**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 directo 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: …Adriana Lo Giudice…………………………………………………**

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

**The canine melanocytic landscape: from epidemiological insights to**

**cellular complexity in normal and neoplastic melanocytes……………………………………………………………………………………………………………………………………………………………………………………………**

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

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| Category | Rating |  Comments |
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| Research Questions/Set-up  |

 | A |  |
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| --- |
| Literature Review  |

 | A |  |
|  Methodology | A |  |
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| Analysis/Presentation of Results  |

 | A | My only comment regarding results relates to SOX-10 IHC – see below. |
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|  Discussion/Implications  |

 | A |  |
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|  Quality of Writing  |

 | B | There are just a few typos here and there. |
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|  **Overall Rating**  |

 | A |  |
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Additional Comments:

I really enjoyed reading this thesis. It was very thorough, well-organized, and well-written. I am especially intrigued by your cell culture study using fine needle aspirate samples. This is a very innovative study and hopefully it will have a strong impact on future canine melanoma research. Congratulations on all of your studies and papers!

I only have a few constructive comments. I would add the heading “CHAPTER 1” in your table of contents and at the start of the Introduction section. I would also make a statement about chapter 1 being an introduction at the bottom of page 8 before you discuss each of the other chapters. There are few typos here and there throughout the thesis but they are very minor.

On page 48 in your article, you state that oral melanomas are the most frequent malignant tumor in dogs – do you mean at any site or just in the oral cavity? Also, a statement on page 49 is in contrast to a statement on page 54 in the last paragraph where it states that melanomas are less likely to be found in the mucocutaneous location compared to melanocytomas. I believe this is a typo and it should say more likely.

In regard to your epidemiology study, I wonder if how pathologists diagnosed melanocytic tumors changed from 2005 to 2024. For example, was the incidence of benign versus malignant different before 2011 compared to after 2011 when the prognostic review paper was published? Just curious.

For chapter 3, I was wondering why you chose the anatomical sites that you did. Have these sites been specifically studied in human medicine? On page 64, left column, in regard to TRP-1 labeling, how did you identify the dermal melanocytes to know that they did not label for TRP-1? How did you identify the positive cells as mast cells? For figure 1, which dog are the images from? Page 67, top left, how did you confirm these cells as histiocytes? In regard to SOX-10, I wasn’t clear about which cells showed nuclear labeling in the cutaneous samples from the head of Case 1. Were the suspected mast cells that labeled for MITF confirmed as mast cells? The positive labeling of suspected mast cells for TRP-1 and MITF is interesting. I don’t believe this has been reported previously. Page 67 bottom right last paragraph to top of page 69 – I don’t understand these sentences. Are you saying the TRP-1 + cells are mast cells or histiocytes, or both? How did you confirm? Lastly, the conclusions state that SOX-10 and Melan-A are the most sensitive and specific markers for melanocytes. However, this was not designed as a sensitivity and specificity study per se. When comparing how the antibodies used in this study labeled melanocytes you can say that Melan-A and SOX-10 were the most sensitive. I presume you are saying they were the most specific of the markers because they did not seem to label suspected mast cells and histiocytes? I would just caution saying that SOX-10, in particular, has high specificity, because it is known to label other cell types such as myoepithelial cells, soft tissue sarcomas, etc. and this study wasn’t designed to test these markers in various cell types. I know this paper is already published and I don’t expect answers to the above questions. They are just things that I pondered when I read the paper.

For chapter 4, page 79, under pigmentation evaluation, it would be nice to have more quantitative grading scales.

In chapter 5, page 101, why was it impossible to get a skin sample from the abdomen on Ozzy?

Under Final Remarks on page 160, which reference list are you referring to in this section? You reference 133 and 139 for example but your reference list on page 162 does not go that high.

Iba-1 seems to be a popular antibody to identify macrophages, but thorough studies have not been done in the dog to evaluate its sensitivity and specificity among various cell types, including among different types of histiocytes, to my knowledge. Recently, I saw a T cell lymphoma that showed strong perimembranous labeling for CD3, and it also labeled cytoplasmically for Iba-1. Therefore, I think this is a marker that pathologists still need to be careful with.

Again, congratulations on your great work! Thank you for allowing me to read it.

Signature:\_ Print name: Rebecca C. Smedley, DVM, MS, DACVP

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

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| **Criteria**  | **Grade Descriptive Anchors**  |
| **Research Question/Set-up**  |

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| 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.  |

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| **Literature Review**  |

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| 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.  |

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| **Methodology**  |

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| 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.  |

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| **Analysis/** **Presentation of Results**  |

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| 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.  |

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| **Discussion/ Implications**  |

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| 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.  |

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| **Quality of Writing**  |

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| 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.  |

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