Nanotechnology against COVID-19

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ABSTRACT

The worldwide healthcare sector has been dealing with a situation of COVID-19 also known as severe acute respiratory syndrome since the end of 2019. It causes a respiratory infection that includes cold, coughing, headache and many more other serious symptoms which has led to the death of many people in countries globally. So, there is increased demand for an effective diagnosis and treatment as well as mitigation of the spread of infection. As we all know nanoparticles (Nanotechnology) are Novel drug delivery system which help to increase the bioavailability, safety and efficacy of different chemical substances having medicinal properties. In the patients of COVID-19 patients it has been seen that the drug is delivered with the help of different Novel drug delivery systems like liposomes, microspheres, and nanoparticles etc. But out of these nanoparticles are widely used because they produce very few side effects. Some of the drugs have been used to prevent COVID 19 infection with the help of nanoparticles like interferon alpha chloroquine phosphate, ribavirin and arbidol. Nanotechnology offers a number of approaches to cope with this emergency. Nanotechnology has important roles in diagnostics, with potential to support the development of simple, fast, and cost-effective nanotechnology-based assays to monitor the presence of SARS-CoV-2 and related biomarkers. In summary, nanotechnology is critical in counteracting COVID-19 and will be vital for future pandemics.

Keywords: COVID-19, Nanotechnology, Pandemics, Infection, Nan