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Russian team designs drug for cancer diagnostics

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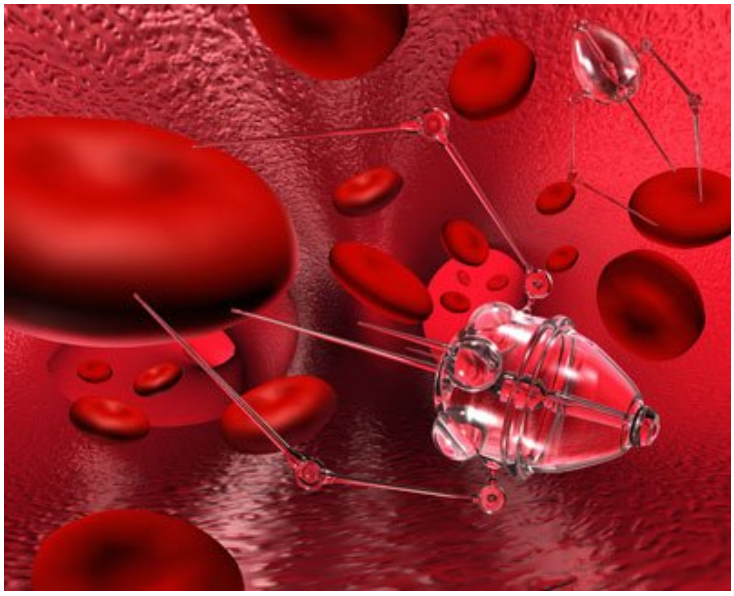

A team of scientists from N.I. Lobachevsky State University of Nizhny Novgorod, Shemyakin-Ovchinnikov Institute of Bioorganic Chemistry, a company Amplituda Science and Technology Centre, and other research groups, has developed a combined action drug based on ionizing radiation and bacterial toxin.

The drug affects tumor cells selectively providing better diagnostics and treatment of malignant tumors. The drug consists of nanoparticles, as the core, with embedded radiopharmaceutical agent (a source of ionising beta-radiation), and a highly toxic toxin derived from bacterium Pseudomonas aeruginosa.

The radiopharmaceutical agent is well secluded inside the nanoparticle and guarantees its side-effect-free targeted action to tumor cells.

The scientists observed that the drug not only treats, but also facilitates visualisation of the tumors, which makes it a diagnostic tool.