



Přírodovědecká
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Faculty
of Science

Jihočeská univerzita
v Českých Budějovicích
University of South Bohemia
in České Budějovice

STATEMENT OF THE BACHELOR/DIPLOMA* THESIS REVIEWER

Name of the student: Sewmi M A Delana Mudiyanadelage

Thesis title: Isolation and molecular characterization of the histone methyltransferase EHMT from the soft tick *Ornithodoros moubata*

Supervisor: Dr. Alejandro Cabezas-Cruz

Reviewer: Dr. Thomas Pollet

Reviewer's affiliation: INRA-UMR BIPAR, Maisons-Alfort, France

	Point scale ¹	Points
(1) FORMAL REQUIREMENTS		
Extent of the thesis (for bachelor theses min. 18 pages, for masters theses min. 25 pages), balanced length of the thesis parts (recommended length of the theoretical part is max. 1/3 of the total length), logical structure of the thesis	0-3	2
quality of the theoretical part (review) (number and relevancy of the references, recency of the references)	0-3	2
Accuracy in citing of the references (presence of uncited sources, uniform style of the references, use of correct journal titles and abbreviations)	0-3	2
Graphic layout of the text and of the figures/tables	0-3	3
Quality of the annotation	0-3	2
Language and stylistics, complying with the valid terminology	0-3	3
Accuracy and completeness of figures/tables legends (clarity without reading the rest of the text, explanation of the symbols and labeling, indication of the units)	0-3	3
Formal requirements – points in total		17
(2) PRACTICAL REQUIREMENTS		
Clarity and fulfillment of the aims	0-3	2
Ability to understand the results, their interpretation, and clarity of the results, discussion, and conclusions	0-3	2
Discussion quality – interpretation of the results and their discussion with the literature (absence of discussion with the literature is not acceptable)	0-3	2
Logic in the course of the experimental work	0-3	3
Completeness of the description of the used techniques	0-3	3

* Choose one

¹ Mark as: 0-unsatisfactory, 1-satisfactory, 2-average, 3-excellent.

Experimental difficulty of the thesis, independence in experimental work	0-3	2
Quality of experimental data presentation	0-3	2
The use of up-to-date techniques	0-3	2
Contribution of the thesis to the knowledge in the field and possibility to publish the results (after eventual supplementary experiments)	0-3	2
Practical requirements – points in total		20
POINTS IN TOTAL (MAX/AWARDED)		48 37 ²

Comments of the reviewer on the student and the thesis:

The goal of this thesis was to isolate and characterize the homolog of EHMT from the soft tick *O. moubata*. The structure of the thesis is clear and the MS is well written. The student has good theoretical knowledge on the subject and the thesis is well documented. Approaches that the student used to reach the objectives are relevant, perfectly understood and performed. Despite a good review on ticks, tick ecology and tick epigenetics, I think the student did not clearly explain why it is important to study EHMT on soft ticks. This should be explained during the defense. Moreover, the interesting results obtained by the student could have been more deeply discussed.

Suggestions and questions, to which the student has to answer during the defense.

Mistakes, which the students should avoid in the future:

Introduction:

Good review on: ticks and tick ecology, on epigenetics, tick epigenetics and histone methyltransferase. However, it is not clear in the MS why it is important to study EHMT on soft ticks. It is quickly explained in the abstract but this should be developed in the introduction part.
Q1: Could you please developed this context?

M&M:

An important part of the M&M is missing: How many ticks have been collected? Where?... More information about the tick collection and treatment are needed.

The methodology is well described and approaches that the student used are completely relevant.
Q2: did you purify your PCR products between the PCRs and cloning? If you did not, do you think this supplemental step could improve the efficiency of the cloning-step?

You mentioned that attempts to amplify the N-terminus were not successful. Q3: How could you explain this lack of amplification? Did you try to adapt the PCR protocol, for example using a range of annealing temperature?

Results:

7.2. You specified that the DNA fragment corresponded to the expected size of the C-terminus *O. moubata* EHMT. Q4: Which size did you expect? this is not specified in the MS.

7.3. This part has already been mentioned in the M&M and no results appear in this part: you could remove it.

7.4. Q5: How could you explain the different size of fragments obtained in the figure 8 (< 500bp) and the figure 6 (>500bp)?

² Enter the number of points awarded.

7.5. You mentioned that the amplicon sequence was submitted to Blastn and showed high identity with EHMT of other species. Q6: Which percentage of identity did you obtain? a table with these data could be interesting...

Discussion:

The most important results appear in this part but are not really discussed.

A small paragraph on future perspectives could have been added at the end of the discussion part.

Q7: My last question is thus: from the interesting results of this thesis, which future research projects the student would like to develop?

References:

Some references should be standardized for example: Brites-Neto et al 2015....

Conclusion:

In conclusion, I recommend the thesis for the defense³

In Maisons-Alfort date 09/01/2018

.....
signature

Thomas POLLET

A handwritten signature in black ink, consisting of a horizontal line with several vertical strokes and a large loop at the end.

³ You can suggest a grade, which can be modified during the defense based on the presentation. However, if the reviewer is not present at the defense, the grade will not be counted.