



Opponent's review of bachelor thesis

<b>Student:</b>	Taisiya Stechkina
<b>Field of study:</b>	Rybářství (BP)
<b>Form of study:</b>	Prezenční
<b>Title of the final thesis:</b>	ADVANCES IN FISH SPERM CRYOPRESERVATION: TAXONOMICAL CONSIDERATION
<b>Supervisor of the final thesis:</b> Name, surname, titles	Assoc. Prof. MSc. Borys Dzyuba, Ph.D.
<b>Workplace and job position of the reviewer</b>	Institute of Experimental Medicine CAS v.v.i, Research Scientist

### 1. Formulation of the thesis's objectives

An introduction to the solution of problems is evaluated, i.e. the justification of the need for the solution of the thesis and the understandability and logicity of the stated objectives with respect to the thesis topic:

**Evaluation** (mark from 1 –  1     2     3     4  
the best to 4 – insufficient):

**Comment on the evaluation** (justification of the proposed mark). Comment is compulsory.

Currently, the number and type of fish species, where the sperm cryopreservation protocols are successfully developed and used remains unknown. Therefore, the review of the current state of fish sperm cryopreservation seems interesting and useful for the cryobiology and biotechnology fields.

## 2. Method of the thesis's solution

The material and methodology used to solve the objectives of the thesis including the way of statistical analysis of data (suitability, comprehensibility, relevance, complexity) are evaluated. In case of the review-type thesis the content structure, the logicity of thesis segmenting, the concept of the review thesis are evaluated.

**Evaluation** (mark from 1 –  1    2    3    4  
the best to 4 – insufficient):

**Comment on the evaluation** (justification of the proposed mark). Comment is compulsory.

Author has used thorough analysis of the currently published literature, using different research databases.

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## 3. Work with information

The extent and relevance of used information accessible in the literature, its topicality, truthfulness, complexity, the way of interpretation of the information and extent of information used, the method of description of results and their comparison with other available information, the ability to draw conclusions are evaluated.

**Evaluation** (mark from 1 –  1    2    3    4  
the best to 4 – insufficient):

**Comment on the evaluation** (justification of the proposed mark). Comment is compulsory.

The table included into the supplementary of the thesis represents easy to understand information, widely summarizing the current availability of protocols for sperm cryopreservation.

#### 4. Formal processing of the thesis

Compliance with the uniform style, graphic layout, clarity, level of language processing, adherence to the citation standard, quality of graphs and images, etc. are evaluated.

**Evaluation** (mark from 1 –  1     2     3     4  
the best to 4 – insufficient):

**Comment on the evaluation** (justification of the proposed mark). Comment is compulsory.

The thesis is written in clear and uniform style with good level of English. The thesis contains all the necessary citations and references.

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#### 5. Fulfilment of the thesis's objectives

The results of the work are compared with the stated objectives and the research plan (the research plan is included in the thesis and it includes key information from the student's supervisor).

**Evaluation** (mark from 1 –  1     2     3     4  
the best to 4 – insufficient):

**Comment on the evaluation** (justification of the proposed mark). Comment is compulsory.

The final results, shown in the thesis completely fulfills the objectives and the research plan of the applicant.

## 6. Formulation of the thesis's conclusions

The comprehensibility of the conclusions and their relevance to the findings (scientific or informative) are evaluated.

**Evaluation** (mark from 1 –  1    2    3    4  
the best to 4 – insufficient):

**Comment on the evaluation** (justification of the proposed mark). Comment is compulsory.

The conclusions of the study are clearly formulated and informative. They address the points with high scientific relevance within the field of fish sperm cryopreservation and cryobanking.

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## 7. Professional benefit of the thesis

The usefulness of the thesis for the given field, its scientific or professional expertise is evaluated.

**Evaluation** (mark from 1 –  1    2    3    4  
the best to 4 – insufficient):

**Comment on the evaluation** (justification of the proposed mark). Comment is compulsory.

The thesis is clearly written and very informative. It summarizes the current knowledge in taxonomical aspects of fish sperm cryopreservation and cryobanking. I believe the thesis, if it is published will be interesting and useful for both cryobiology and biotechnology professionals as well as wider community.

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## Overall evaluation of the thesis:

**Proposal of the  
evaluation with the mark:**

- excelent**
- very good**
- good**
- insufficient**

**I recommend the thesis  
for defence:**

- yes**
- no**

**Questions for defence:**

**Question for defence 1**  
(compulsory)

What is the most commonly applied protocol for the fish sperm cryopreservation? Does it significantly vary depending on the taxonomic groups?

**Question for defence 2**  
(compulsory)

We know that in mammalian nucleated cell cryopreservation practice, even the different cell types have different cryosensitivity the most of researchers use "conventional" protocol (e.g.  $-1^{\circ}$  per min). Is there something similar with fish sperm cryopreservation?

**Other comments, expressions and suggestions for defence of the thesis, respectively to its further use:**  
(optional)

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**Date and signature:**

Date:

23.05.2019

Signature of the thesis' reviewer:

