

Thesis Changes Log

Name of Candidate: Juliia Piskunova

PhD Program: Life Sciences

Title of Thesis: Maturation And Functional Analysis Of Microcin C-Like Compounds

Supervisor: Professor Konstantin Severinov

Chair of PhD defense Jury: Professor Yuri Kotelevtsev

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

Reviewer Comment 1) “The main problem is that the second publication (Activation of *Yersinia pseudotuberculosis* Trojan-horse peptide-cytidine antibiotic by the Tld protease) is poorly linked to the studies described in the thesis and is still not accepted for publication. Thesis defense will be possible only after acceptance of the manuscript and DOI number assignment.”

RW Comment 2) “The thesis is assembled around two papers, one published and one submitted, to satisfy the requirements of at least two publications on the subject of the thesis. However, these two papers are not sufficiently linked logically. I can’t recommend the thesis for defense, before more research has been done supposedly on part 1, which is more advanced. In this case part 2 should be excluded. One more publication on the subject will be required.”

Author: According to the comments of the reviewer, the thesis has been changed: the part describing research on microcin B was excluded, and additional part that is strongly connected with the first part of the study was added. Due to these changes the title of the thesis was corrected: “Maturation and Functional Analysis of Microcin C-like Compounds”. The second paper is currently in revision in the Journal of the American Chemical Society and we hope will be accepted by the time of defense.

RW Comment 3) “Also there is a good practice to read the manuscript after doc-> pdf conversion as it helps to exclude unreadable parts.”

Author: Thank you for your comment, the new version of the thesis was examined after the format conversion to make sure all parts are readable.

RW Comment 4) “The dissertation still contains typos, for instance on page 70 there is a sentence: "In this work was show that microcin C induces persistence in *E. coli*" - the author needs to check the dissertation and fix the language and typos throughout the text.”

Author: The language and typos deficiencies were corrected throughout.

RW Comment 5) “The conclusions are clear, but while in the case of McC there is a clear and very interesting discussion of biological hypothesis, in the case of McB there is a discussion of results and not many biological conclusions. Overall, I think, the conclusions section may be shorten.”

RW Comment 6) “Both chapters lack some in depth discussion and conclusion (or future perspective) after the results section. A summary is included for both chapters but only lists the key findings. The

thesis will benefit with a more extended discussion section for each section. The Conclusion section in p70-71 is not sufficient.”

Author: The sections of summaries and conclusion have been changed in accordance with the substantial modifications of the thesis (inclusion of a new big part on microcin C from *Yersinia*) and reviewer’s comments.

RW Comment 7) “The Project Objectives (p47) should be moved before the Materials and Methods section since it will introduce the key questions of the thesis.”

Author: The section “Project Objectives” was moved in accordance with your request.

RW Comment 8) “Since the McB variants produced in the thesis have not been characterised before, it might be good to show HPLC traces and mass spec data for key variants as an appendix.”

Author: According to the comments of other reviewers, the thesis has been changed, the part on microcin B study was excluded. Because of this the requested correction is not necessary.