Interaction of Fluorescent Semiconductor Nanoparticles with Tumor Cells / T. I. Terpinskaya, G. K. Zhavnerko, K. D. Yashin, V. S. Osipovich, E. A. Petrova, M. V. Artemyev, and V. S. Ulashchyk // Nanotechnologies in Russia, 2015, Vol. 10, Nos. 3-4, pp. 303-310.

**Abstract**

The biological properties of aqueous solution of CdSe/ZnS nanoparticles stabilized by cysteine have been studied in the work. It has been shown that the nanoparticles are absorbed by the cells of Ehrlich carcinoma under in vitro conditions without cytotoxic effect. Nanoparticles are adsorbed on cell membrane and gradually penetrate inside the cells and are observed as large granules or agglomerates for 30 min. In 60 min, a more uniform distribution of the fluorescent particles in the cells is registered. The mild trypsinization of cells changes the properties of the cell membrane; increases its adhesiveness, which has been evaluated using atomic force microscopy; and enhances the internalization of the nanoparticles.