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## Thermo sensitive gelling film mediated drug rectal delivery in the treatment of colorectal cancer

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In our previous study, thermo sensitive gelling film contained functional biopolymers was proved to be an effective *in situ* delivery system in the treatment of colorectal cancer. The preparation was observed as free-flowing liquid before use, while a layer of gel film was quickly formed in the rectum when applied. It was well-distributed and had increased contact area with rectum. The gel film, which possessed good bio-compatibility, appropriate gel strength and bioadhesive force, was able to closely combine with rectal mucosa and prolonged the action time. Based on that knowledge, a few pharmaceutical technologies were applied to modulate the characters of the encapsulated drugs, such as Cyclodextrin inclusion technology to improve the solubility of water insoluble drugs, micro emulsion technology to increase the infiltration of drugs with poor lipid-solubility, and liposome technology to facilitate the cellular uptake of biological therapeutic drugs. The physicochemical properties were evaluated. Transportation test, cellular uptake and *in vivo* experiments were conducted as well. In conclusion, the therapeutic requirement could be met by combining active materials with appropriate biopolymer ingredients and the *in situ* delivery could be an effective alternative for the treatment of colorectal cancer.

### Biography

Lulu Wang completed her graduate education in Pharmaceutical Science and Pharmacology from Peking Union Medical College. She is assigned as Associate Professor by the Institute of Materia Medica, CAMS & PUMC, Pharmacy department and dedicated to explore novel carriers for drug delivery. She has published more than 25 papers in reputed journals.

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