

Reply to comment on “Structural changes in the rat placenta during the last third of gestation discovered by stereology”

Dear Editor,

We are thankful to our colleagues for their interest in our paper and comments that they have provided. We could not agree more with the part of the letter regarding the method of sampling. On the basis of our 16-year-long experience in research on rat placentas, we underline sampling as one of the most important concepts in stereology, especially in the light of biological variability [1]. This variability is the reason why we approach sampling with the greatest care, as it is evident from all our published papers in the field of stereology. In addition, we consider it as one of the best methods for quantification of biological materials.

Systematic random sampling, which combines both the unbiasedness of random sampling and the efficiency of a systematic sampling, was used in our research. It is based on the selection of the final sample systematically, while the first sample was selected randomly within the first sampling interval [2]. Sections were sampled at a ratio 1:10 (Section Sampling Fraction-SSF), with a random section (RS) selection from the first ten sections (in this case, the 3rd section) and then every 10th section after this initial selection. Preliminary measurements were performed for each of the experimental groups.

In addition, due to its small size, it is possible to analyze the entire section of the rat placenta as a single field, which we did, as seen in Figure 2 [3]. However, this is not possible for human placenta, which, due to its larger size, cannot fit into a single section or single field for stereological analysis.

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REFERENCES

- [1] Šerman L, Vlahović M, Sijan M, Bulić-Jakuš F, Šerman A, Sincić N, et al. The impact of 5-azacytidine on placental weight, glycoprotein pattern and proliferating cell nuclear antigen expression in rat placenta. *Placenta* 2007;28(8-9):803-811. doi:10.1016/j.placenta.2007.04.001.
- [2] Mayhew TM. Stereology and the placenta: Where is the Point? - A Review. *Placenta* 2006;27(A):17-25. doi:10.1016/j.placenta.2005.11.006.
- [3] Šerman L, Žunić I, Vrsaljko N, Grbeša D, Gjurčević E, Matašin Z, et al. Structural changes in the rat placenta during the last third of gestation discovered by stereology. *Bosn J Basic Med Sci* 2015;15(1):21-25. doi:10.17305/bjbms.2015.1.244.