



## Supplementary Material

# Aptamer Conjugated Indium Phosphide Quantum Dots with a Zinc Sulfide Shell as Photoluminescent Labels for *Acinetobacter baumannii*

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**Citation:** Ayed, Z.; Malhotra, S.; Dobhal, G.; Goreham, R.V. Aptamer Conjugated Indium Phosphide Quantum Dots with a Zinc Sulfide Shell as Photoluminescent Labels for *Acinetobacter baumannii*. *Nanomaterials* **2021**, *11*, 3317. <https://doi.org/10.3390/nano11123317>

Received: 9 November 2021

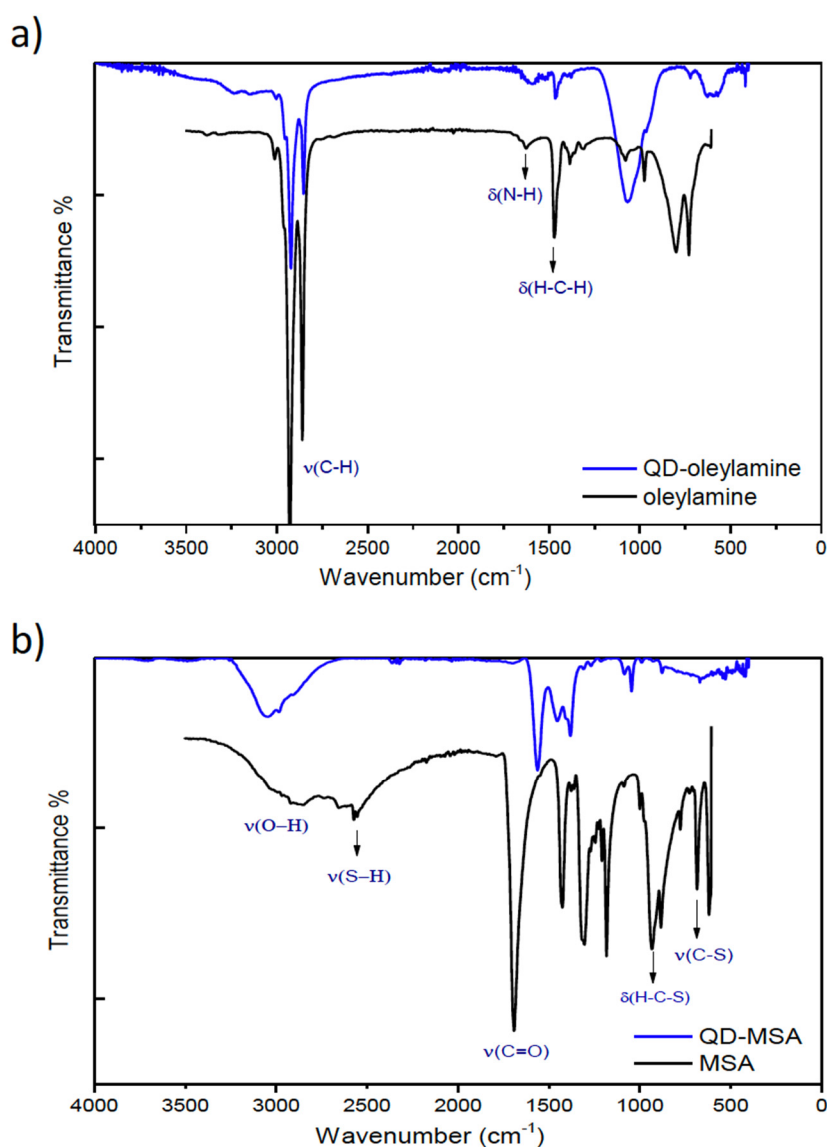
Accepted: 3 December 2021

Published: 7 December 2021

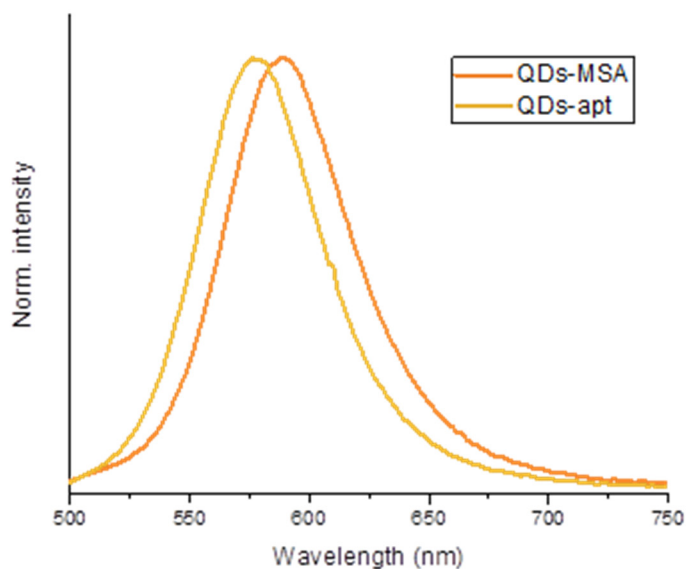
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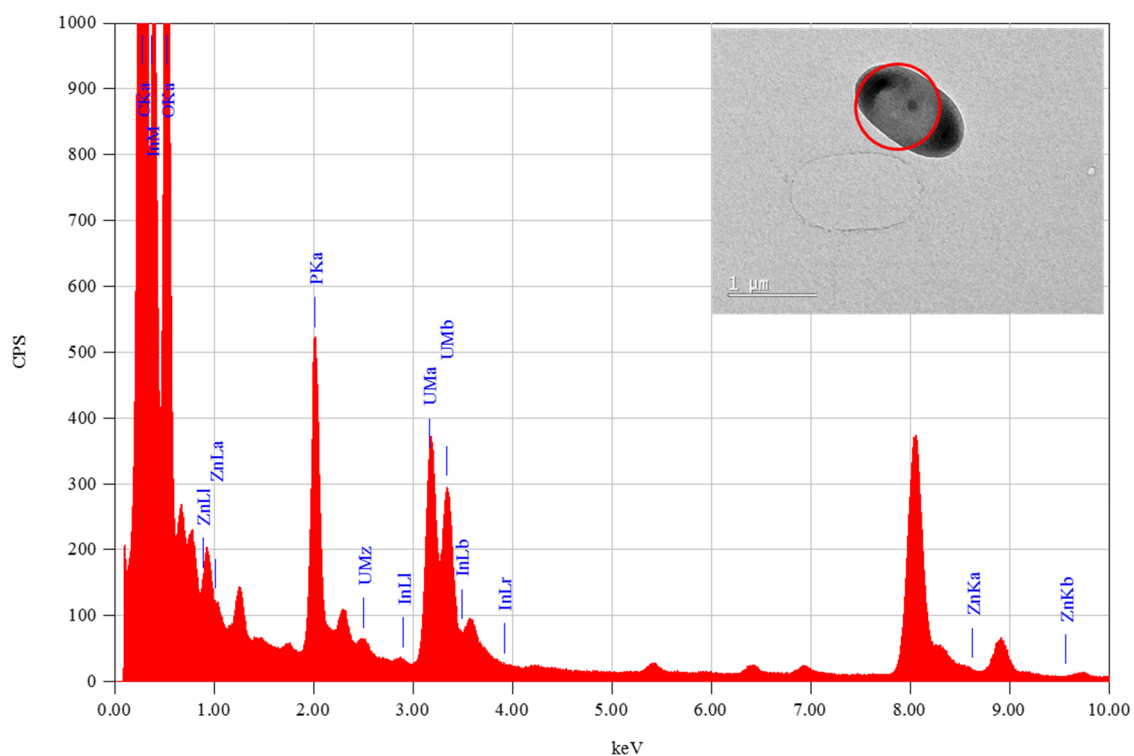
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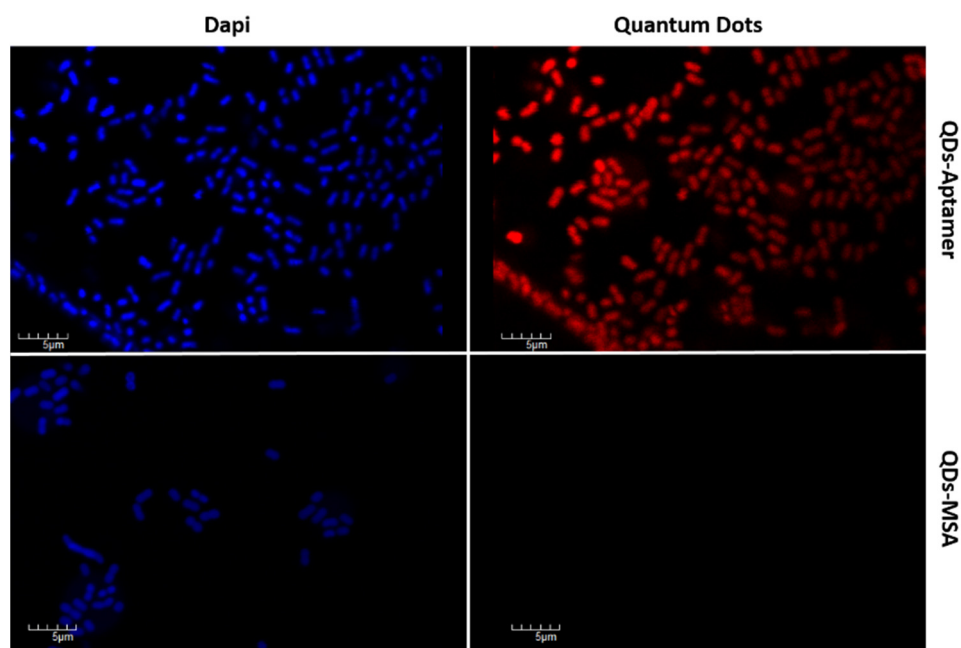
**Figure S1.** Fourier transform infrared spectroscopy (FTIR) spectra of the InP/ZnS QDs-oleylamine (a), and InP/ZnS QDs-MSA (b).



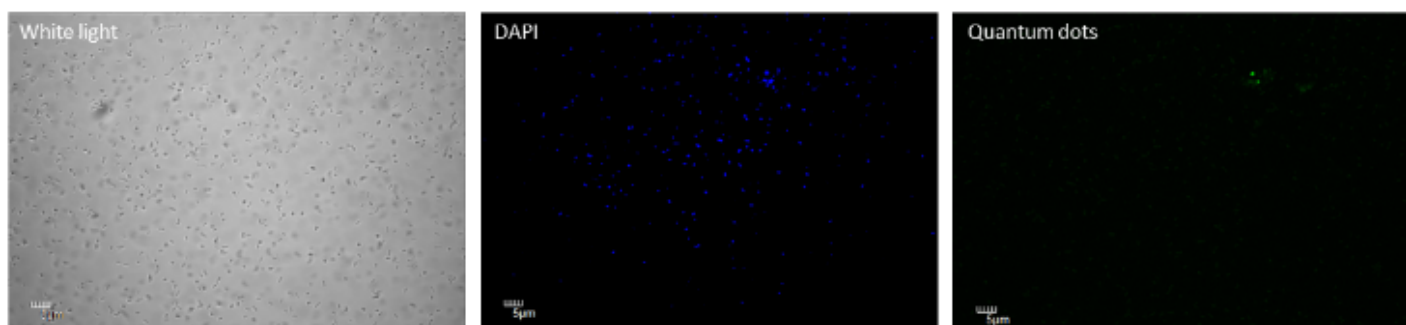
**Figure S2.** Normalized emission spectra of QDs-MSA and QDs-Aptamer. Excitation  $\lambda_{\text{ex}} = 480$  nm.



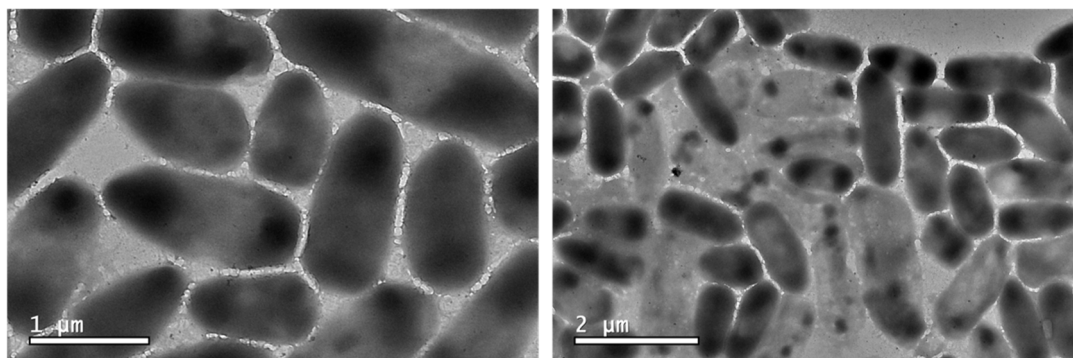
**Figure S3.** EDS spectrum of *A. baumannii* stained with uranyl acetate showing high phosphorous and uranyl peaks and no traces of Zinc or Indium. Inset is a TEM image of the bacterium and the location of the EDS. Unit: CPS: Count/sec.



**Figure S4.** Confocal images of *A. baumannii* (AB11) targeted with QDs-aptamer (top) and QDs-MSA (bottom). Images show DAPI staining the cells RNA with blue, QDs staining the cells with red. Scale-bar is 5  $\mu$ m.



**Figure S5.** Confocal images of DAPI stained *P. aeruginosa* mixed with QDs-aptamer. Scale-bar is 5  $\mu$ m.



**Figure S6.** TEM images of Uranyl acetate-stained *P. aeruginosa* cells with QDs-Aptamer showing clear transparent membrane.