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**Simvastatin loaded composite polyspheres of gellan gum and carrageenan: in vitro and in vivo evaluation.**

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**Abstract**

We investigated the lipid lowering ability of simvastatin loaded gellan gum-carrageenan composite polyspheres, which were prepared by ionotropic gelation/covalent crosslinking method. The surface morphology revealed that the polyspheres have rough and dense surface. The drug entrapment efficiency of the polyspheres prepared by ionic crosslinking was higher than those prepared by dual crosslinking. The in vitro drug release study indicated that the ionically crosslinked polyspheres discharged the drug quickly whereas, dual crosslinked polyspheres extended the drug release for longer period. The hypolipidemic activity performed on Wistar rats indicated that the polyspheres have effectively reduced the elevated total serum cholesterol and triglycerides.

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