Skoltech
Skolkovo Institute of Science and Technology

Jury Member Report – Doctor of Philosophy thesis.

Name of Candidate: Smirnov Dmitrii

PhD Program: Life Sciences

Title of Thesis: Investigation of the role of SIRT6 in molecular mechanisms of gene expression regulation, metabolism and aging

Supervisors:

Assistant Professor Ekaterina Khrameeva, Skoltech

Associate Professor Deborah Toiber, Ben-Gurion University

Name of the Reviewer:

I confirm the absence of any conflict of interest (Alternatively, Reviewer can formulate a possible conflict)	**Date: 01-11-2023**

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

Jury Member Report on PhD Thesis of Dmitrii Smirnov

I have had the opportunity to thoroughly review the dissertation of Dmitrii Smirnov and based on the evaluation criteria, I find it to be of high quality and well-structured. The thesis is well written, contains all the required sections and is logically organized. The introduction is somewhat brief, but it effectively presents all the necessary information. The three chapters describing the research results correspond to three of Dmitrii's publications, thus they are detailed and well presented. The conclusions are concise but contain all the required information. There is a slight omission in the detailed discussion of SIRT proteins link to brain metabolic regulation based on the study results.

The topic of the dissertation is highly relevant and corresponds with the actual content of the work. The methods used in the dissertation are appropriate and relevant to the study.

The scientific significance of the results obtained is substantial. The research on SIRT protein function in ageing regulation is central to our understanding of this complex and relevant issue. The results of Dmitrii's PhD work contribute significantly to this field and align with international standards and current state of the art. This is reflected in their publication in high-ranking international journals.

In terms of practical application, while the results presented are not immediately applicable, they lay a solid foundation for future development of aging-regulating instruments.

Finally, the quality of the publications associated with this dissertation is very good. They reflect a high level of scientific rigor and contribute significantly to our understanding of SIRT proteins and ageing regulation.

In conclusion, Dmitrii Smirnov's PhD thesis meets all the required standards and exhibits a high level of scientific competence. The research findings are significant and contribute substantially to this field of study. I commend Dmitrii for his excellent work and look forward to seeing his future contributions to science.

Provisional Recommendation

X *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*