

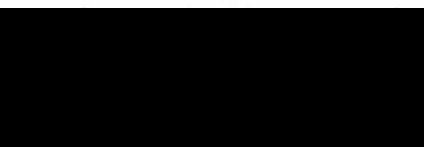
Thesis report Mgr. Jana Báčová

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The thesis of Mgr. Jana Báčová presents a range of cytotoxicity testing projects with nanomaterials. The results have been achieved independently and include novel and original aspects. Therefore I provisionally recommend that the candidate reached the required standard and that the degree should be awarded. The techniques are comprehensively described. The results are based on sufficient replications of the experiments. The data are processed by adequate statistical tests. Conclusions are convincing since they are derived from tests of multiple aspects of cellular responses.

The author may consider providing more information about two aspects.

- 1) The statement: “in vitro cytotoxicity testing provides lower predictive value (Frohlich 2018)” is certainly true taking into account complex responses. However, the simple in vitro system has its advantages and can produce additional insights into the mechanisms.
- 2) The statement: “Long TiO₂ nanofibers were more cytotoxic compared to their shortened counterparts (Bianchi et al. 2020)” is true within the range of lengths they studied. Nevertheless, the maximum toxicity is likely around a certain length, and not only shorter but also longer fibres will probably have reduced toxicity, as it is known in other systems.



Senior Researcher
Experimental Biophotonics
Brno University of Technology
CEITEC - Central European Institute of Technology
Technická 2896/2
616 69 Brno