Author's response to reviews

Title: Clinical Validation of Robot Simulation of Toothbrushing - Comparative Plaque Removal Efficacy

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Author's response to reviews:

Dear Editor, dear Referees

Thank you very much for your valuable comments. Please find the revised MS according to your recommendation, and we are providing a point-by-point response to the concerns.

Editor and Referee 2:

Risk fields next to the gumline are very well defined at all KaVo typodonts. For the statistical correlation calculation we excluded these fields and did not find different correlation coefficients. Therefore, we included for validation purposes only all 18 fields per tooth again. We are using the robot model with and without gingival masks, depending from the study type.

In the deciduous dentition we are using exclusively artificial gums around teeth. All this is now mentioned in M+M as well as in the discussion.

Inclusion criteria are described in M+M.

Statistical results are in text and extended in one Table according to Editor´s and Referee´s 1 comments.

ADA reference (2012) is updated.

The style of written English has been edited. We are using „programme“ in the british scientifique tradition for any programme, and we would use „program“ just für computer programs.

Referee 1: Please see all the responses to the Editor.

The process of robot programming concerning force, time, all different movements around all teeth etc. is called „teaching the robot“, is now corrected in M+M.

The earliest structured and reproducible in-vitro toothbrushing device goes back to the Dresden group, so we kept this reference. However, we deleted all other
references, not being published in scientifique journals.

We included more data from the Table 1 and from the new Table 2 and from the Figures 4 and 5 into the text.

Again, thank you all for very helpful recommendations. With best regards on behalf of all authors

Peter Gängler and Tomas Lang