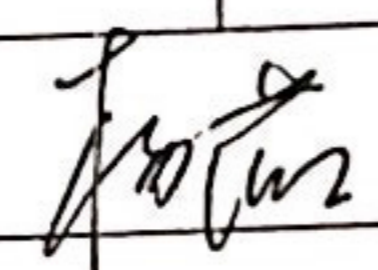


吉林大学第二医院伦理委员会临床研究审批件

(2018年) 研审第(004)号

项目名称	Polycaprolactone Nanofibers loaded with 20(S)-Protopanaxadiol for <i>In Vitro</i> and <i>Vivo</i> Antitumor Activity Study			
申请资助类别				
申请科室	Department of Otolaryngology, Head and Neck Surgery	项目负责人	Bo Teng	
研究内容简介	<p>In this work, 20(S)-Protopanaxadiol (PPD) loaded polycaprolactone (PCL) nanofibers were successfully fabricated by electrospinning technique using tween-80 as a solubilizer. Firstly, smooth and continuous nanofibers were collected by using suitable solvent and appropriate spinning conditions. Secondly, nanofiber mats were characterized by scanning electron microscope (SEM), thermogravimetric (TG) analysis, Fourier transform infrared spectroscopy (FTIR) and mechanical test. Finally, nanofibrous membranes were evaluated using water contact angle, in vitro drug release, biodegradation test, in vitro and vivo antitumor activity and cell apoptosis assay. As a result, scanning electron microscopy observations indicated that diameter of the drug-loaded nanofibers increased with drug concentration increasing. Thermogravimetric (TG) analysis and mechanical test showed nanofibers equipped with great thermal and mechanical properties. Biodegradation test exhibited that the structure of fabricated nanofibers had a certain degree of change after 15 days. In vitro release study showed that PPD from drug-loaded nanofibers could be released in a sustained and prolonged mode. The cytotoxic effect of drug-loaded nanofiber mats examined on the human laryngeal carcinoma cells (Hep-2 cells) demonstrated that the prepared nanofibers had a remarkable antitumor effect. Meanwhile, the drug-loaded fiber mats showed a super antitumor effect in vivo antitumor study. All in all, PCL nanofibers could be a potential carrier of PPD for cancer treatment.</p> <p>All experiments were performed in compliance with relevant national laws or guidelines; all experiments followed institutional guidelines, In accordance with the regulations of the Ministry of science and technology of the state on the guidance of good laboratory animals, and other laws and regulations, we agreed to carry out research.</p>			
伦理委员会 审批意见	<input checked="" type="checkbox"/> 同意	<input type="checkbox"/> 作必要修改 后同意	<input type="checkbox"/> 不同意	<input type="checkbox"/> 终止或暂停
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2018年1月3日