

Jury Member Report – Doctor of Philosophy thesis.

Name of Candidate: Mariia Vlasenok

PhD Program: Life Sciences

Title of Thesis: Transcriptomic analysis of the interaction between pre-mRNA splicing and intronic polyadenylation

Supervisor: Associate Professor Dmitri Pervouchine

Name of the Reviewer:

I confirm the absence of any conflict of interest (Alternatively, Reviewer can formulate a possible conflict)	Yongfeng Jin Date: 15-11-2023
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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 submit signed copy of the report 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 relevance of the topic of dissertation work to its actual content
- The relevance of the methods used in the dissertation
- The scientific significance of the results obtained and their compliance with the international level and current state of the art
- The relevance of the obtained results to applications (if applicable)
- The quality of publications

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

1. Brief evaluation of the thesis quality and overall structure

The thesis exhibits a commendable level of scholarship, maintaining a well-organized and coherent structure throughout. The writing is clear, concise, and exhibits a command of the subject matter. The structure of the dissertation is logical, with each chapter contributing effectively to the overall narrative.

2. Relevance of the topic to its actual content

The chosen topic aligns seamlessly with the content of the dissertation, which demonstrating a clear interplay between pre-mRNA splicing and intronic polyadenylation. The research problem is well-defined, and the objectives are clearly articulated.

3. Relevance of the methods used in the dissertation

The research analyzed a large-scale RNA-seq dataset from GTEx, and the methods of analyses employed in this dissertation are appropriate and rigorously applied.

4. Scientific significance of the results obtained and their compliance with the international level and current state of the art

The results obtained in this dissertation hold scientific significance, aligning well with international standards and displaying an awareness of the current state of the field. The findings contribute valuable insights and advancements to RNA processing mechanisms.

5. Relevance of the obtained results to applications

The author systematically identified solid PASs across human tissues, and provide convincing evidence of counteraction of Intronic polyadenylation and splicing, which is valuable for disease-related APA mechanism research.

6. Quality of publications

The candidate's publications related to the thesis are of high quality and have been published in reputable, peer-reviewed journals. The publications demonstrate the candidate's ability to communicate research findings effectively to the wider academic community.

In conclusion, I strongly recommend that the candidate should defend the thesis by means of a formal thesis defense. The candidate's work makes an important contribution to the field of RNA processing, showcasing commendable academic competence.

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