

## عنوان مقاله:

Biological Aspects and Clinical Applications of Nanoparticles on Treatment and Prophylaxis of HIV

## محل انتشار:

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## خلاصه مقاله:

Acquired Immune Deficiency Syndrome (AIDS) is a descriptive type of immune system dysfunction disorder which is caused by HIV infection. Since its discovery, HIV has been responsible for the death of more than 25 million people worldwide, and many people are infected with HIV each year. Because of the structural complexity of the virus and the lack of a promising vaccine, several antiviral drugs, and nucleic acid therapies such as siRNA have been studied and evaluated for the HIV prevention. The antiviral treatments have considerably improved the quality and hope of life for the infected people, but along with the capacity to adapt to the virus, it has prevented further success. Nanotechnology approaches have had a positive impact on the prevention and treatment of different diseases. Various nanoparticles and substances have been evaluated for the antiviral drugs improvement for the prophylaxis and treatment of AIDS. Some nanoparticles which have been discussed in this article include liposomes, dendrimers, gold nanoparticles, polymeric nanoparticles, nanofibers, silver nanoparticles, and drug nanocrystals. In this review study, the nanotechnology approaches, the structure and properties of nanoparticles and their function in the prophylaxis and treatment of HIV were discussed.

## کلمات کلیدی:

HIV, Nanoparticles, Gene therapy, Prophylaxis, Drug delivery, ایدز, نانوذرات, ژن درمانی, پیشگیری, تحویل دارویی

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