Reviewer’s report

Title: Release kinetics of the model protein FITC-BSA from different polymer-coated bovine bone substitutes

Version: 0 Date: 03 Aug 2019

Reviewer: Peer Kämmerer

Reviewer's report:

This is the review of the manuscript "Release kinetics of the model protein FITC-BSA from different polymer-coated bovine collagen matrices". In brief, the authors added polymers to collagen matrices in order to change release kinetics of a molecular weight tracer. They concluded that polymers with a medium molecular size were able to reduce the amount of overall released protein. This is interesting and may have an impact on further modification protocols of substitute materials even if it is very experimental, yet.

Abstract: Background: first two sentences can be omitted. Please focus on the background of the study and use the PICO(S)-statement. Methods: in a section, that is called "methods" those should be described including the carrier materials and the different groups to be compared including the numbers of samples and time points in each group. The "results" section should be structured accordingly. For "conclusions", a clinically relevant statement should be added.

Introduction: One may consider autologous bone not to be a "bone substitute" material. The expression "guide railing" is difficult to understand.

Methods: Please give information which groups (together with sample numbers) were used for final experiments. ANOVA is the correct test for normally distributed values and those with a homogeneity of variance only. Please check (Shapiro-Wilk & Levene) and re-calculate; in the statistics section, it should be added which group comparisons were conducted with which tests. By the way, when comparing such a high number of parameters and groups, the p-value cannot be set at 0.05 but needs to be adjusted. Also, please indicate which measurements were conducted in detail. The number of groups and the group comparisons ware very high and may confuse the results. Maybe reduction of groups and/or pooling of data would make sense.

Results: Hard to read but adequate. Needs re-structuring as indicated above.

Discussion: Adequate so far.

In general: 9 authors for an in vitro study seem to be a bit much. Also, there are several typos to be corrected.

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An article whose findings are important to those with closely related research interests

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