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Author Correction: Testing pseudotopological and nontopological models for SMC-driven DNA loop extrusion against roadblock-traversal experiments

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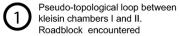
Correction to: Scientific Reports https://doi.org/10.1038/s41598-023-35359-2, published online 19 May 2023

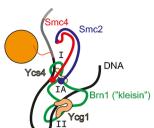
The original version of this Article contained an error in Figure 1b-1, where the fore- and background order of the strands "DNA" (in black) and "Brn1 Kleisin" (in green), were switched.

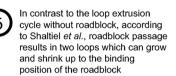
The original Figure 1 and accompanying legend appear below.

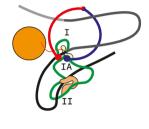
The original Article has been corrected.

a Pseudotopological model





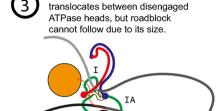




Second pseudo-topological loop

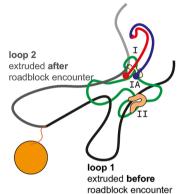
threaded between the SMC coiled

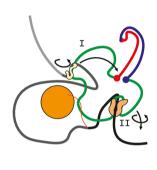
Conformational flexibility of the kleisin allows reconfiguration and re-binding of Ycs4 to the ATPase head

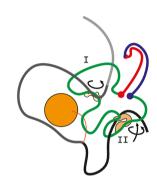


Tether between roadblock and DNA

Tether can move into combined chambers I and IA upon dissocation of Ycs4 from Smc4 head.

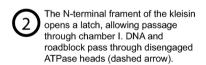


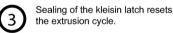


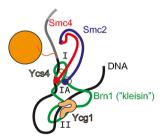


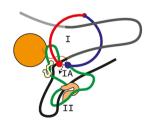
b Nontopological model

Nontopological loop between kleisin chambers I and II. Roadblock encountered.









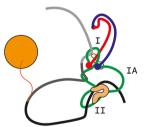


Figure 1. Description of the mechanism postulated by Shaltiel et al. for roadblock passage into an extruded loop on the DNA and a potential nontopological model. (a) The steps through the proposed DNA loop extrusion cycle are commented in more detail in steps 1–6 within the figure. Adapted from Ref.¹¹. (b) Potential nontopological model which is closely analogous to the pseudotopological model, but with a slight variation in the DNA-SMC topology which allows particle bypass.

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