

Dec 06 2017

Department of Education and Student Affairs  
Ms. Nataša Tymichová  
Faculty of Science  
Charles University  
Albertov 6  
CZ-12843 Praha 2  
Czech Republic

**Re:** Evaluation of the thesis titled:

**Title:** "Structural and Chemical Aspects of Calcium Phosphate Formation in Tooth Enamel"

**PhD Candidate:** Anna Kallistova

Dear Ms. Tymichová,

I have reviewed the thesis manuscript above and provided detailed comments for the candidate to consider. This letter is to summarize my review. Anna had presented an outstanding work that introduces the function of basic structural units (Hap crystallites) in the structure and mechanical properties of enamel.

I have recommended to revise the title to include "apatite" instead of calcium phosphate. Anna has provided an excellent overview of tooth development and enamel formation citing a broad list of references. Since the scope of her work is related to the mineral phase of porcine enamel at different stages of amelogenesis, I would suggest that special attention be given to the section of amelogenesis and wherever possible to add the specific species from which the information was drawn. I have recommended to make the format of all sections consistent and revise a few terminologies throughout the text.



*Janet Moradian-Oldak, M.Sc., Ph.D.  
Professor*

Finally, I recommended to add a general perspective (discussion) at the end of the thesis that includes future work and identifies gaps after the scopes of the thesis were achieved. I particularly would like to see discussion on comparison with other mammals that have different enamel structures.

I believe that Anna can address all the above comments and therefore recommend that she will be granted a PhD degree after she revises the document.

Sincerely yours,



Janet Moradian-Oldak, M.Sc., Ph.D

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