

Jury Member Report – Doctor of Philosophy thesis.

Name of Candidate: Aleksei Mironov

PhD Program: Life Sciences

Title of Thesis: Tissue-specificity and regulation of aberrant alternative splicing

Supervisor: Assistant Professor Dmitri Pervouchine

Name of the Reviewer:

I confirm the absence of any conflict of interest	Signature: Date: 08-08-2022
---	--

Reviewer's Report

This is a solid and interesting analysis addressing an important problem, the balance between splicing noise and functionally important minor alternatively spliced isoforms. It is a very difficult question, and one of the strongest points of the dissertation is the general methodology of dealing with problems like that; similar approaches may be relevant to the analysis of differential expression, epigenetic chromatin modifications etc. The concrete biological insights are also impressive, ranging from the general networks of mutual regulation by splicing factors to specific predictions that are immediately testable in an experiment. The only thing I'm missing in the Discussion is a broader evolutionary outlook on generation of novelty out of noise, but this is a matter of taste.

The thesis is well-written and generally easy to read. The review chapter is very good, logical, and sufficiently detailed but not boring. The results are presented clearly and with a proper level of detail. The language is generally good.

The results are published in one first-author paper; there are also two co-authored papers, all in reputable journals, one belonging to the Nature Index. The results have also been reported at three international conferences of a good standing.

My technical remarks and comments made during the pre-defense have mainly 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