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XIANGYANG POLYTECHNIC

湖北省高等职业教育特色专业 临床医学专业 建设总结报告

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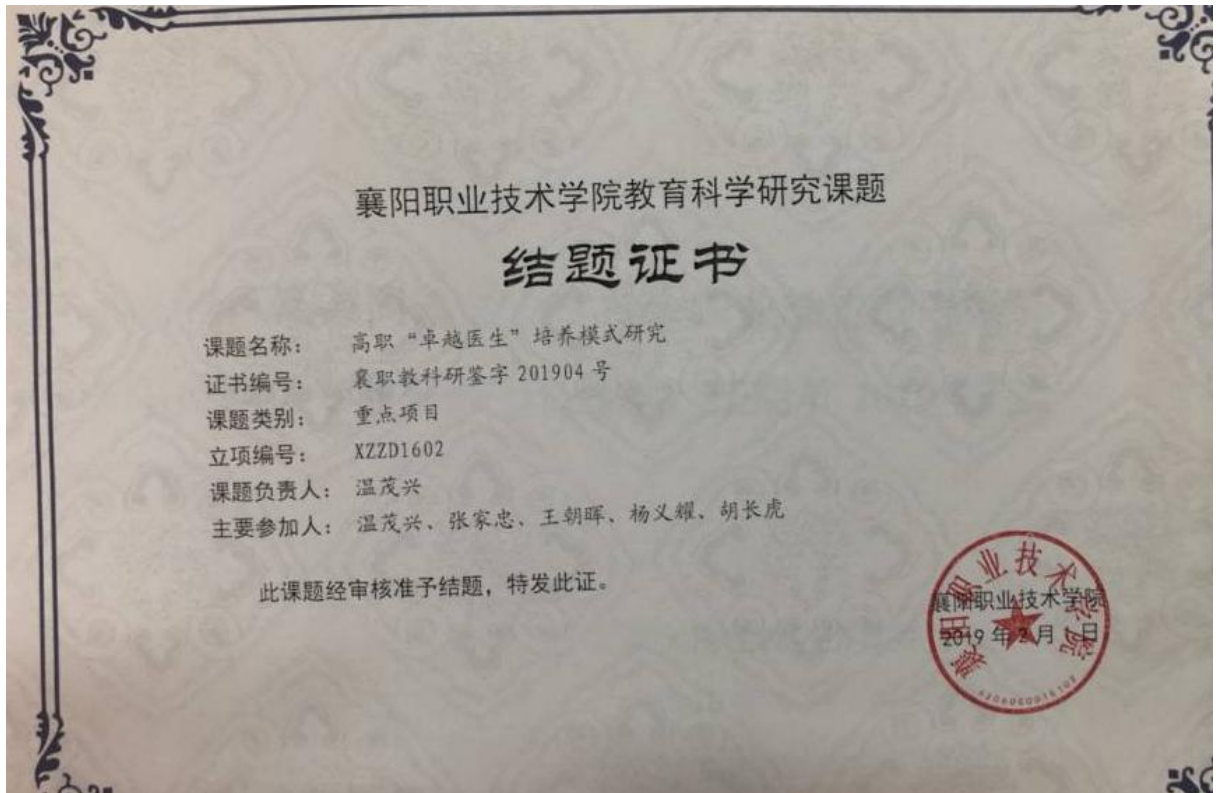
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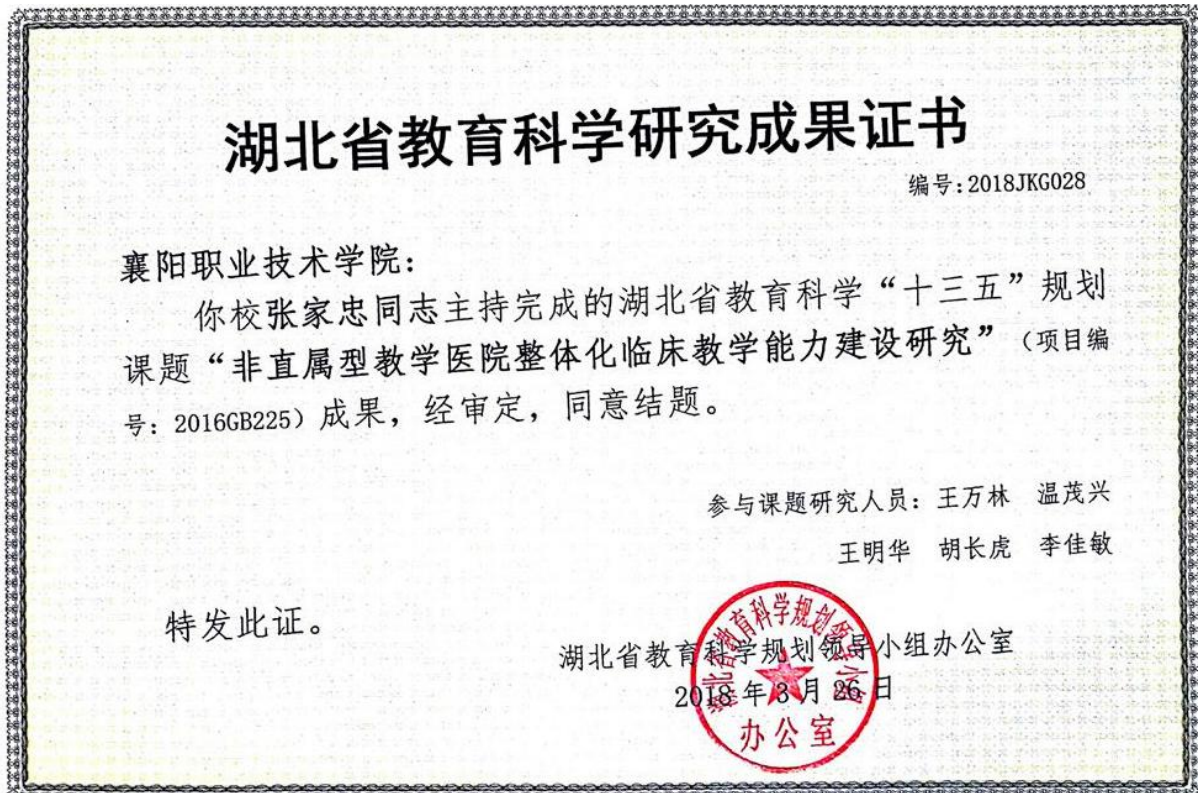
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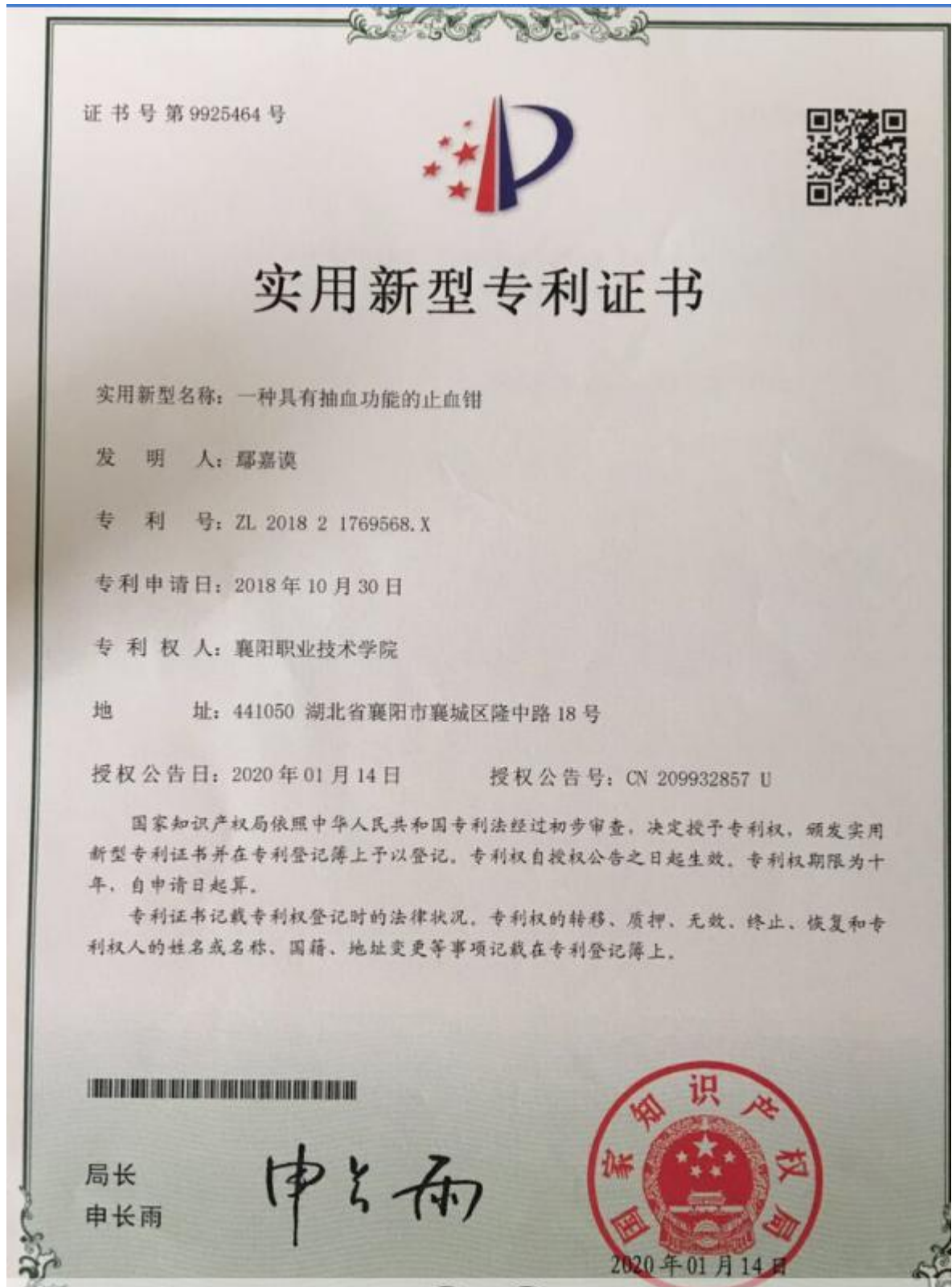
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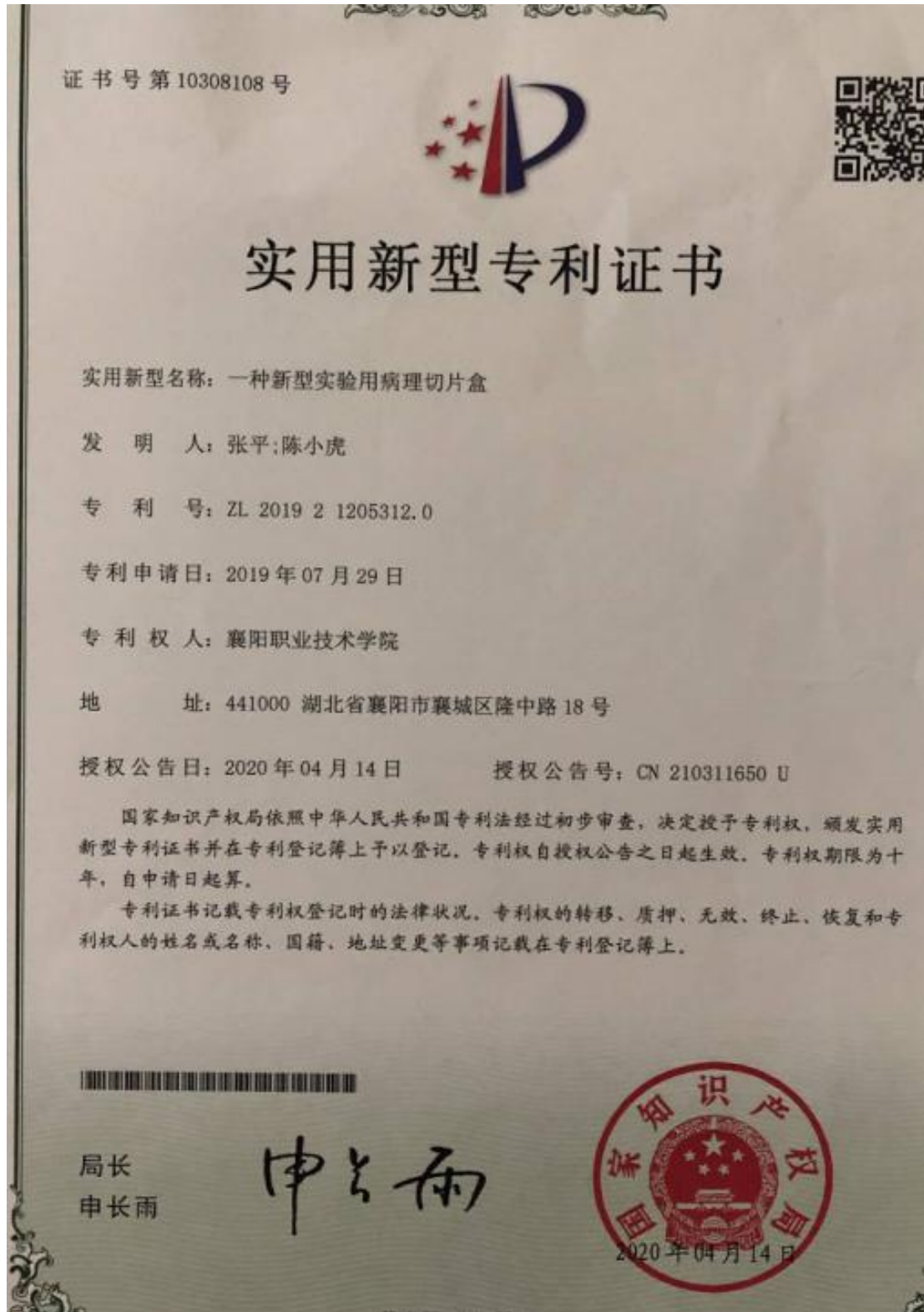
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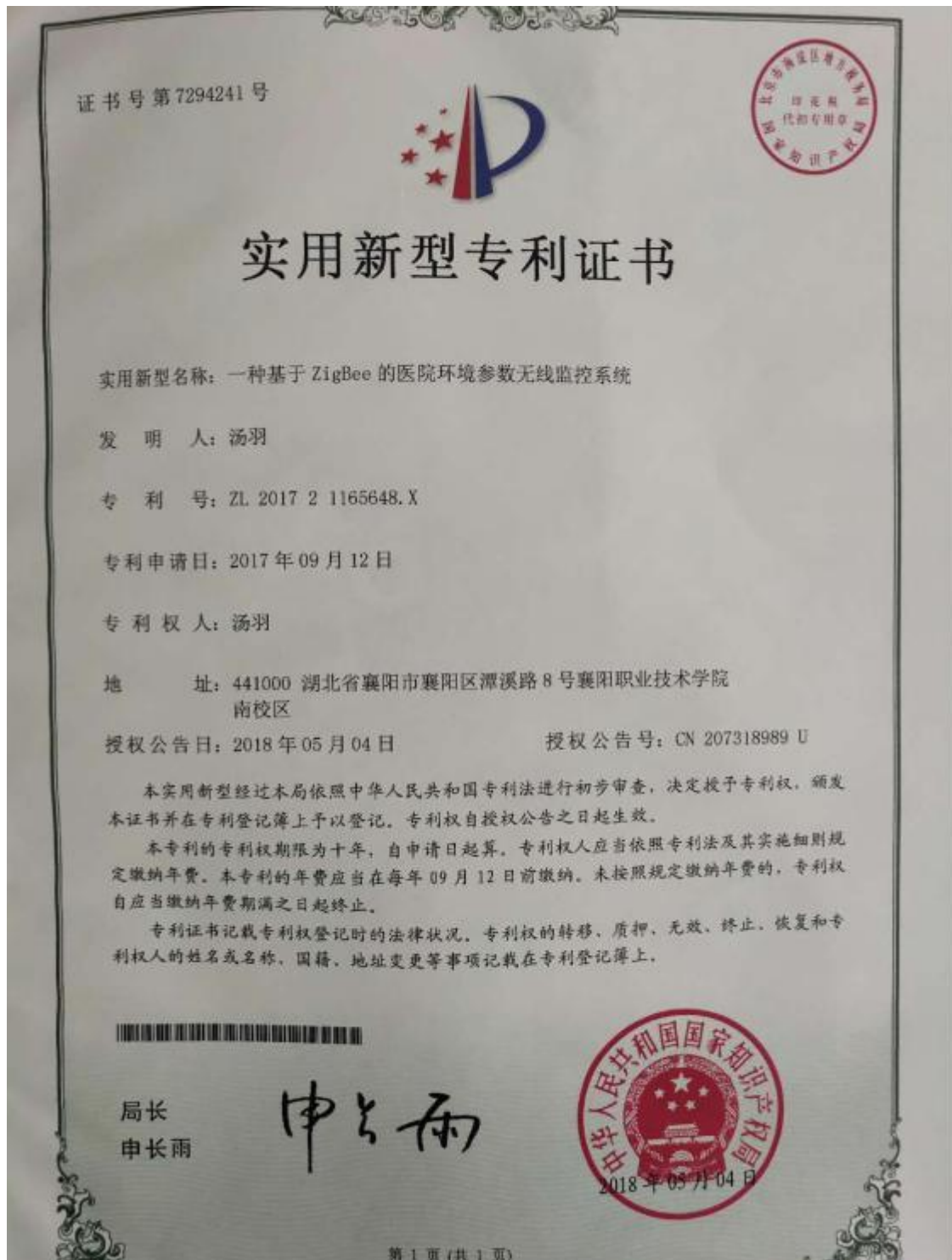
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Zinc enhances chemosensitivity to paclitaxel in PC-3 prostate cancer cells

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Abstract. Paclitaxel-based chemotherapy is a promising approach for prostate cancer treatment. However, single-drug chemotherapy is associated with an increased risk of drug resistance. Therefore, novel combination chemotherapy regimens are a popular topic of research. Zinc participates in the regulation of apoptosis, for example in the form of Zn²⁺ and via zinc-dependent enzymes. Zinc can either induce or suppress apoptosis, and its effect depends primarily on its concentration. Previous research has demonstrated that physiological concentrations of zinc can directly induce apoptosis of PC-3 prostate cancer cells via the mitochondrial pathway. In prostate cancer tissues, zinc concentrations have been demonstrated to be reduced compared with non-cancerous tissues. Furthermore, the concentration of zinc has been demonstrated to decrease further with cancer progression. In the present study, it was investigated whether exposure of PC-3 cells to zinc improved their sensitivity to the chemotherapeutic agent, paclitaxel. MTT assays, cell clone formation assays, Hoechst staining and flow cytometry revealed that zinc enhanced PC-3-cell chemosensitivity to paclitaxel. Western blotting and reverse transcription-polymerase chain reaction were used to determine that the mitochondria-mediated apoptosis signaling pathway is involved with zinc/paclitaxel-induced cell death.

Introduction

Prostate cancer is among the most common types of cancer in elderly men, and is a leading cause of cancer-associated mortality in Western countries (1). Treatment strategies for prostate cancer include surgery, hormone therapy, radiotherapy and chemotherapy (2). Chemotherapy serves an important role in the treatment of castration-resistant metastatic prostate cancer (3). Paclitaxel has been demonstrated to result in significant antitumor responses in combination with other agents (4,5). However, there are limitations to chemotherapy, including the development of drug resistance, particularly multidrug resistance (6). Therefore, the identification of effective mechanisms to prevent chemotherapy resistance is essential.

The mechanism by which paclitaxel acts on prostate cancer cells is different from the mechanisms of action of other anticancer drugs, and it functions by inhibition of cytoplasmic microtubule depolymerization (7). This inhibits normal spindle formation and causes cell cycle arrest in the G2/M phase (8). Other studies have suggested that the main mechanism by which paclitaxel acts on prostate cancer cells is via Bcl-2 degradation, which reduces the DNA-protective

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乡村医生免费订单定向培养模式的研究与实践

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【摘要】 乡村医生短缺是农村卫生服务体系建设的最大难题,地方政府和学校联合采取乡村医生免费订单定向培养的方式是解决这一难题的有效途径。襄阳职业技术学院近年来在此方面进行了有益的探索与研究。本文采用文献资料分析、问卷调查、专家座谈等方法,开展行业调研,制订人才培养方案,进行联合招生和有针对性培养,构建了乡村医生培养的“襄职模式”,研制了一批特色课程和教材,为本地农村培养了一批急需的乡村医生,为精准脱贫贡献了力量。

【关键词】 乡村医生; 订单培养; 培养模式

【中图分类号】 R-05; H192

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Research and practice of rural doctors' free order oriented training mode

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【Abstract】 The shortage of rural doctors is a challenge in the construction of rural health service system. The way to train the tuition-free oriented rural doctors in a mode of "order-oriented training" by both local government and schools is effective to respond to this challenge. Xiangyang Polytechnic mode has conducted useful exploration and research in this regard in recent years. It has carried out industry research, formulated the personnel training program, actively raised funds to conduct joint enrollment and targeted cultivation, through methods including literature consultation, questionnaire surveys, expert discussions, etc. Therefore, a "mode with Xiangyang Polytechnic characteristics" to cultivate rural doctors was established, through which a number of special courses and special teaching materials were developed, and a group of rural doctors were trained, which made great contribution to poverty alleviation in the areas where they provide health-care service.

【Key words】 Rural doctor; Order training; Training mode

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2009年3月,中共中央、国务院颁发的《关于深化医药卫生体制改革的意见》(以下简称《意见》)指出,要大力加强以乡镇卫生院和村卫生室为基础的农村医疗卫生服务网络建设,采取定向免费培养等多种方式,为贫困地区农村培养实用的医疗卫生人才。随后,国务院办公厅先后2次发布文件,明确指出乡村医生队伍是农村医疗卫生的网底,是亿万农村居民的健康“守护人”^[1,2]。为切实解决当前乡村医生数量和质量的问題,必须大力开展农村订单定向医学生培养,重点实施面向村卫生室的3年制高职免费医学生培养^[3]。为此,建立政府统筹规划和投入机制,建立乡村医生免费订单定向培养管

理模式,探索具有针对性的人才培养和教学模式,建立医学职业教育的精准扶贫模式,尽快培养一大批“招得来、下得去、用得好、留得住”的乡村医生尤为迫切。襄阳职业技术学院从2014年开始为宜昌市和襄阳市政府免费订单定向培养了多批乡村医生,形成了比较成熟、富有特色的培养模式。

1 乡村医生免费订单定向培养的路径与模式

1.1 开展行业调研

襄阳职业技术学院于2014年承担了宜昌市人民政府委托的108名乡村医生免费订单定向培养任务。课题组深入到7个县(市、区)卫生行政部门,25个乡镇卫生院和村卫生室,通过召开座谈会、

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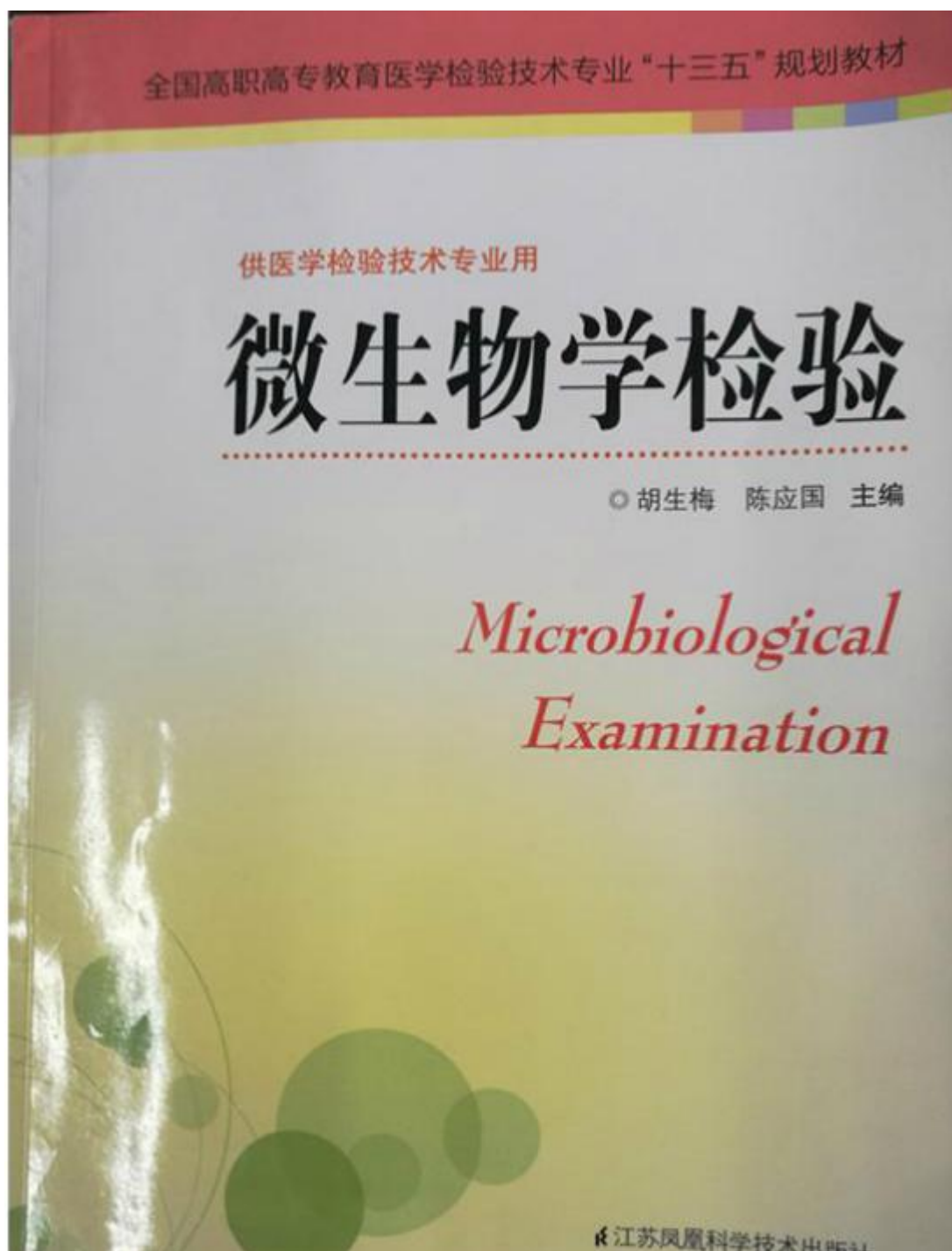
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