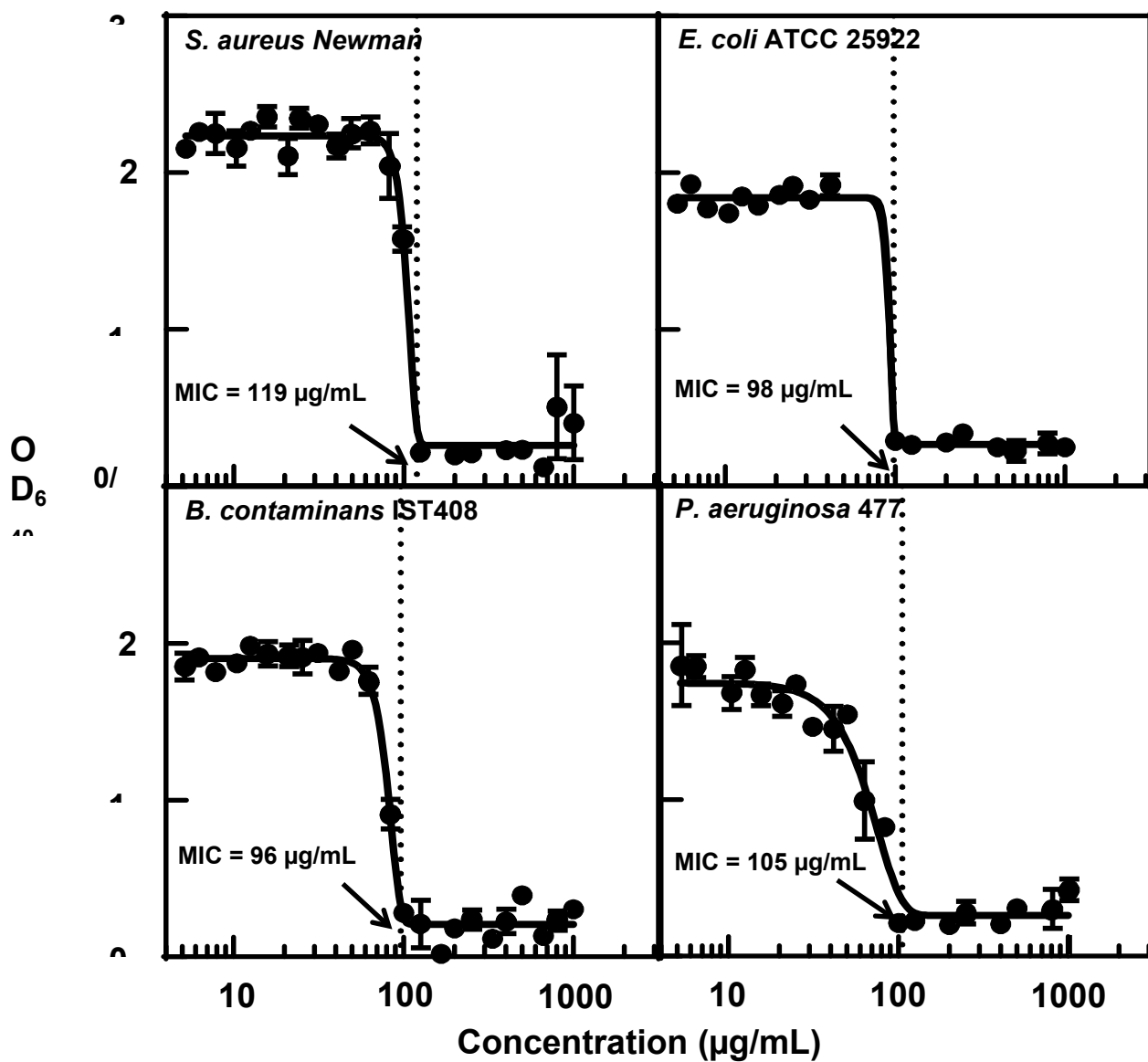
Since all compounds displayed considerable hallos of growth inhibition, a step forward was given towards evaluation of their Minimal Inhibitory Concentrations (MIC) for the four bacteria strains. Data fitting was performed using a modified Gompertz equation<sup>1</sup> and the corresponding graphs are displayed in Figures S2 to S5.



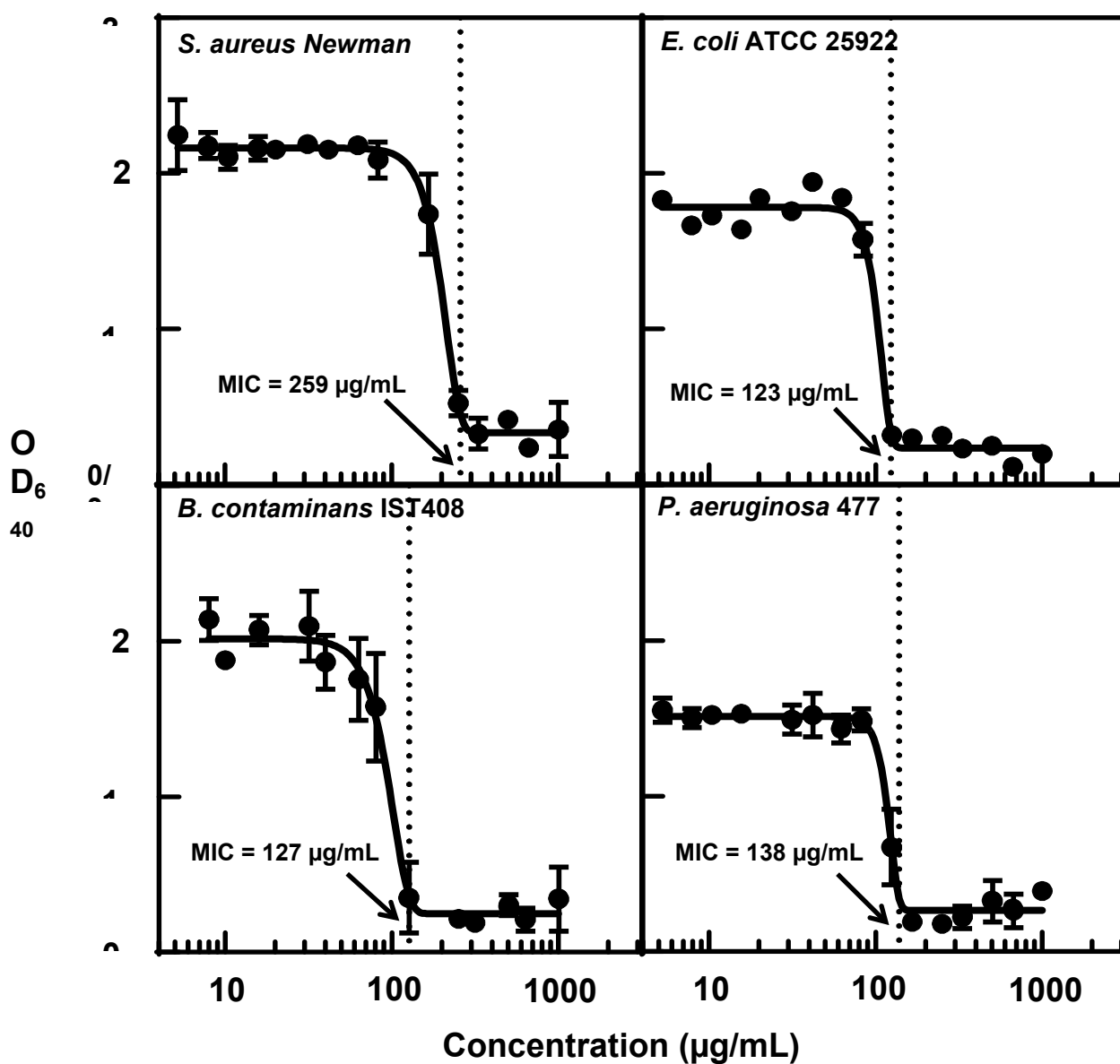
**Figure S2** – Antibacterial activity of compound I towards *S. aureus* Newman, *E. coli*, *P. aeruginosa* and *B. contaminans*. Experimental OD<sub>640</sub> mean ± SD values of the indicated cultures after 24 h incubation at 37 °C in the presence of the indicated concentrations of I are shown. Data fitting was performed using a modified Gompertz equation. MIC values are indicated in each case.



**Figure S3** – Antibacterial activity of compound II towards *S. aureus* Newman, *E. coli*, *P. aeruginosa* and *B. contaminans*. Experimental OD<sub>640</sub> mean ± SD values of the indicated cultures after 24 h incubation at 37 °C in the presence of the indicated concentrations of II are shown. Data fitting was performed using a modified Gompertz equation. MIC values are indicated in each case.



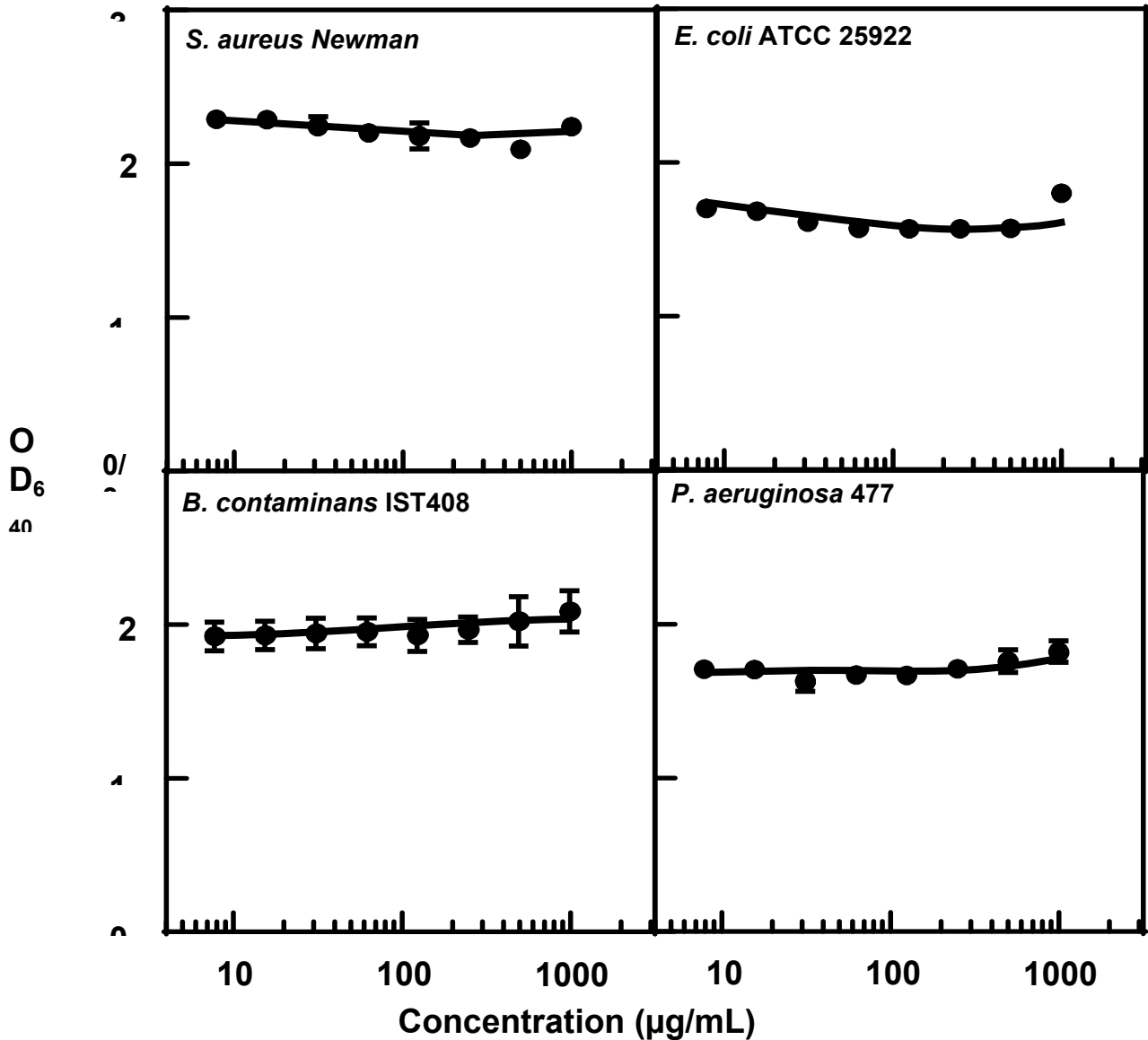
**Figure S4** – Antibacterial activity of compound IV towards *S. aureus* Newman, *E. coli*, *P. aeruginosa* and *B. contaminans*. Experimental  $OD_{640}$  mean  $\pm$  SD values of the indicated cultures after 24 h incubation at  $37^\circ\text{C}$  in the presence of the indicated concentrations of IV are shown. Data fitting was performed using a modified Gompertz equation. MIC values are indicated in each case.



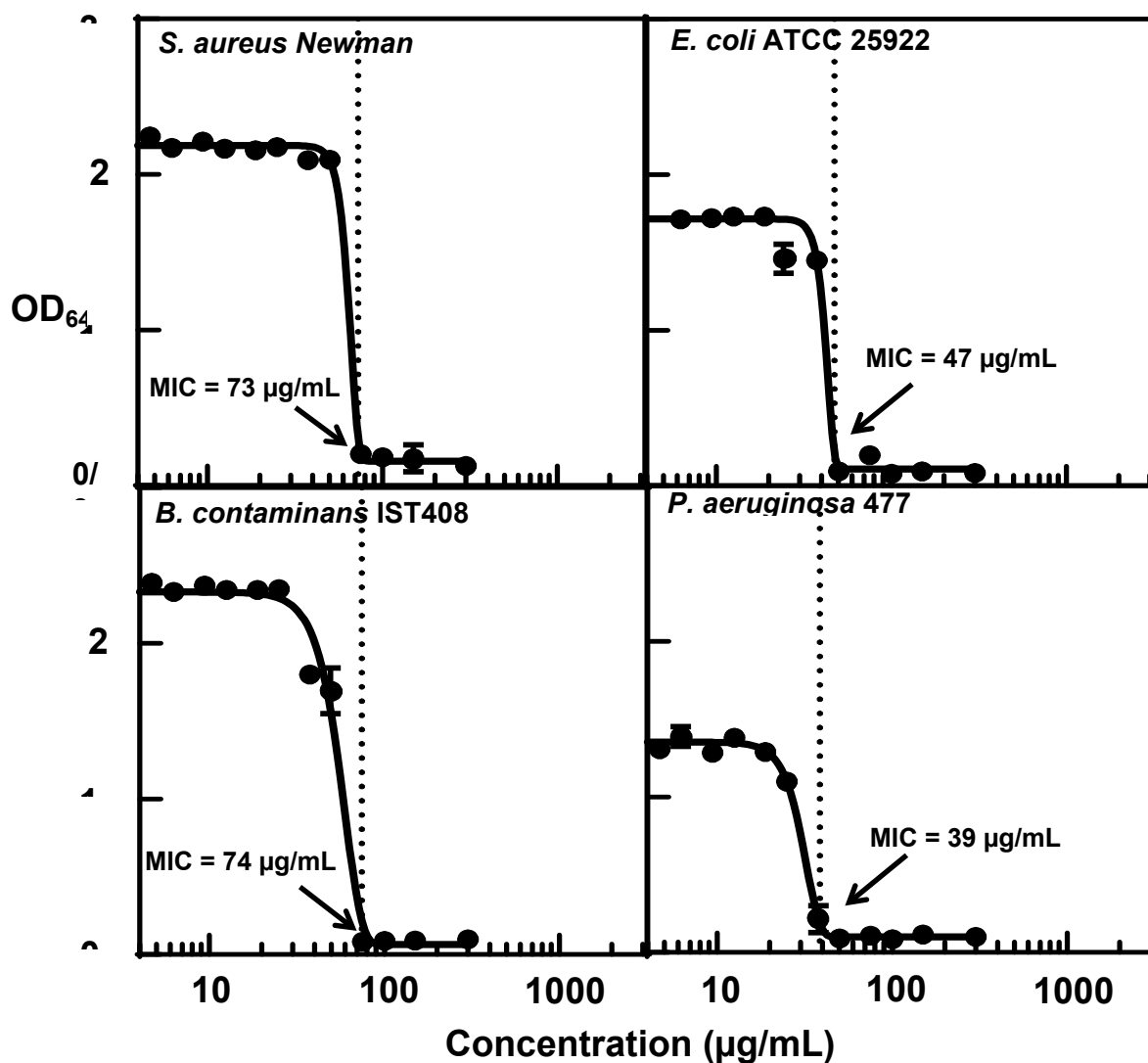
**Figure S5** – Antibacterial activity of compound **V** towards *S. aureus* Newman, *E. coli*, *P. aeruginosa* and *B. contaminans*. Experimental OD<sub>640</sub> mean ± SD values of the indicated cultures after 24 h incubation at 37 °C in the presence of the indicated concentrations of **V** are shown. Data fitting was performed using a modified Gompertz equation. MIC values are indicated in each case.

For comparative purposes, the MIC values for camphor (Figure S6), AgNO<sub>3</sub> (Figure S7), and the camphor ligands <sup>1</sup>A (Figure S8), <sup>2</sup>A (Figure S9), <sup>1</sup>B (Figure S10), <sup>2</sup>B (Figure

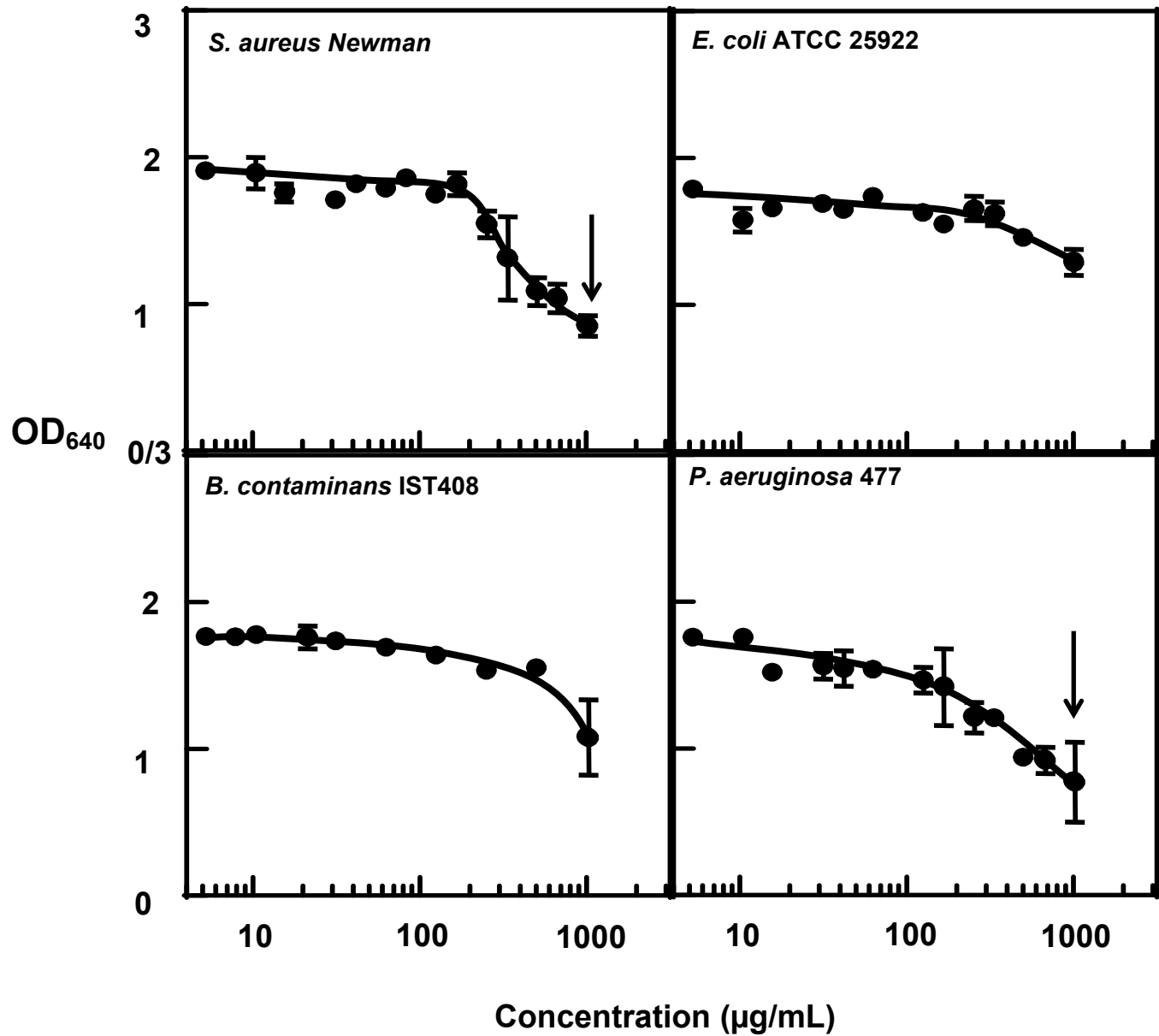
S11), and <sup>3</sup>L (Figure S12), were also evaluated under the same experimental conditions. The experimental data was plotted and the graphs are shown.



**Figure S6** – Antibacterial activity of **camphor** towards *S. aureus* Newman, *E. coli*, *P. aeruginosa* and *B. contaminans*. Experimental OD<sub>640</sub> mean ± SD values of the indicated cultures after 24 h incubation at 37 °C in the presence of the indicated concentrations of camphor are shown.

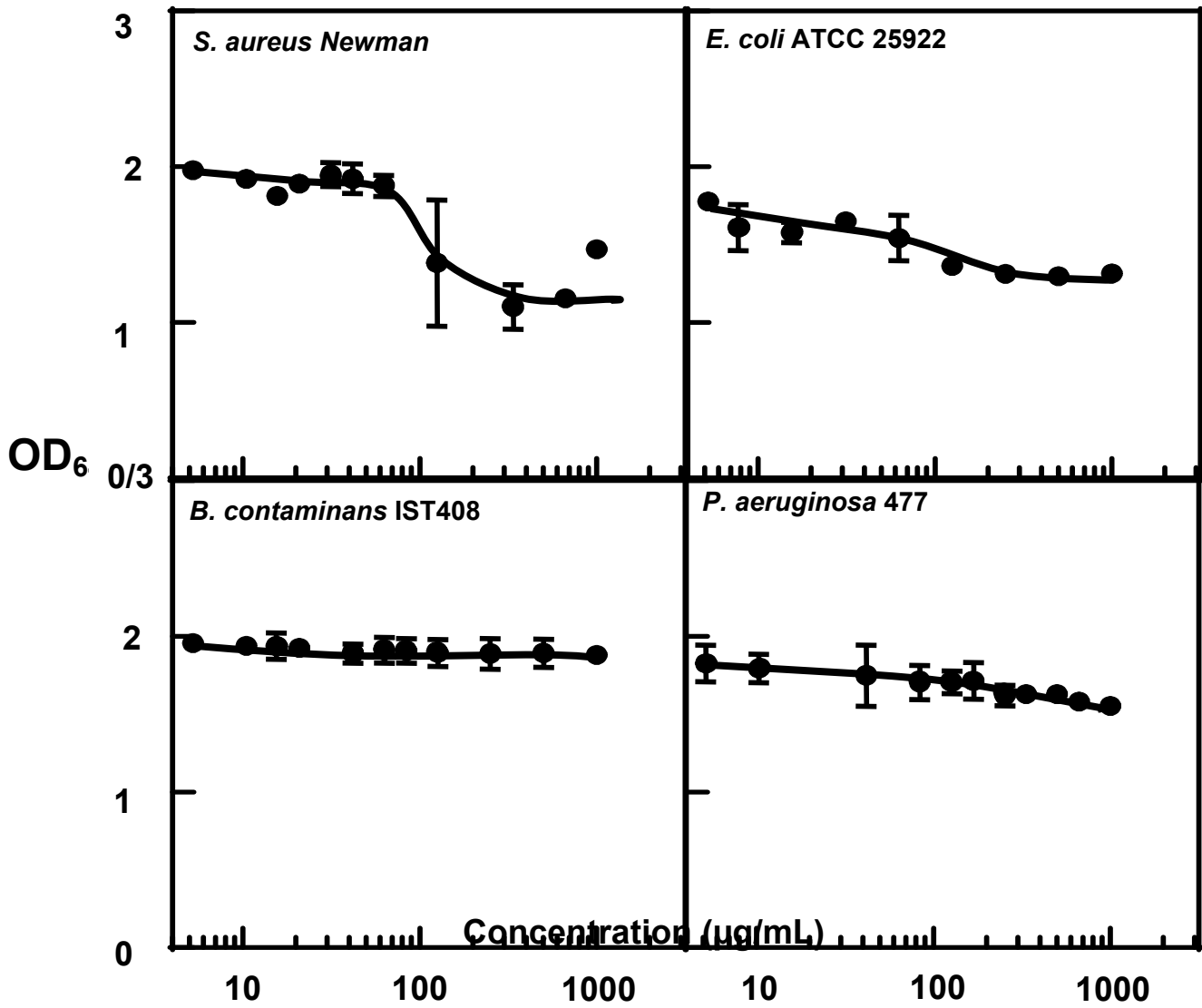


**Figure S7** – Antibacterial activity of silver nitrate ( $\text{AgNO}_3$ ) towards *S. aureus* Newman, *E. coli*, *P. aeruginosa* and *B. contaminans*. Experimental  $\text{OD}_{640}$  mean  $\pm$  SD values of the indicated cultures after 24 h incubation at 37 °C in the presence of the indicated concentrations of silver nitrate are shown. Data fitting was performed using a modified Gompertz equation. MIC values are indicated in each case.

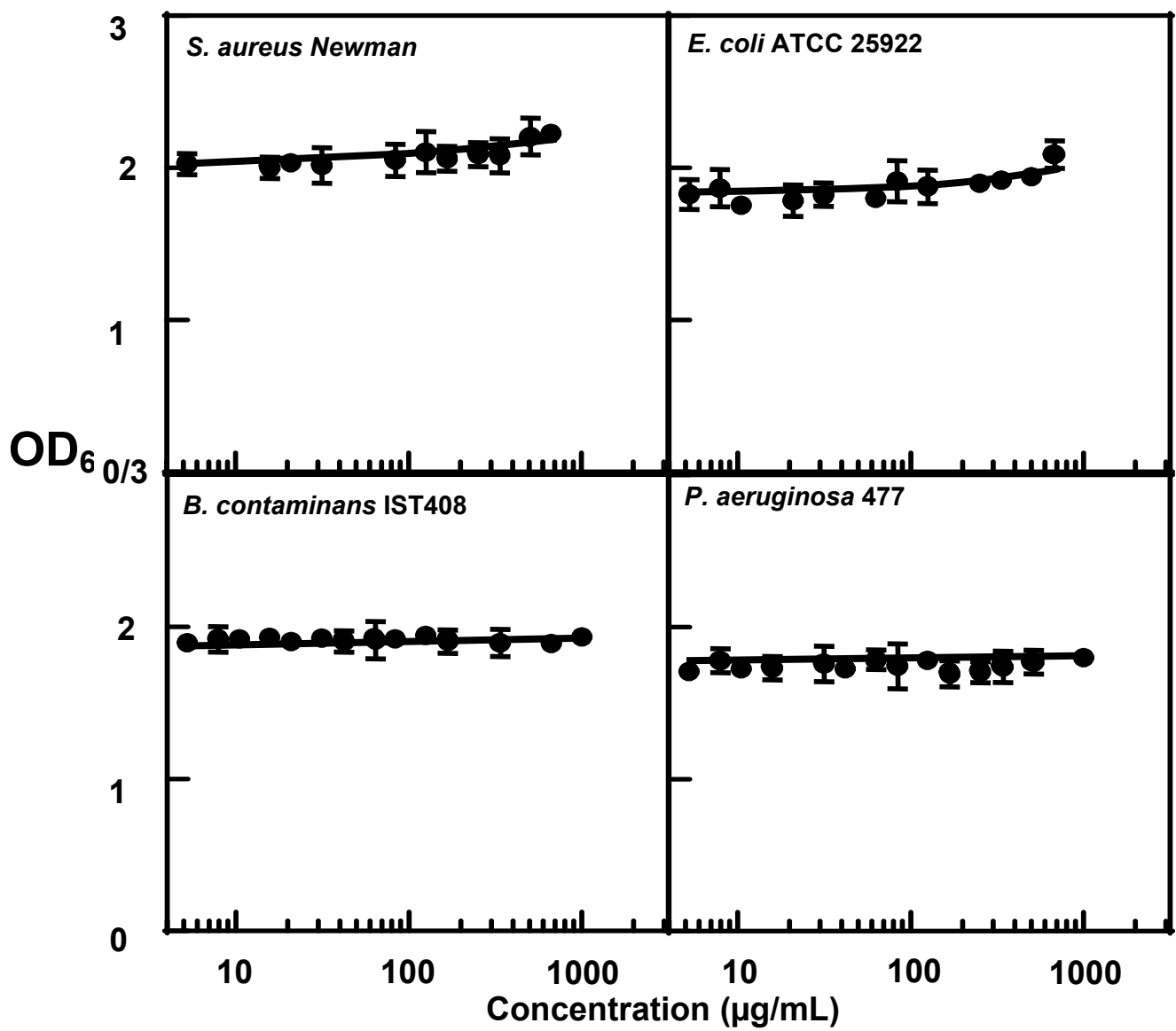


**Figure S8** – Antibacterial activity of ligand <sup>1</sup>A towards *S. aureus* Newman, *E. coli*, *P. aeruginosa* and *B. contaminans*. Experimental OD<sub>640</sub> mean ± SD values of the indicated cultures after 24 h incubation at 37 °C in the presence of the indicated concentrations of ligand <sup>1</sup>A are shown. For *S. aureus* and *P. aeruginosa*, since the OD<sub>640</sub> was below 1.0 for the highest concentration tested (indicated by arrows), the CFUs per mL were determined and were, respectively,  $5.5 \times 10^7$  and  $1.2 \times 10^7$ .

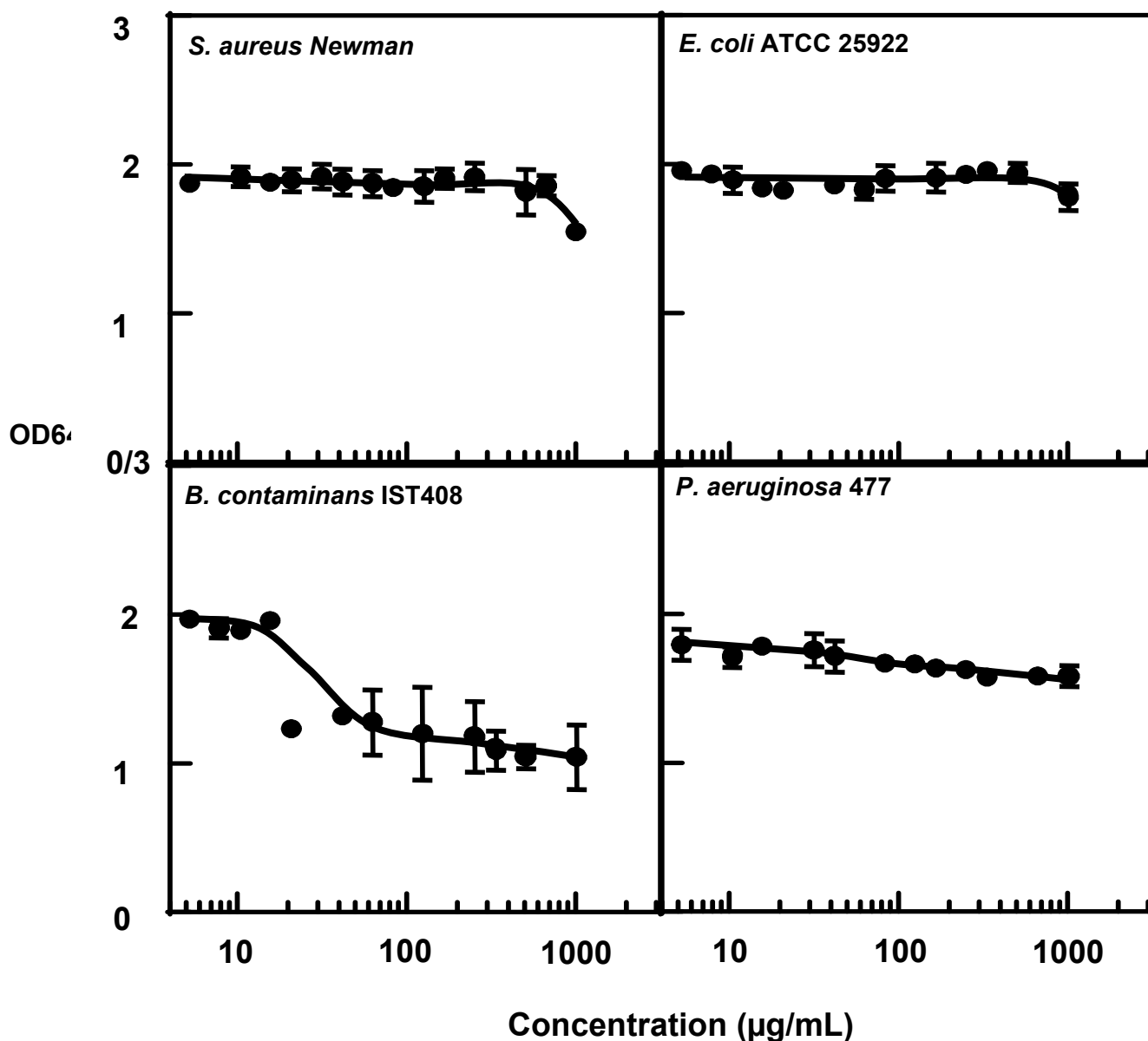




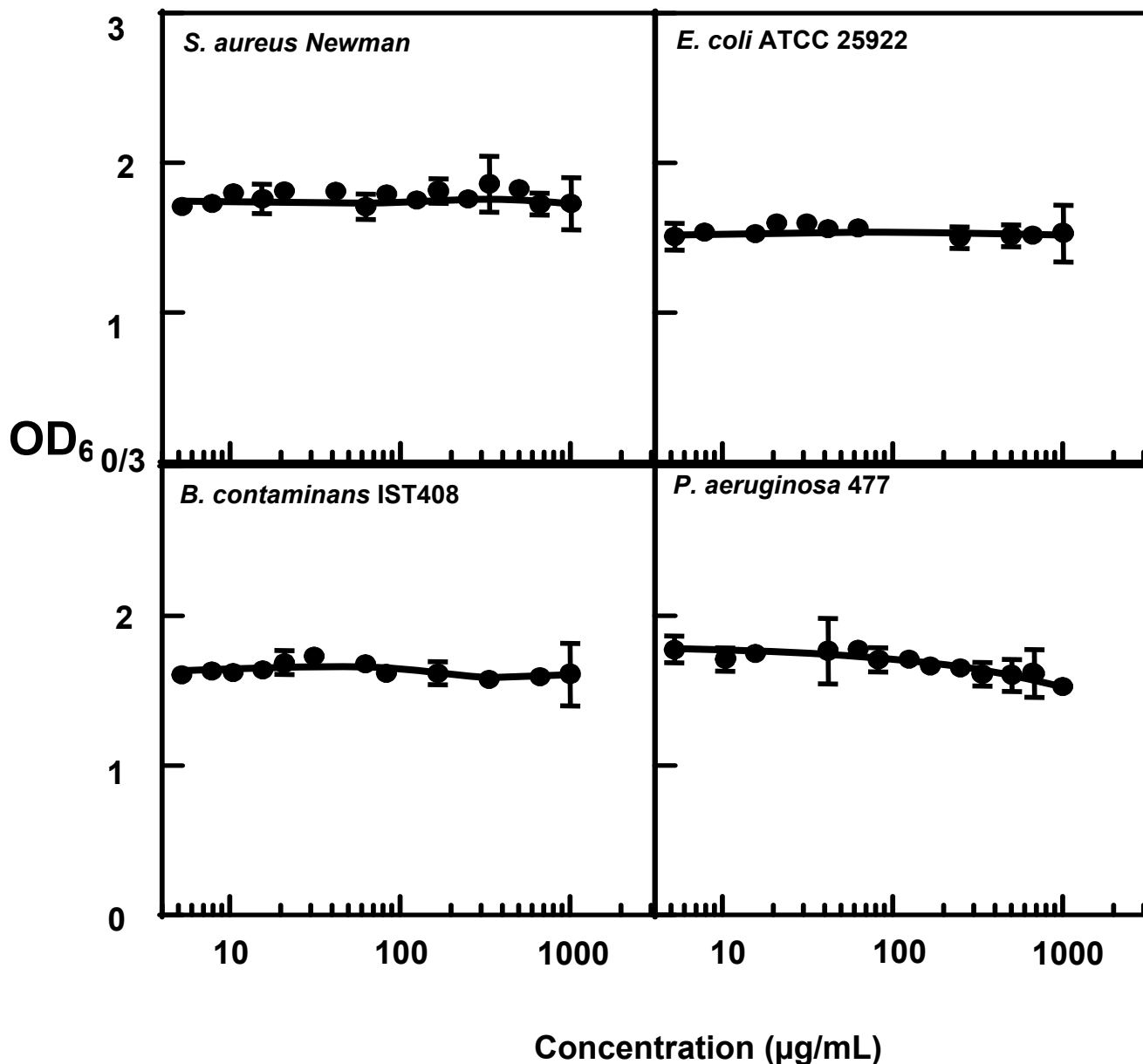
**Figure S9** – Antibacterial activity of ligand <sup>1</sup>B<sub>L</sub> towards *S. aureus* Newman, *E. coli*, *P. aeruginosa* and *B. contaminans*. Experimental OD<sub>640</sub> mean ± SD values of the indicated cultures after 24 h incubation at 37 °C in the presence of the indicated concentrations of ligand <sup>1</sup>B<sub>L</sub> are shown.



**Figure S10** – Antibacterial activity of ligand <sup>2A</sup>L towards *S. aureus* Newman, *E. coli*, *P. aeruginosa* and *B. contaminans*. Experimental OD<sub>640</sub> mean ± SD values of the indicated cultures after 24 h incubation at 37 °C in the presence of the indicated concentrations of ligand <sup>2A</sup>L are shown. MIC values are indicated in each case.



**Figure S11** – Antibacterial activity of ligand <sup>2</sup>B<sub>L</sub> towards *S. aureus* Newman, *E. coli*, *P. aeruginosa* and *B. contaminans*. Experimental OD<sub>640</sub> mean ± SD values of the indicated cultures after 24 h incubation at 37 °C in the presence of the indicated concentrations of ligand <sup>2</sup>B<sub>L</sub> are shown. Data fitting was performed using a modified Gompertz equation. MIC values are indicated in each case.



**Figure S12** – Antibacterial activity of ligand <sup>3</sup>L towards *S. aureus* Newman, *E. coli*, *P. aeruginosa* and *B. contaminans*. Experimental OD<sub>640</sub> mean ± SD values of the indicated cultures after 24 h incubation at 37 °C in the presence of the indicated concentrations of ligand <sup>3</sup>L are shown. Data fitting was performed using a modified Gompertz equation. MIC values are indicated in each case.