

Accepted Manuscript

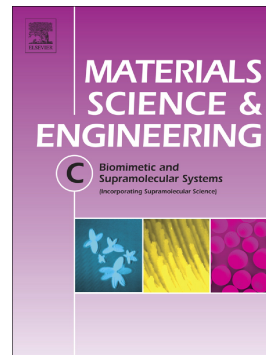
Development and characterization of the cisplatin loaded nanofibers for the treatment of cervical cancer

Urvashi Aggarwal, Amit Kumar Goyal, Goutam Rath

PII: S0928-4931(17)30456-3
DOI: doi: [10.1016/j.msec.2017.02.013](https://doi.org/10.1016/j.msec.2017.02.013)
Reference: MSC 7344

To appear in: *Materials Science & Engineering C*

Received date: 3 August 2016
Revised date: 23 October 2016
Accepted date: 6 February 2017



Please cite this article as: Urvashi Aggarwal, Amit Kumar Goyal, Goutam Rath , Development and characterization of the cisplatin loaded nanofibers for the treatment of cervical cancer. The address for the corresponding author was captured as affiliation for all authors. Please check if appropriate. Msc(2017), doi: [10.1016/j.msec.2017.02.013](https://doi.org/10.1016/j.msec.2017.02.013)

This is a PDF file of an unedited manuscript that has been accepted for publication. As a service to our customers we are providing this early version of the manuscript. The manuscript will undergo copyediting, typesetting, and review of the resulting proof before it is published in its final form. Please note that during the production process errors may be discovered which could affect the content, and all legal disclaimers that apply to the journal pertain.

Development and characterization of the cisplatin loaded nanofibers for the treatment of cervical cancer

Urvashi Aggarwal, Amit Kumar Goyal, Goutam Rath*

Department of pharmaceuticals, ISF College of pharmacy, Moga, Punjab, India,

ABSTRACT

A small scale study was carried out to investigate the therapeutic efficacy cisplatin loaded polycaprolactone / chitosan composite electrospun nanofibers for local chemotherapy of cervical cancers in mice. The prepared nanofibers had shown the sustained release pattern up to one month. Prepared nanofibers were found to have greater mucoadhesive strength. An orthotopic cervical cancer model was established by inducing the EAC cell lines in the vaginal mucosa at cervix region of the mice. Intravaginal administration of the cisplatin loaded nanofibers showed lesser % cell viability as compared to the plain drug. In vivo studies showed a better anti-tumour efficacy of prepared nanofibers in animals at 14th and 21st after the beginning of treatment. Therefore the technique of electrospinning provides a favourable approach for the targeted delivery of the anti-cancer drug via vaginal route against cervical cancer.

Keywords: Cisplatin, Cervical cancer, EAC, Localized, Polycaprolactone, Chitosan

Corresponding author

Goutam Rath

Associate Professor

Department of pharmaceuticals, ISF College of pharmacy,

Moga, Punjab, India, goutamrath123@gmail.com,

Mob. +919888206383

Download English Version:

<https://daneshyari.com/en/article/5434810>

Download Persian Version:

<https://daneshyari.com/article/5434810>

[Daneshyari.com](https://daneshyari.com)