## Thesis (PHD) Evaluation Form

It is the coordinator/student's responsibility to distribute this form along with their thesis to each member evaluator of the thesis. After the evaluation the form should be submitted to the PhD director by email. (Prof. Beniamino Cenci Goga Dipartimento di Medicina Veterinaria, via San Costanzo 4, 06124 Perugia Italy. Tel + 39 075 5857929; email beniamino.cencigoga@unipg.it)

**Student's Name: Daniele Marini**

**Degree: PhD TITLE OF THESIS/DISSERTATION:**

**Gonadal development and dynamics in ectotherm models:**

**insights from *Danio rerio* and *Xenopus tropicalis***

**Rating range A-D (ex.A = excellent B = good C = sufficient)**

| Category | Rating | Comments |
|---|---|---|
| Research Questions/Set-up | B | The research questions are valuable, as they address a comparative analysis on gonadal development in two common ectotherm model species |
| Literature Review | C | The literature review is completed with reference to the first two published papers, and missing in the last two. |
| Methodology | B | While adequate methodology is described in the two complete papers on amphibians, the methodological part on zebrafish is partially or very limited |
| Analysis/Presentation of Results | D | It is partially reported in the third paper and missing in the last part. |
| Discussion/Implications | D | Missing in the last two papers, and in the final discussion/conclusion of the thesis |
| Quality of Writing | C | |
| **Overall Rating** | D | |
| | | |

Additional Comments:

The thesis is conceived as a comparative study of the gonadal development and dynamics of two ectotherm species widely used in research, and the topic as well as the scientific questions are timely and relevant for the scientific community working in the biology of development, transgenesis, etc….

The thesis is proposed as a paper collection of 4 manuscripts, 2 of which have been already published in well ranked journals. The third paper is in the shape of an advanced draft though uncomplete in the methodological and discussion parts. The fourth paper is completely ongoing.
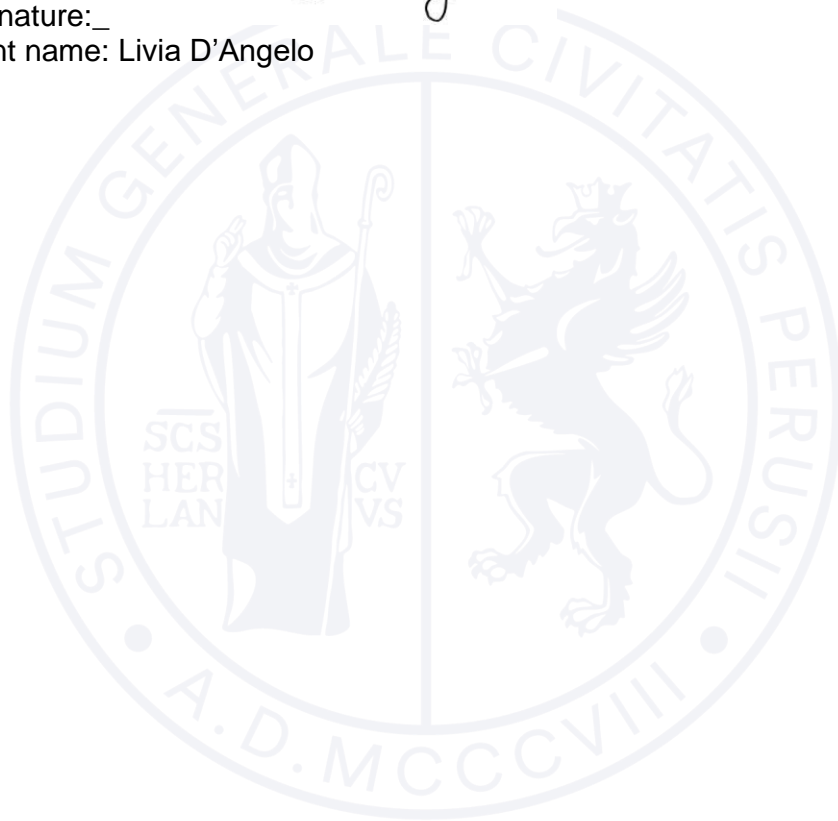
In my role as reviewer I propose to dedicate more efforts in completing this thesis and make it valuable for a dissertation. The following implementation should be considered: a) expand the introduction of the thesis by subdividing into more paragraphs outlining the state of the art; b) add a paragraph on the aims of the thesis

listing the research questions; c) complete the planned experiments in the paper 3 and 4 and make them in the form of a manuscript; d) add a final chapter to draw conclusions on the four papers and highlight the future perspective and potential implications in this research field.

Signature:_ *Livia D'Angelo*
Print name: Livia D'Angelo

*Please review the attached evaluation guidelines and provide your assessment below.*

| Criteria | Grade | Descriptive Anchors |
|---|---|---|
| **Research Question/Set-up** | A | Includes clear description of the issue, identifies gaps in scientific knowledge and/or provides justification for the current research study. |
| | B | Research questions clearly articulated and sufficient background information included. |
| | C | Lacks a focused research question and importance is not completely justified. |
| **Literature Review** | A | Identifies relevant research and literature and accurately summarizes and integrates the information. |
| | B | Cites major works and places them in context. |
| | C | Fails to cite or assimilate previous works. |
| **Methodology** | A | Demonstrates clear understanding and proper use of methodology, identifies relevant strengths and weaknesses of methods used. |
| | B | Demonstrates proficient knowledge of methodology and gives justification for selection of methods. |
| | C | The methodology is not well appropriate for study and understanding is not clearly demonstrated. |
| **Analysis/ Presentation of Results** | A | Results interpreted in light of proposed research question and existing literature. Includes alternative explanations and instructional tables and graphs. |
| | B | Results clearly summarized, discussion of results focused and tied to research question. |
| | C | Presentation lacks focus, tables are unorganized, and results produce no insight into proposed question. |
| **Discussion/ Implications** | A | Clearly summarizes the key information gained from the study and describes advancement of knowledge or new insights on an issue. |
| | B | Discussion of results focused and connected to research questions. Implications for future research discussed. |
| | C | The new knowledge gained from the study and implications of the study are not clearly discussed. |
| **Quality of Writing** | A | Ideas expressed with very good clarity, logic, and conciseness. |
| | B | Coherent presentation with limited typos and grammatical errors. Logical progression of thought within overall thesis and within each section. |
| | C | Significant parts difficult to understand, numerous errors. Repetition, poor organization of ideas, and poor writing hinders reader understanding. |