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Poster Presentations

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Achieving targeted nano-carriers for use in simultaneous injection and delivery of a combination therapy system (drug and gene) for cancer cells

Shahmohammadi S¹, Akhlaghi M², Ansari K³, Ebrahimpour M¹, Tajardoost M¹, Haghrosadat BF⁴.

1. Medical Nanotechnology and Tissue Engineering Research Center, Yazd Reproductive Sciences Institute, Shahid Sadoughi University of Medical Sciences, Yazd, Iran.

2. Department of Biochemistry, Shahid Sadoughi University of Medical Sciences, Yazd, Iran.

3. Nano-Biotech Foresight Company Biotechnology Campus, Science and Technology Park of Yazd, Yazd, Iran.

4. Department of Advanced Medical Sciences and Technologies, School of Paramedicine, Shahid Sadoughi University of Medical Sciences, Yazd, Iran.

Email: fhaghrosadat@gmail.com

Background: One of the most common causes of death in humans is cancer. Each year, out of every 100,000 people in the world, about one hundred to three hundred people die from this disease. One of the new methods for treating cancer is targeted nanocarriers.

Objective: Achieving targeted nano-carriers for use in simultaneous injection and delivery of a combination therapy system (drug and gene) for cancer cells.

Materials and Methods: This review, we searched in PubMed, Scopus and, Web of Sciences database from 2000 to 2020 with "nano liposomal drug delivery" key word and used 17 full text of 35 in this abstract.

Results: In general, the design of nanosystems in drug or gene delivery involves several important fields: 1) Nanocarriers: particle size is very important in delivering nano-drug. Because of not only the biochemistry of the body is targeted but also the size of nanoparticles is very suitable for cells. The biological systems are in nanoscale too. For treat a disease, it's necessary to acting on the same dimensions of the active ingredients in the disease, which have the same nanoscale. 2) target finders: target detectors Nanoparticles have specific surface molecules. They bind drugs to cells with specific receptors based on their specific surface molecules. They can even facilitate the uptake of nanocarriers by cells. In this way, the efficiency of drug delivery and the effect of the drug is higher and fewer doses are used.

Conclusion: Targeted nano-liposomes can transfer therapeutic drugs and genes to specific cells.

Key words: Targeting, Nano-liposomal, Drug delivery, Gene delivery.