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: Giulia Rigamonti

Degree: PhD TITLE OF THESIS/DISSERTATION:

Natural treatments for the control of *Giardia duodenalis* infection: focus on the potential use of *Tabebuia avellanedae*

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

Category	Rating	Comments
Research Questions/Set-up	A	The thesis investigates the efficacy of various natural extracts, includin *Morinda citrifolia*, *Panax ginseng*, *Tabebuia avellanedae*, and *Zingibe officinale*, as well as the bioactive compounds β-lapachone and 6-gingerd against *Giardia duodenalis* trophozoites *in vitro*. The rationale for the research highlights the importance of Giardiasis in the One Health scenario, the need t investigate pharmacological treatments, with a focus on alternative therapies.
Literature Review	A	The literature review is extensive, thorough and performed with rigour on the various aspects of the biology, epidemiology, pathogenesis, diagnosis, contrd and therapy of infections caused by *Giardia duodenalis*. Noteworthy is the exhaustive and interesting examination of Plant-based natural treatments for *Giardia duodenalis* infection
Methodology	A	The thesis has a strong methodological basis, rigorous and innovative
Analysis/Presentation of Results	A	The results are presented clearly and supported by plenty of figures and tables, and the data are interpreted accurately.
Discussion/Implications	A	The clear and wide-ranging discussion highlights possible future developments on the use of phytotherapy therapy.
Quality of Writing	A	The thesis is well written in a straightforward way with care also taken in the presentation
Overall Rating	A	Research contributes significantly to the generation and dissemination of ne knowledge through the application of innovative methods. The objectives ar achieved and supported by a robust literature review. The results are we presented and interesting for future developments. The discussion is extensive The manuscript is well written and gives interesting insights for future research

Additional Comments:

It has been a pleasure reading the thesis and, given the comments and observations made above, conclude is that the PhD candidate has a very good understanding of the field of study, is more than able to conceive, plan and conduct research, and has contributed to new knowledge and understanding on the study topic following a rigorous scientific approach.
The thesis requires no further revision.

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Signature:_____   Print name:_____

[signature]

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.