

P38**Anticancer effects of non-toxic repurposed drugs on hamster fibrosarcoma – fast applicable in oncology**

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Background: Some drugs developed for other illnesses might be repurposed for cancer treatment, to kill cancer cells by hitting previously recognized or unrecognized molecular target or unknown target. This study investigated such drugs, with proven *in vitro* anticancer effects, *in vivo* on fibrosarcoma in hamsters. **Material and Methods:** Anticancer efficacy of selected repurposed drugs: mebendazole, metformin, diclofenac, 2-Deoxy-D-glucose, deoxycholic acid, caffeine, itraconazole, nitroglycerin, disulfiram and selected two-component combinations were tested on fibrosarcoma experimentally induced by BHK21/C13 cells in Syrian golden hamsters. Tumor biophysical characteristics, histology and immunohistochemistry were assessed. Blood samples were collected for hematological and biochemical analyses and the main organs were toxicologically analyzed. **Results:** This study showed that two-drug combinations: metformin with 2-Deoxy-D-glucose, metformin with deoxycholic acid, metformin with caffeine, metformin with itraconazole, metformin with nitroglycerin and metformin with disulfiram can significantly ($P < 0.05$) suppress fibrosarcoma in hamsters with doses equivalent to achievable oncological human doses, without toxicity and influence on biochemical and hematological tests. **Conclusion:** All efficacious repurposed drug combinations recorded in our study on hamster

fibrosarcoma can be recommended for further clinical trials.

Keywords: BHK-21/C13, cell culture, drug effects, fibrosarcoma, hamsters, NF-kB

Acknowledgements: This study was supported by the Republic of Serbia, Autonomous Province of Vojvodina, Provincial Secretariat for High Education and Scientific Research, grants nos. 142-451-3155/2022-02 (JM), 142-451-2626/2021 (DL) and Republic of Serbia, Ministry of Education, Science and Technological Development, grant no. 451-03-68/2022-14/200114.