

Thesis Changes Log

Name of Candidate: Aleksandra Strotskaya

PhD Program: Life Sciences

Title of Thesis: Effects of Targeting by the *Esherichia coli* I-E CRISPR-Cas System on Infection by Various Phages.

Supervisor: Professor Konstantin Severinov

Chair of PhD Defense Jury: Professor Yuri Kotelevtsev

The thesis document includes the following changes in answer to the external review process.

Reviewer Comment 1) On my opinion the addition of figures describing different aspects of phages and CRISPR-Cas systems would be helpful for the readers.

Author: Agreed. Figure 1 as a summary of phage life cycle stages and defense strategies was added to the literature review section.

RW Comment 2) In general, I would suggest an additional round of proofreading to improve the quality of the manuscript. For example reformulating some long sentences would be helpful for the easier reading of the manuscript.

Author: Agreed. Changes have been introduced to the table of contents, to p.15, 16, 17, 18, 19, 21, 26, 27, 30, 39, 42, 43, 45, 46, 47, 51, 56, 59, 64, 73, 74, 76, 77, 78, 113, 122. On p.41 brief review on different CRISPR-Cas types was added. On p.47 the term “seed” was explained. On p.69 more detailed information was added to the table 3 legend.

RW Comment 3) Finally, the major findings of the work are summarized in the last conclusions section. On my opinion, the perspectives of the work and future directions could be discussed in this part.

Author: Agreed. The conclusions part has been re-organized and future

directions are included.

RW Comment 4) There is a section entitled "novelty and practical application", while the novelty is described there, there is nothing written about technology etc. The author would probably need to think about possible practical applications, which may emerge from this study and discuss them at the time of dissertation defense.

Author: Agreed. The practical application part has been included to this section.

RW Comment 5) The conclusions are clear, but it may be better to reduce this section a bit, since in its current format the conclusions are too long and resemble second discussion. Simply it is hard to "fish out" there the major, most essential findings.

Author: Agreed. The conclusions and results have been re-organized to better show the summary of the work.