

论著

## 雷公藤甲素聚乳酸纳米粒对大鼠睾丸组织的影响

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**摘要** 目的 观察采用聚乳酸纳米粒能否减轻雷公藤甲素的大鼠睾丸毒性。方法 雄性Wistar大鼠分别ig 0.2及0.6 mg/kg雷公藤甲素(非纳米粒组)及其聚乳酸纳米粒混悬液(纳米粒组),连续给药15 d,以ig生理盐水的大鼠为对照组,测定睾丸的脏器系数及其组织匀浆液中酸性磷酸酶(ACP)活性和果糖含量,光镜观察睾丸组织的病理学变化。结果 在0.6 mg/kg剂量下,非纳米粒组睾丸ACP活性和果糖的含量均明显低于纳米粒组( $P<0.05$ )。光镜观察显示,雷公藤甲素0.6 mg/kg可引起大鼠睾丸的损伤,非纳米粒组引起的病变程度明显重于纳米粒组,主要表现为睾丸萎缩,各级生精细胞变性、坏死、数量减少或消失,出现了多核巨细胞。结论 以聚乳酸作为药物载体的纳米体系,可明显减轻雷公藤甲素对睾丸的毒性。

**关键词** [雷公藤甲素](#) [聚乳酸](#) [纳米粒](#) [睾丸](#)

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## Effect of triptolide-loaded poly(*D,L*-lactic acid) nanoparticles on testicle tissue in rats

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### Abstract

**AIM** To study if poly(*D,L*-lactic acid) nanoparticles can reduce the toxicity of triptolide(TP) on testicle tissue in rats.  
**METHODS** Male rats were treated respectively with a 15 d successive oral administration of 0.2, 0.6 mg/kg TP or the suspension of TP-loaded poly(*D,L*-lactic acid) nanoparticles(TP-PLA-NP, containing TP 0.2, 0.6 mg/kg). The rats in control group were treated with normal saline. The testis organ index, the content of fructose and the activity of acid phosphatase (ACP) in testicular hemogenate were measured and the pathological changes in testicular tissue were observed by optical microscope. **RESULTS** The ACP activity and fructose content in TP 0.6 mg/kg group were significantly lower than that in TP-PLA-NP 0.6 mg/kg group. Meanwhile, the testicular lesion in rats caused by TP was observed and the damage in TP group was more serious than that in the TP-PLA-NP group. The testicle of rats in TP 0.6 mg/kg group were shown with atrophy of testicle, severe degeneration and necrosis of amount of the spermatozoon, spermatid and secondary spermatocyte, and even an appearance of multi-nucleus large cells.  
**CONCLUSION** The nanoparticles system of poly(*D,L*-lactic acid) as a drug carrier material may obviously abate the toxicity of the testicle in rats caused by TP.

**Key words** [triptolide](#) [poly \(D L-lactic acid\)](#) [nanoparticles](#) [testis](#)

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