Extended Abstract
Volume 5:1, 2021

Genetics & DNA Research

Open Access

Panax Notoginsenosides Attenuates Inflammation in Rabbit Model

Rahim Abdul

University Of Engineering and Technology, Lahore, Pakistan

Panax Notoginsenosides (PNS) performs the function of enhancing blood circulation. The aim of this study is to investigate the effect of intrapleural PNS on rabbit pleural inflammation reaction, and determine the levels of transforming growth factor β1 (TGF-β1) and Vascular Endothelial Growth Factor (VEGF). Forty New Zealand white rabbits were divided into four groups. The rabbit pleural inflammation reaction model was established by injection of tetracycline hydrochloride solution into pleural cavity. Then PNS, urokinase (UK) and PBS were injected into the pleural cavity as experiment groups. While tetracycline hydrochloride solution was replaced by phosphate buffer solution (PBS) as control group. The pleural effusion was collected at 24 h, 48 h, 72 h and 96 h in all groups, and then biochemical indicators, TGF-β1 and VEGF were detected. On day 14, all animals were killed and pleural tissues were collected to perform hematoxylin eosin (HE) and Masson trichrome staining. The results indicated that levels of TGF-β1 and VEGF were significantly lower in PNS group than that in UK group and PBS group (Pand inhibit collagen production, which had better effects compared with UK, single gene conferring resistance to P. neglectus, Rlnn1, has been mapped to chromosome 7AL. QTL analysis in several bi-parental mapping populations has identified major QTL for P. thornei resistance on chromosomes 2BS, 6DS and 7BL, which have been verified in sources of resistance from diverse backgrounds. Genotyping-by-sequencing has provided closely linked flanking markers that are now available to Australian breeders through the Australian Wheat and Barley Program to implement marker-assisted selection. Further fine mapping using large segregating populations will allow map-based cloning approaches to identify candidate genes underlying these QTL for RLN resistance.

Our findings provide a new treatment strategy for inflammation reaction. Forty male New Zealand white rabbits (2.5-3.0 kg) were divided into four groups (n=10): PNS group, UK group and control group. The ear vein of rabbits was injected 2 ml/kg 3% pentobarbital solution, after anesthesia, the chest was routine disinfected and skin was cut about 1 cm, next the chest wall muscularis and intercostal muscles were blunt separated, then pleura was broken to insert the rubber drainage tube; at last, the incision was sutured and the drainage tube was fixed. Ten animals were given 20 ml PBS (control group) and thirty animals were given 35 mg/kg tetracycline solution through drainage tube. In PNS group, 1 ml/kg PNS were injected into pleural cavity every 12 h for 8 times; in UK group, 1500 IU/kg UK were injected into pleural cavity every 12 h for 8 times; and 20 ml PBS was injected every 12 h for 8 times in PBS group and control group

This work is partly presented at International Conference on Human Genetics & Genetics Diseases 2021, September 27, 2021