

ERRATUM

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# Erratum to: Multidrug resistance protein MdtM adds to the repertoire of antiporters involved in alkaline pH homeostasis in *Escherichia coli*

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## Erratum

It has been brought to our attention after publication that there is an error in Fig. 2 of our article [1]. The panel in Fig. 2a which purported to show the growth phenotypes of *E. coli* BW25113 cells transformed with plasmids pMdtM and pD22A at logarithmic dilutions of  $10^{-3}$  to  $10^{-5}$  at pH 9.75 actually showed the  $10^{-4}$  to  $10^{-6}$  logarithmic dilutions of cells grown at pH 9.5. The offending panel has been removed and the correct panel, which shows the growth phenotypes of transformants at logarithmic dilutions of  $10^{-3}$  to  $10^{-5}$  at pH 9.75, has been incorporated into the new Fig. 2 shown at the end of this erratum. The figure legend remains unchanged. This error does not affect the other results or any of the conclusions of the article.

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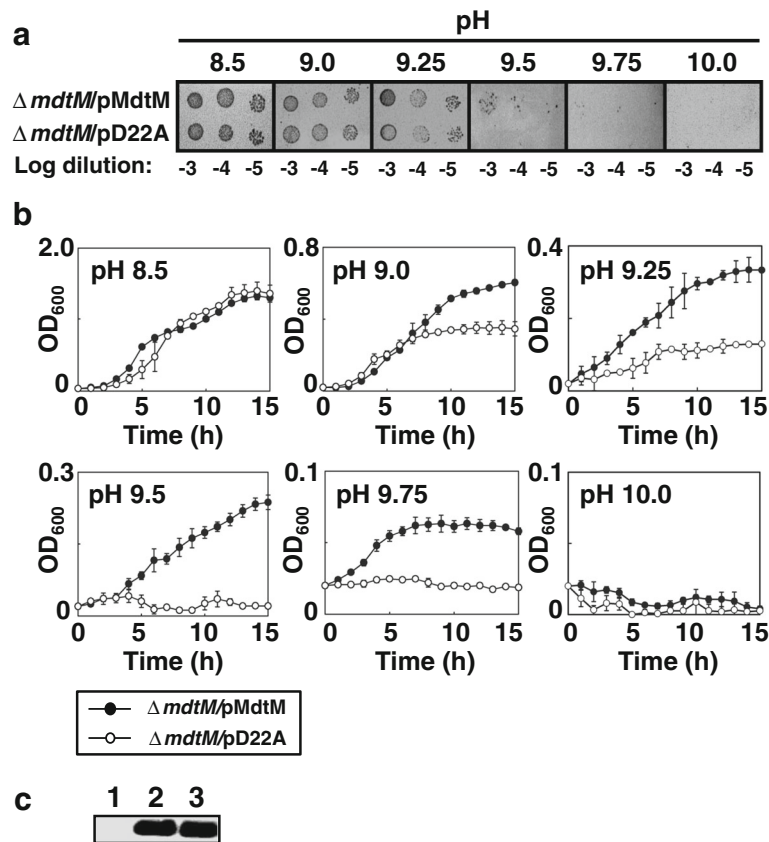
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## Reference

1. Holdsworth SR, Law CJ. Multidrug resistance protein MdtM adds to the repertoire of antiporters involved in alkaline pH homeostasis in *Escherichia coli*. *BMC Microbiol.* 2013;13(1):113.

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**Fig. 2** *E. coli*  $\Delta mdtM$  cells complemented with wild-type *mdtM* can grow at alkaline pH. **a** Growth phenotypes of  $\Delta mdtM$  *E. coli* BW25113 cells transformed with a multicopy plasmid encoding wild-type MdtM (pMdtM) or the dysfunctional MdtM D22A mutant (pD22A) at different alkaline pH's on LB agar. As indicated, 4  $\mu$ l aliquots of a logarithmic dilution series of cells were spotted onto the solid media and the plates were incubated for 24 h at 37  $^{\circ}$ C prior to digital imaging. **b** Growth of  $\Delta mdtM$  *E. coli* BW25113 cells complemented with pMdtM or the pD22A mutant in liquid LB media at different alkaline pH values. Data points and error bars represent the mean  $\pm$  SE of three independent measurements. **c** Comparison of expression levels of recombinant wild-type and D22A mutant MdtM at three different pH values by Western blot analysis of DDM detergent-solubilised membranes of *E. coli* BW25113 cells that overproduced the protein from plasmidic DNA. Cells harbouring empty pBAD vector were used as a negative control. Each lane contained 10  $\mu$ g of membrane protein