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## THE RADIOPROTECTIVE EFFECT OF DEUTERIUM DEPLETED WATER AND POLYPHENOLS

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### Abstract

In the experiments performed in mouse (*Mus musculus*) the radioprotective effect of Deuterium Depleted Water (DDW, with 30 ppm deuterium) and a 0.01% total extract of polyphenols (from *Aralia mandshurica* cortex), applied individually or together was tested, towards a sublethal dose of X-rays (5.28 Gy). The animals were intraperitoneal injected (five injections with 0.5 mL each, one at two days), with single DDW, or with a 0.01% polyphenols diluted in DDW. The stress factor was applied one day after the third injection. As radiobiological point the ultrastructural features of the liver was used (following the animal sacrifice a day after the last injection). The X-irradiation of the animals treated independently or combined with DDW and polyphenols extract, manifest a radioprotective effect, especially in the combined action of the two factors. Also, it was established that the application of a single exogenous factors, enhanced the lipid drops from hepatocyte.

*Key words:* *Aralia mandshurica*, DDW, liver ultrastructure, polyphenols, radioprotection

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