

Jury Member Report – Doctor of Philosophy thesis.

Name of Candidate: Julia 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

Email: y.kotelevtsev@skoltech.ru

Date of Thesis Defense: October 27, 2017

Name of Reviewer:

<p>I confirm the absence of any conflict of interest</p> <p>(Alternatively, Reviewer can formulate a possible conflict)</p>	<p>Signature:</p>  <p>Date: 11-10-2017</p>
---	--

The purpose of this report is to obtain an independent review from the members of PhD defense Jury before the thesis defense. The members of PhD defense Jury are asked to forward a completed copy of this report to the Chair of the Jury at least 30 days prior the thesis defense. The Reviewers are asked to bring a copy of the completed report to the thesis defense and to discuss the contents of each report with each other before the thesis defense.

If the reviewers have any queries about the thesis which they wish to raise in advance, please contact the Chair of the Jury.

Reviewer's Report

Reviewers report should contain the following items:

- Brief evaluation of the thesis quality and overall structure of the dissertation.
The thesis of Julia Piskunova is well written and contains original experiments describing structural and functional analysis of two microcline C and relayed compounds in relation to the phenomenon of persistence, or survival of specific population of bacterial cells under the pressure of antibiotic selection.
The relevancy of the topic of dissertation work to its actual content
The study is devoted to functional analysis of peptide antibiotic microcin C and contains original experiments uncovering toxin antitoxin relations and mechanisms of persistence.
The relevancy of the methods used in the dissertation

The methods are relevant and demonstrate wide range of skills in experimental molecular biology of prokaryotes.

- The scientific significance of the results obtained and their compliance with the international level and current state of the art

Results obtained by Piskunova are novel and contain clear scientific qualities. The relevance of the obtained results to applications (if applicable)

Although the study does not support possible medicinal value of micromicin C and rather suggest that it won't be developed into clinically useful antibiotic, as it increases persistence of the bacteria, it is useful per se as saving further efforts and also establishing a universal platform for future investigations.

- The quality of publications

Only one paper was published in the specialist journal (Molecular microbiology) with impact factor 4. Second paper is submitted, not accepted yet.

- The summary of issues to be addressed before/during the thesis defense

The applicant completed a lot of work after initial submission and addressed all issues raised by me and other reviewers. As a result the Thesis is now presents a complete study which can be recommended for the defence.

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