

# On-Line Supplemental Information

## Size-Dependent Inhibitory Effects of Antibiotics Drug NanoCarriers against *Pseudomonas aeruginosa*

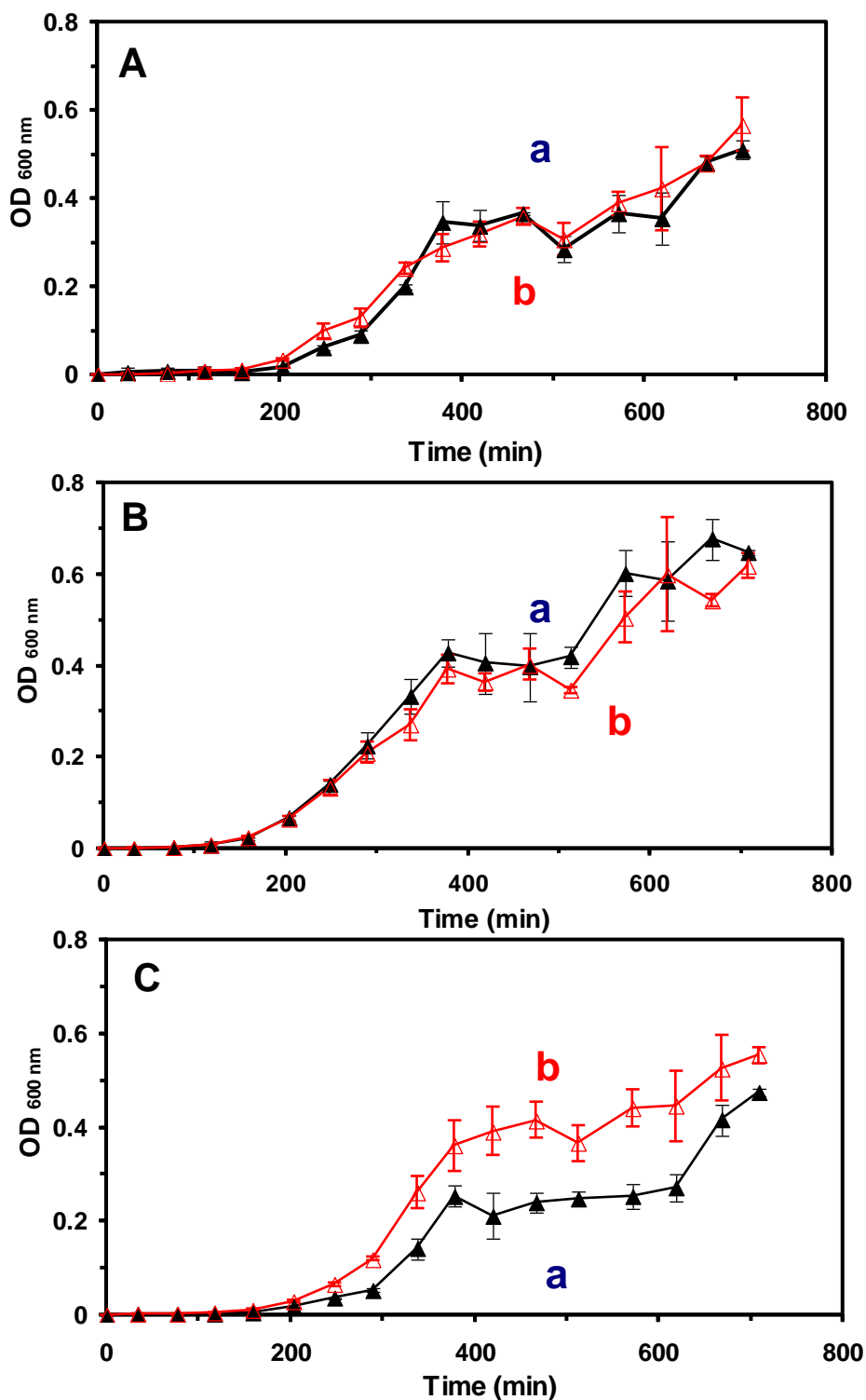
Feng Ding<sup>†</sup>, Preeyaporn Songkiatisak<sup>†</sup>, Pavan Kumar Cherukuri<sup>†</sup>, Tao Huang, and  
X. Nancy Xu<sup>\*</sup>

*Department of Chemistry and Biochemistry, Old Dominion University, Norfolk, VA 23529,  
USA*

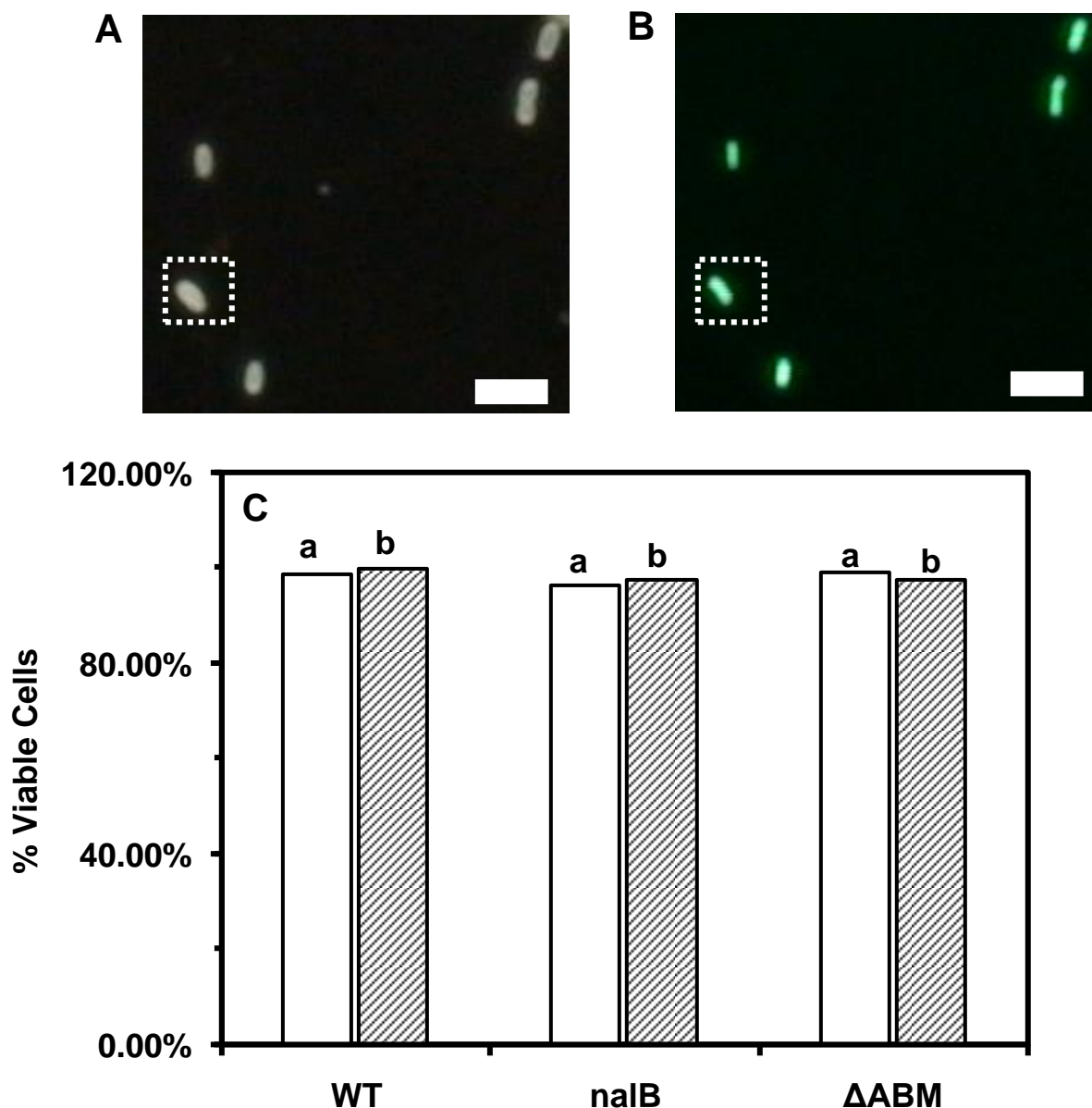
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<sup>†</sup> These authors contributed equally to this work.

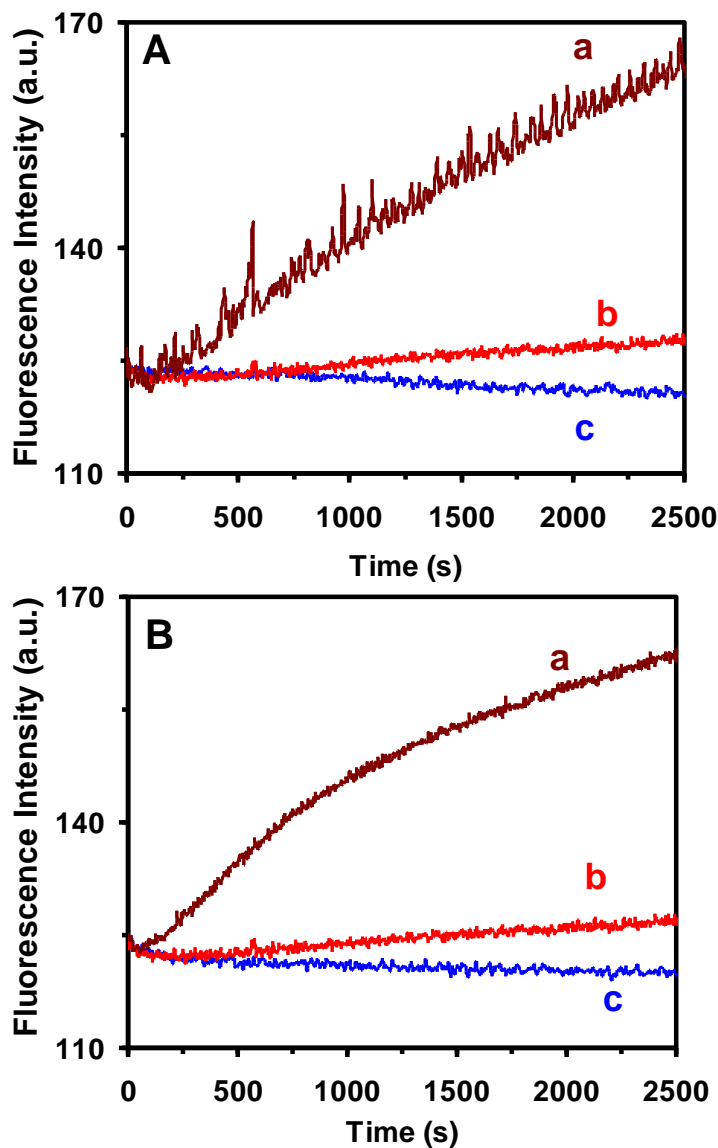
<sup>\*</sup> To whom correspondence should be addressed: Email: [xhxu@odu.edu](mailto:xhxu@odu.edu); [www.odu.edu/~xhxu](http://www.odu.edu/~xhxu);  
Tel/fax: (757) 683-5698



**Figure S1:** Characterization of growth kinetics of the live cells cultured in (a) standard and (b) modified LB medium. The cellular growth curves of: (A) WT, (B) *nalB* and (C)  $\Delta$ ABM cultured in (a) standard and (b) modified LB medium over time show that the growth rates of a given strain in either medium are nearly identical, which indicates that the modified LB medium is well suited to culture the cells.



**Figure S2:** Characterization of viability of the cells (WT, nalB and  $\Delta$ ABM) cultured in (a) standard and (b) modified LB medium using Live/Dead *BacLight* assay. (A) Optical and (B) fluorescence images of the cells (e.g., WT), that were cultured over 12 h, and suspended in the PBS buffer and assayed using Live/Dead *BacLight* assay. The cells exhibiting green fluorescence and red fluorescence are counted as that live and dead cells, respectively. (C) Plot of the percent of the live cells (live cells divided by the total number of given cells) cultured in (a) standard and (b) modified LB medium show that more than 99% of the cells (WT, nalB,  $\Delta$ ABM) are viable, which further indicates that the modified LB medium is well suitable to culture the cells. The scale bars in (A-B) are 3  $\mu$ m.



**Figure S3:** Characterization of accumulation and efflux kinetics of the EtBr for live cells cultured in **(A)** standard and **(B)** modified LB medium. Time-dependent fluorescence intensity of EtBr (10 μM) incubated with the cells ( $OD_{600\text{ nm}} = 0.1$  in PBS buffer, pH 7.2): **(a)**  $\Delta$ ABM, **(b)** WT and **(c)** nalB1 cultured in (A) standard and (B) modified LB medium exhibit nearly identical accumulation and efflux kinetics, which demonstrates that the modified LB medium is well suitable to culture the cells for the study of accumulation and efflux kinetics of MexAB-OprM.