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**Poster presentations (PP):****Study of UDD under experimental carcinogenesis**

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In article the protection ability of the ultra-disperse nanodiamonds (UDD) is studied based on the measurements of content of electrolytes in plasma and erythrocytes of Wistar rats with Guerin's carcinoma under conditions of irradiation by 10.0 Gy and use of UDD. The groups of rats with Guerin's carcinoma and with X-ray irradiation and both with used UDD and X-ray irradiation treatments were compared to the control group. In the experiment, the content of electrolytes in blood plasma and erythrocytes of rats was measured by flame photometry. It was shown, that UDDs have a radioprotective effect under conditions of external exposure of the body of rats. The radiation activities of UDDs are based on its specific membranotropic properties, which integrally increases the general nonspecific resistance of the organism.

**Keywords:** Carcinoma, X-ray, erythrocytes, blood plasma, nanodiamonds

**The use of different silica gel RP-TLC plates for the determination the lipophilicity parameters of metformin and phenformin**

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Silica gel in form of different TLC and RP-TLC plates is the major material used as stationary phase for chromatographic study of different drug substances. Variety of commercially available silica gel plates consisting of small particle size silica gel is also efficient in the determination the lipophilicity parameter of numerous bioactive compounds [1]. Because lipophilicity is essential parameter for pharmacokinetics, pharmacodynamics and toxicity of bioactive molecules and metformin and phenformin exhibit the biological activity i.e. antidiabetic and antitumor, the aim of this study was to determine the chromatographic parameter lipophilicity of both biguanide derivatives and to compare it with theoretical values of logP [2,3].

**Keywords:** Silica gel plates, lipophilicity, metformin, phenformin

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