

Jury Member Report – Doctor of Philosophy thesis.

Name of Candidate: Dmitrii Sutormin

PhD Program: Life Sciences

Title of Thesis: Regulation of bacterial genome topology by topoisomerases

Supervisor: Professor Konstantin Severinov

Name of the Reviewer:

I confirm the absence of any conflict of interest	Signature: Date: 08-08-2022
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Reviewer's Report

The author has developed a new high-throughput method, Topo-Seq, for the identification of topoisomerase cleavage sites with single-nucleotide resolution and applied it to the analysis of three major bacterial topoisomerases. In addition to Topo-Seq, the author used a wide array of experimental methods, developed scripts to process the data, and used several diverse computational techniques to study various aspects of the topoisomerase function and its relation to genome sequence and structure. The results are definitely interesting and of very high quality. The text is logically structured and well written.

The author has published a first-author paper in a top journal, and one more first-author paper is accepted in a Nature Index journal. In addition, he co-authored a review and a last-author paper on an unrelated topic. The results were reported at several conferences, including international ones, and selected as the best talk at the Lomonosov conference and the best poster at a EMBO Workshop.

My technical remarks and comments made during the pre-defense have been accounted for in the final version, so I have no further comments.

Provisional Recommendation

I recommend that the candidate should defend the thesis by means of a formal thesis defense

I recommend that the candidate should defend the thesis by means of a formal thesis defense only after appropriate changes would be introduced in candidate's thesis according to the recommendations of the present report

The thesis is not acceptable and I recommend that the candidate be exempt from the formal thesis defense