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***In vitro* evaluation of vaginal suppository including siRNA and paclitaxel-loaded SLNs for cervical cancer**

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The objective of this study is to prepare vaginal suppository containing chemotherapeutic agent and genetic material that can be applied locally in cervical cancer which is the second most frequently observed cancer type in women below the age of 45 and is generally resistant to chemotherapy. Paclitaxel has been selected as chemotherapeutic agent and siRNA that inhibits the BCL-2 oncogene has been selected as the genetic material. SLNs have been formulated in order to load the paclitaxel and siRNA to the vaginal suppository and to compare their effects. Paclitaxel loaded SLN, siRNA loaded SLN and paclitaxel/siRNA loaded SLNs have been dispersed separately in vaginal suppository prepared with PEG 6000. First, the physicochemical properties of SLNs, their cytotoxicities as well as the effects of siRNA loaded SLN on the protein amount expressed by the BCL-2 gene in the cells have been examined. Afterwards, the release of SLNs from the three different vaginal suppositories prepared has been determined via Horizontal Diffusion Chamber System. The paclitaxel amount loaded to the SLNs has been determined via HPLC whereas the siRNA amount has been determined via gel retardation system and UV spectrophotometer.

Biography

Gulay Buyukkoroglu has completed her PhD from Anadolu University and Postdoctoral studies from University of London, The School of Pharmacy on transcutaneous DNA vaccination. She is Head of Pharmaceutical Biotechnology at Anadolu University Faculty of Pharmacy. She is working on gene delivery systems, new cancer drug delivery systems with siRNA and specific antibodies attached drug delivery systems and DNA vaccination.

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