

1 **Appendix file for**

2 **Novel transient cytoplasmic rings stabilize assembling bacterial**
3 **flagellar motors**

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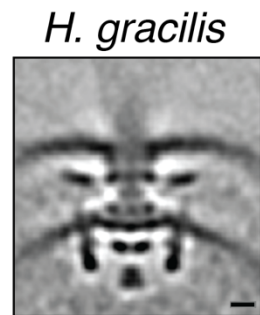
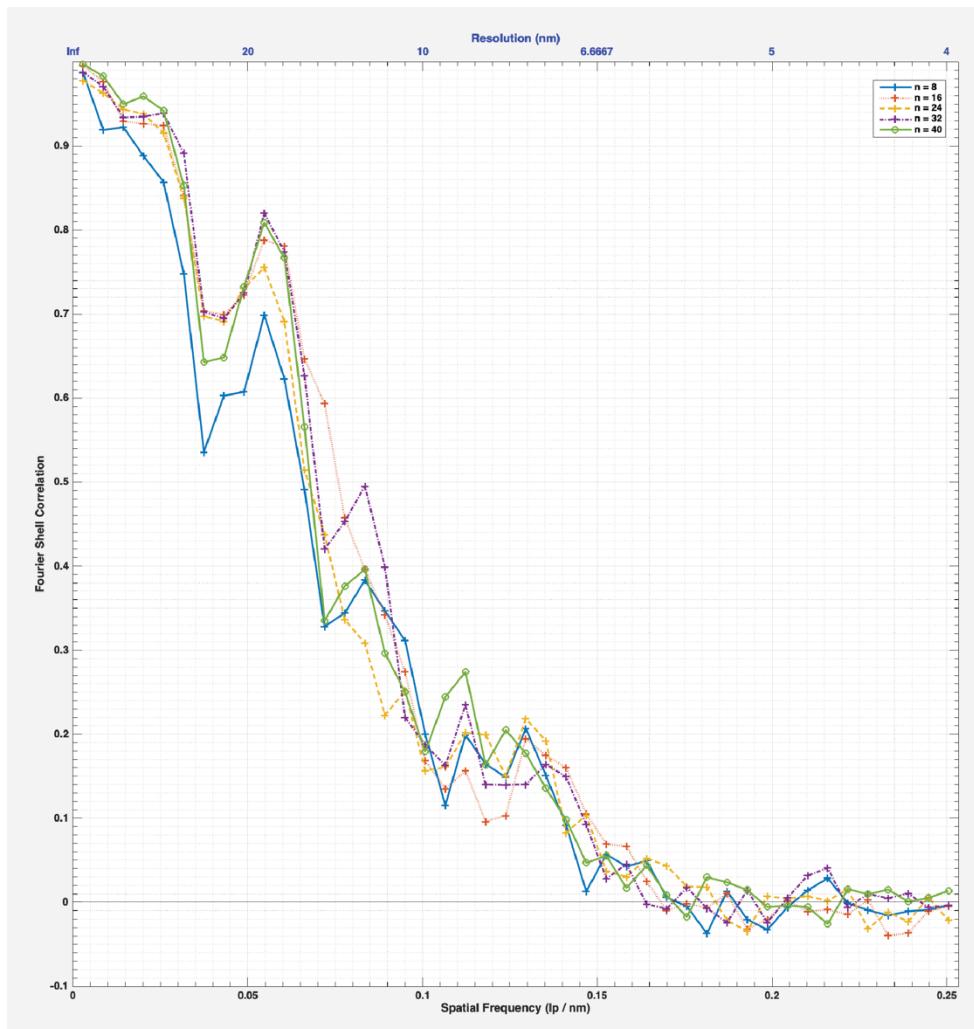
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51 **Appendix Figure S1: FSC curve of the *H. gracilis* flagellar motor.**

52 FSC curve of the subtomogram average of the fully-assembled motor of *H. gracilis* (shown on the

53 right). The different colored curves represent different particle subsets. Scale bar is 10 nm.

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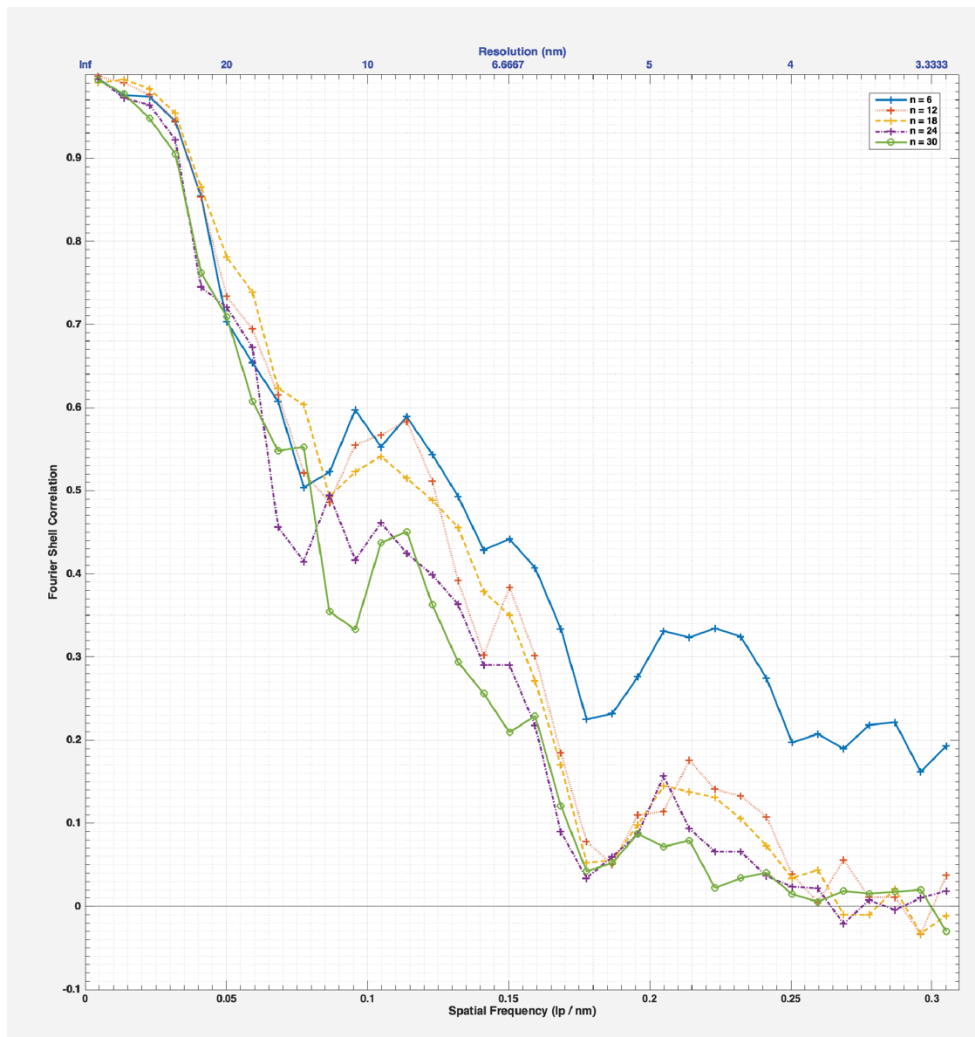
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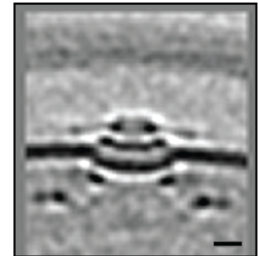
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*H. pylori fliP**



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61 **Appendix Figure S2: FSC curve of the *H. pylori fliP** MS-complex.**

62 FSC curve of the subtomogram average of the MS-complex of *H. pylori fliP** (shown on the right).

63 The different colored curves represent different particle subsets. Scale bar is 10 nm.

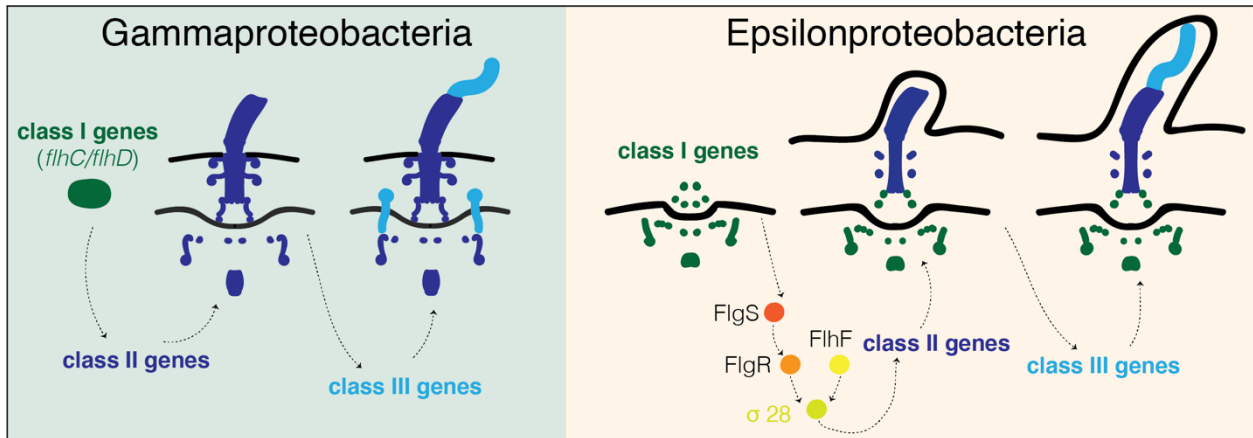
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70 **Appendix Figure S3: Expression of flagellar genes in Gamma- and Epsilonproteobacteria.**

71 A schematic representation of the different regulation of the transcription of flagellar genes in
 72 Gammaproteobacteria and Epsilonproteobacteria. Schematic based on (Gilbreath *et al*, 2011;
 73 Lertsethtakarn *et al*, 2011).

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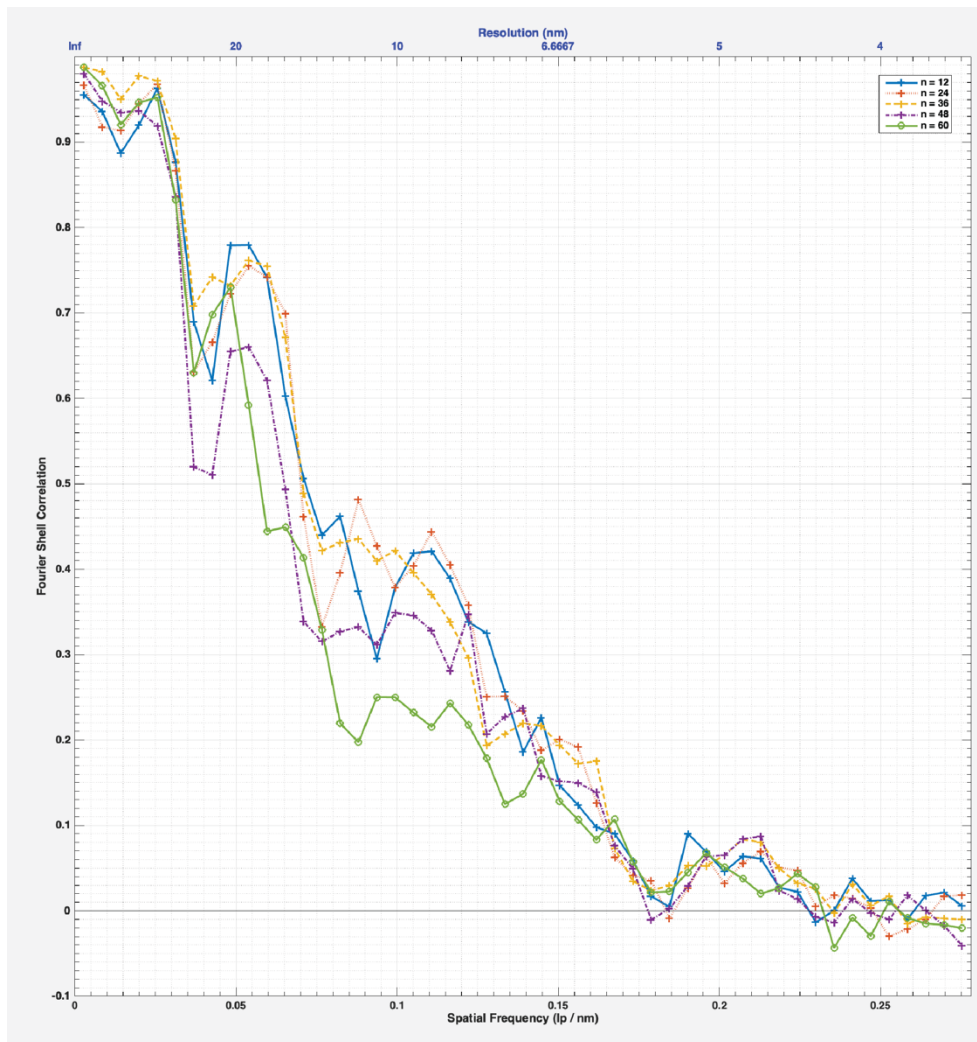
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H. pylori Δ *fliM* *fliP**



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88 **Appendix Figure S4: FSC curve of the *H. pylori* Δ *fliM* *fliP** MS-complex.**

89 FSC curve of the subtomogram average of the MS-complex of *H. pylori* Δ *fliM* *fliP** (shown on
90 the right). The different colored curves represent different particle subsets. Scale bar is 10 nm.

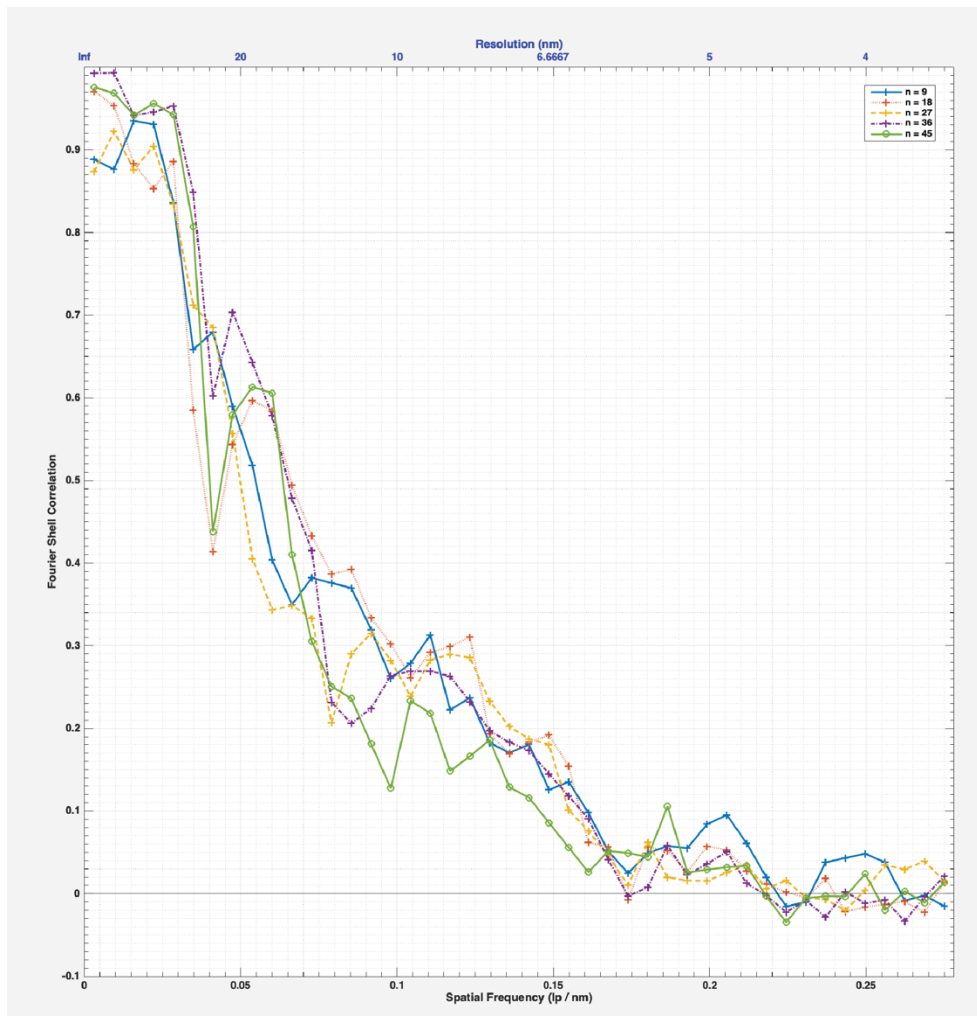
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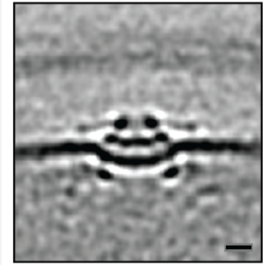
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H. pylori $\Delta fliQ$ *fliP**



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97 **Appendix Figure S5: FSC curve of the *H. pylori* $\Delta fliQ$ *fliP** MS-complex.**

98 FSC curve of the subtomogram average of the MS-complex of *H. pylori* $\Delta fliQ$ *fliP** (shown on
99 the right). The different colored curves represent different particle subsets. Scale bar is 10 nm.

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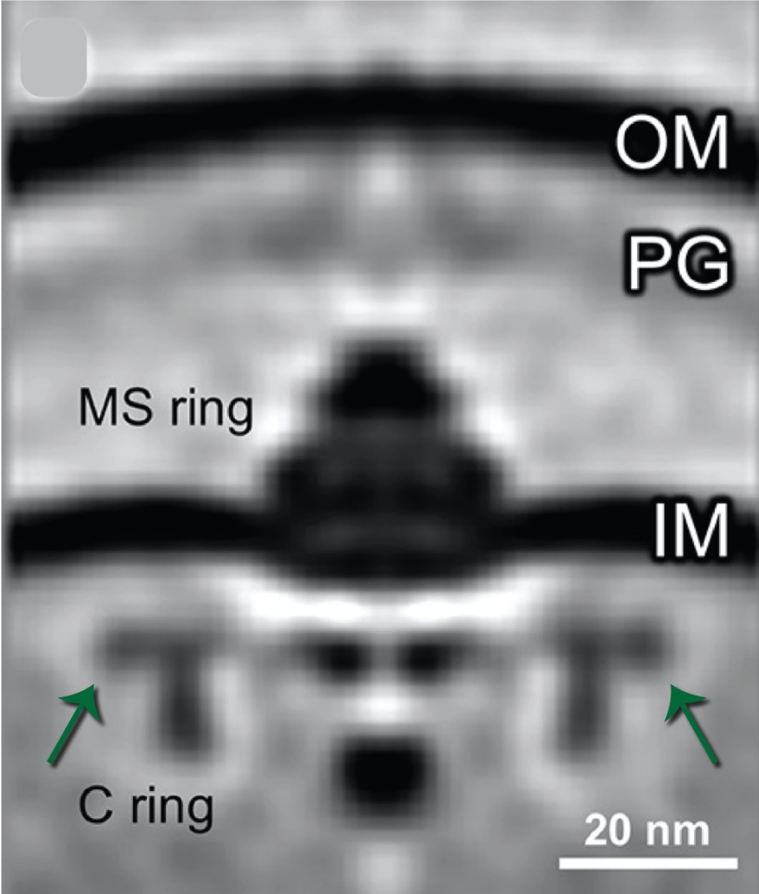
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Appendix Figure S6: A cytoplasmic ring surrounds the C-ring in the C-complex of *P. aeruginosa*. A central slice through the STA of the C-complex of *P. aeruginosa* adapted from (Zhu *et al*, 2019). Green arrows point to a ~56-57-nm cytoplasmic ring surrounding the upper part of the C-ring occupied by FliG.

129 **References:**

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133 and *Helicobacter*. *Microbiology and Molecular Biology Reviews* 75: 84–132

134 Lertsethtakarn P, Ottemann KM & Hendrixson DR (2011) Motility and Chemotaxis in
135 *Campylobacter* and *Helicobacter*. *Annual Review of Microbiology* 65: 389–410

136 Zhu S, Schniederberend M, Zhitnitsky D, Jain R, Galán JE, Kazmierczak BI & Liu J (2019) *In*
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