UNIVERSITÀ DEGLI STUDI DI MILANO

DOTTORATO DI RICERCA IN SCIENZE DELLA NUTRZIONE
PHD PROGRAM IN NUTRITIONAL SCIENCES

Examiners' Recommendation Form

DOCTORAL STUDENT AND PhD DISSERTATION DATA	
PhD Student name and surname:	Stella Papaleo
Title of the Thesis	Improvement of metagenomic techniques to better understand the role of Candidate Phyla Radiation in food allergies
EXPERT/EXAMINER DATA	
Name and surname: Position: University/Research Center Address and Country:	Aurora Piazza RTDa University of Pavia, Unit of Microbiology and Clinical microbiology, Dep. of Clinical Surgical Diagnostic and Pediatric Sciences, Viale Brambilla 74, 27100. Pavia. Italy

DISSERTATION ASSESSMENT (Please, mark with an X your evaluation)					
	Excellent	**Very Good**	**Good**	**Fair**	**Poor**
Originality of the research		X			
Background: exhaustive and up-to-date	X				
Goals		X			
Appropriateness of methodology	X				
Clarity of outcomes presentation		X			
Significance of the findings		X			

ANALYTIC JUDGEMENT (comments and suggestions for improving the thesis, if any):

The Thesis appears to be very well structured, with an extensive yet extremely clear, accurate, and up-to-date background.

All the work presented in the thesis reflects the PhD Student's growth throughout her doctoral years; starting drafting a Review, that certainly allowed Dr Papaleo to acquire the necessary knowledge background to properly address the new research topics.

The subsequent experimental works led to the publications reported in the Thesis. The main focus of the research performed in the three years was to deepen the understanding of the oral microbiota, with the first study specifically focusing on the characterization of the oral microbiota in children affected by food allergies. The results of the first study led to understand that the oral microbiota of allergic patients compared to healthy controls was enriched in "*Candidatus* Saccharibacteria*"*, belonging to the Candidate Phyla Radiation (CPR). According to the literature, CPR are suggested to play a role in immune modulation, but studies and methodologies to reliably assess their presence are still scarce. The PhD Student's research, and subsequent scientific work, have therefore focused on the comparison of methods already in use, as well as the development and validation of new molecular techniques to effectively detect and quantify "Ca Saccharibacteria" from clinical saliva samples.

In each study presented, the PhD Student's role is sufficiently defined, and each is well formulated, highlighting also the limitations of the study and proposing future steps.

Overall, the Thesis is well-written and well-structured, despite the presence of some oversight/small typos in the text.

FINAL RECOMMENDATION	
The thesis does not require modifications and the candidate can defend it	X
The thesis needs minor amendments before discussion	
The thesis needs major revision and must be reconsidered	
The thesis is extremely flawed and cannot be reconsidered	

[X] **I confirm that there is no actual or perceived conflict of interest arising from my examination of this thesis.**

Date: 10/02/2025	Signature: Aurora Piazza