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Synthesis of Bismuth-Hyaluronic Acid Nanoparticles Containing Melittin Coated with Chitosan for Treating Eye Cancer Cells with Radiotherapy

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Abstract : Bismuth can increase radiation and reduce the dose of radiotherapy. On the other hand, hyaluronic acid plays a role in healing damaged cells, and melittin has been used to destroy cancer cells. This research aims to destroy eye cancer cells and accelerate the recovery of damaged healthy cells during treatment. In this research, we used this nanoparticle, the sol-gel method. According to the optimization process that was carried out, we obtained the optimal value of the desired variables for the manufacture of nanoparticles. The advantage of doing this is reducing the amount of medicine used, as a result of reducing the number of side effects during the treatment and using melittin as an anti-eye cancer drug and the presence of hyaluronic acid to accelerate the recovery of cells, as well as coating the bismuth nanoparticle with chitosan to increase the half-life of the nanoparticle and prevent its adhesion.

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