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Use of lytic liposomes in cancer

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Cancer nanotherapeutics are quickly progressing and are being important elements to resolve conventional drug limitations such as nonspecific biodistribution and targeting, poor oral bioavailability, and low therapeutic results. To improve the distribution inside body of cancer drugs, nanoparticles have been designed in for optimal size and to increase their circulation time in the bloodstream. In addition to this, passive targeting mechanism, active targeting strategies using ligands or antibodies directed against selected tumor targets amplify the specificity of nanoparticles. Nanoparticles have also the ability to accumulate in cells without being recognized by P-glycoprotein. Multifunctional and multiplex nanoparticles are now being highly investigated and such a next generation of nanoparticles in our horizon is "lytic liposomes", patented by Daniel Serrano. These nanoparticles, facilitating personalized and tailored cancer treatment, can destroy cancer cells because they are producing real holes in cell membrane leaving to destruction in a couple of minutes. "Lytic liposomes" will be the next frontier to destroy and win cancer.