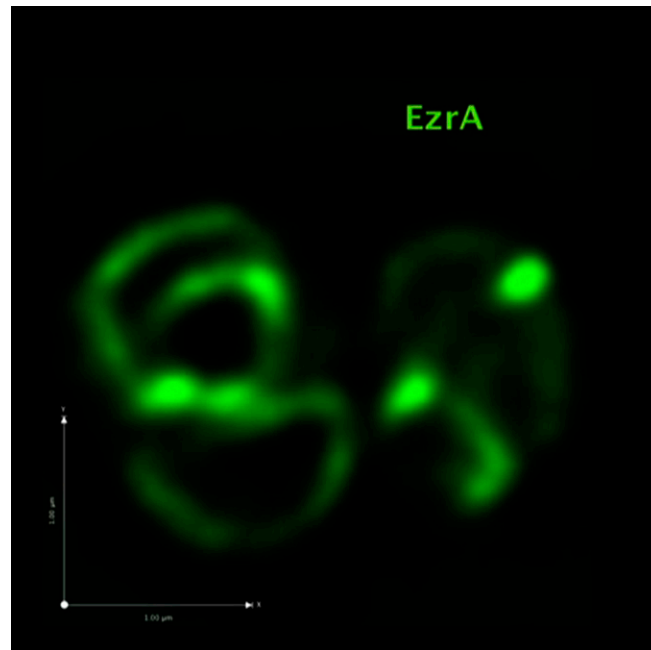


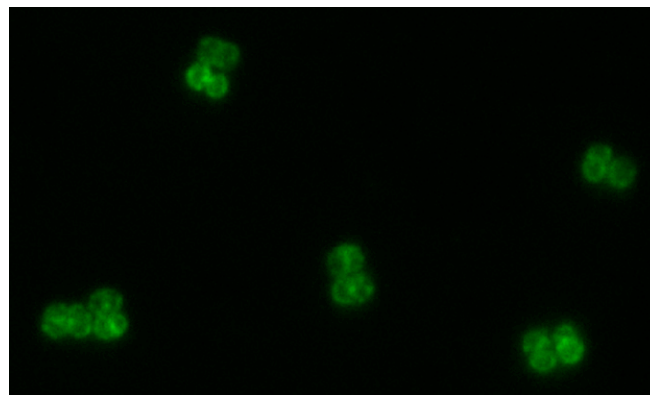
Supporting Information

García-Lara et al. 10.1073/pnas.1509557112



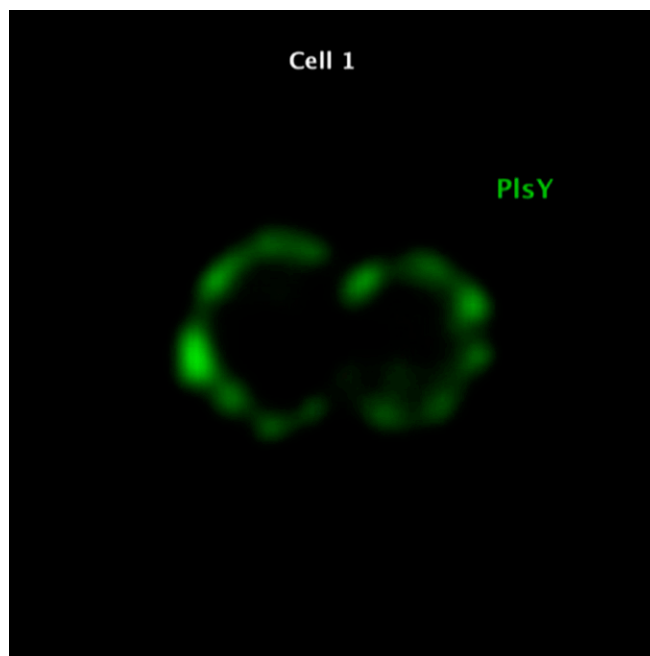
Movie S1. Superimposed onto a DIC image of three cells of *S. aureus* JGL237 (which contains an EzrA–GFP fusion) grown in the absence of inducer and therefore partly depleted for PlsY, there is a fluorescence microscopy image of the same cells revealing an abnormal distribution of EzrA. Although EzrA normally forms a ring at the division site, in the absence of PlsY, it seems unable to complete a faithful ring (like the example shown), resulting in a spiral shape.

[Movie S1](#)



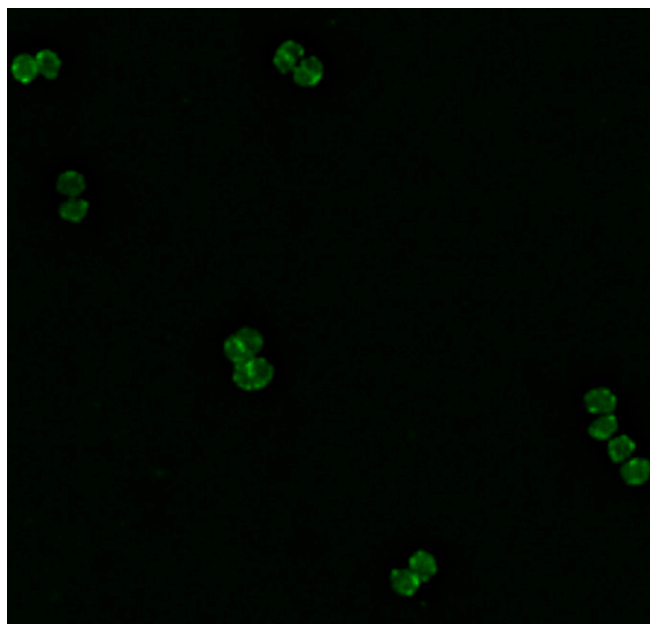
Movie S2. The patterned distribution of GFP-tagged PlsY localizes in a pattern in the *S. aureus* cell membrane is recognizable in both nondeconvolved and deconvolved images, even if the latter enable for sharper discrimination. Orange, vancomycin-labeled peptidoglycan; green, PlsY-GFP. Frame 28 × 16.76 µm.

[Movie S2](#)



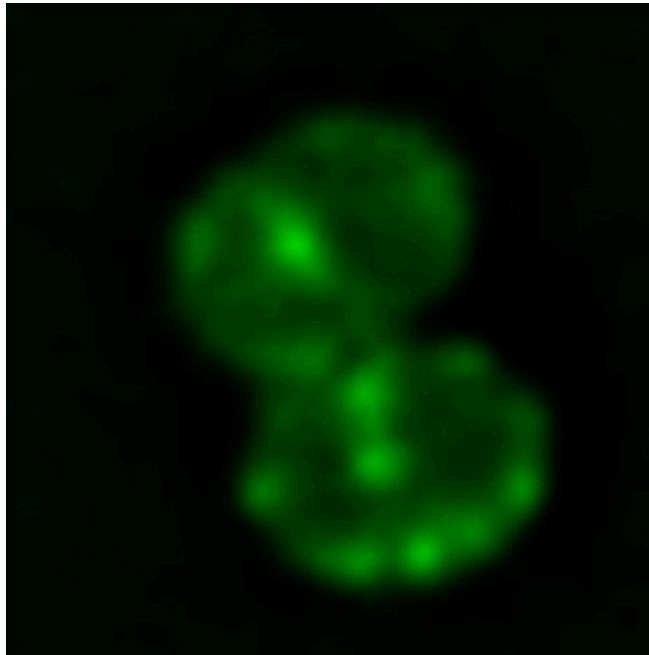
Movie S3. Immunofluorescence microscopy Z-stacks of a *S. aureus* LC102 revealing the regular distribution of PlsY in its membrane. PlsY was labeled with α -731 primary antibody and with A-11008 Alexa Fluor 488 as a secondary antibody. A cell within the microscopic field (cell 1) has been magnified to provide a more detailed view of the patterned distribution of PlsY. Frame $98.83 \times 98.83 \mu\text{m}$.

[Movie S3](#)



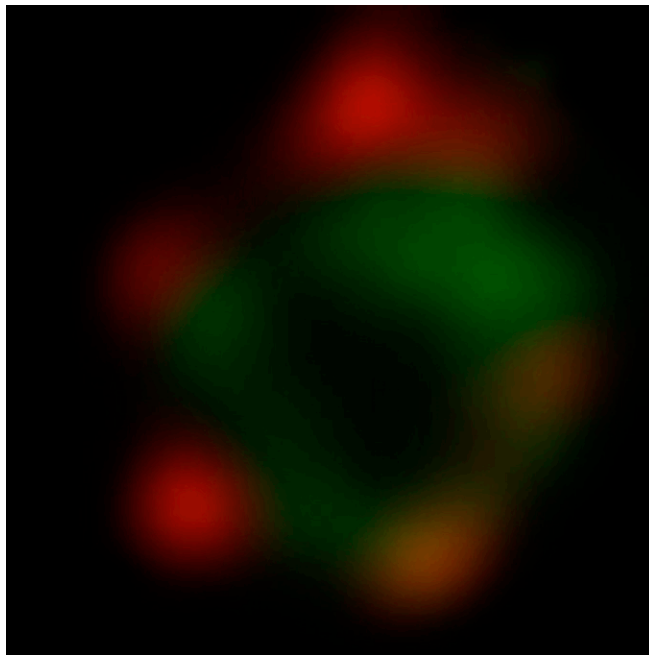
Movie S4. Distribution pattern of GFP-tagged CdsA in the membrane of nonfixed cells mounted 1% wt/vol Agar (in H_2O). Frame $28.84 \times 28.84 \mu\text{m}$.

[Movie S4](#)



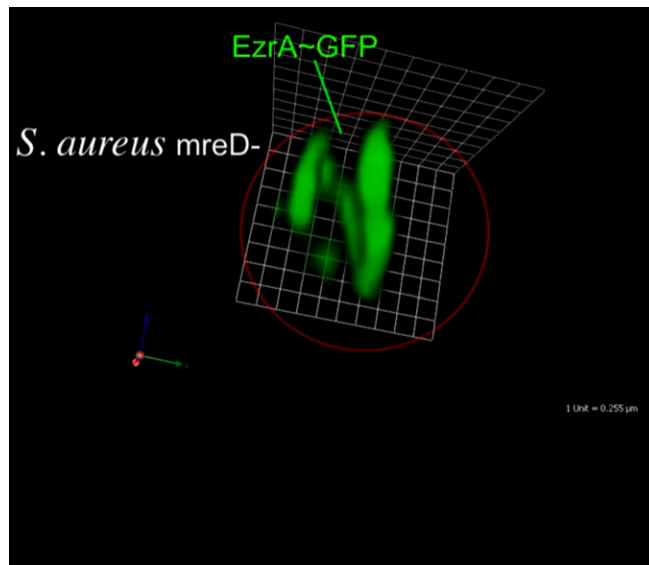
Movie S5. Close-up video of one of the cells within Movie S4. Frame $28.84 \times 28.84 \mu\text{m}$.

[Movie S5](#)



Movie S6. PlsY (immunolabeled in red with anti-GFP antibodies) distributes in its typical patterned manner in the membrane of *S. aureus* (spa-) and CdsA–GFP (green) does not only adopt a similar distribution, but it colocalizes with PlsY; to stress the colocalization of both, it can be noticed that the disappearance of a cluster of PlsY in a subset of the Z-stack slices, CdsA also concomitantly disappears. Frame $0.95 \times 1.05 \mu\text{m}$.

[Movie S6](#)



Movie S7. Example of a GFP-tagged EzrA that forms an abnormal spiral in cells lacking MreD, instead of its typical ring in wild-type cells. (Scale bar, 1 μm .)

[Movie S7](#)

Other Supporting Information Files

[SI Appendix \(PDF\)](#)