

Nanogel: A novel tool for controlled drug delivery system

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Nanoparticles hydrogel are become a most favoured tool for controlled drug delivery system now a day because of characteristics of hydrogel with nanoparticals. Several polymeric hydrogel nanoparticles systems have been prepared and characterized in recent years, based on both natural and synthetic polymers, each with its own advantages and drawbacks. Among the natural polymers, chitosan and alginate have been studied extremely for preparation of hydrogel nanoparticles and form synthetic group. Hydrogel nanoparticles based on poly (vinyl alcohol), poly (ethylene oxide), poly (ethyleneimine), poly (vinyl pyrrolidone), and poly-N-isopropylacrylamide have been reported with different characteristics and features with respect to drug delivery. Regardless of the type of polymer used, the release mechanism of loaded agent from hydrogel nanoparticles is complex, while resulting from three main vectors, i.e., drug diffusion, hydrogel matrix swelling, and chemical reactivity of the drug/matrix.

Biography

Marvinkumar Patel is an employee of lupin pharmaceutical ltd in Ahmedabad headquarter. He had completed B.Pharm from Gujarat Technological University, Ahmedabad with top rank in university. He is a member of Controlled Release Society, Canada and take part in two international and many national level conference.

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Cloning and sequencing of *Leishmania major* poly-protein

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The group of diseases known as the leishmaniasis are caused by obligate intracellular protozoa of the genus *Leishmania*. Although treatments for Lesimaniasis are available, because of re-infection, drug resistance and economic reasons, it is unlikely that we will be able to control the global spread, without an effective vaccine. A Poly protein vaccine developed by identifying a potential antigenic region in proteins like GP63, GP46, KMP11 and HASPB1; could be an effective alternative as it arrests the invasion in the macrophages.

Methods: primers are designed and amplified as a template. Then the PCR product was cloned into pET-41a-c vector. Finally, the recombinant plasmid was extracted from transformed *Escherichia coli* and sequenced.

Results: Sequence analysis of cloned poly-protein genes into pET-41a-c vector showed high homology of 90% with *leishmania major* (Accession no. AAR32945.1).

Conclusion: We cloned poly- protein genes of *L. major* successfully. Recombinant plasmid was confirmed. It is ready to express recombinant protein for further studies.

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