

only-treated group and several concentrations of WSH and CP (100 mg/kg of CP) treated group for the same period.

Results: WSH has effect on absolute and relative testes weight, sperm count, sperm motility and serum testosterone level in CP treated mice. CP and 100, 500, 1000 mg/kg of WSH treatment groups significantly increased the testosterone levels by 144.38, 142.73, 154.96% compared to the only-treated group in the mouse serum.

Conclusion: Our results suggest that WSH plays an important role in the male reproductive function by improving serum testosterone level.

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P1.057

Effects of *Rosae Laevigatae Fructus* on the cyclic AMP response element modulator (CREM) expression during spermatogenesis



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Purpose: Spermatogenesis is a remarkably complex and specialized process of testis specific genes expression and germ cell metamorphosis. To investigate the effects of *Rosae Laevigatae Fructus* (RLF) on CREM expression, C57BL/c male mice were divided into five groups, the normal group, cyclophosphamide (CP) only-treated group and RLF with CP (100, 500, 1000 mg/kg of RLF and 100 mg/kg of CP, respectively) treated group for five weeks.

Methods: RT-PCR and Western blotting assays were performed in this study.

Results: In our results, CP only treated group was decreased in CREM expression than that of the vehicle treated group (68.0%, $p < 0.05$), while the CP and 1000 mg/kg of RLF treated groups was increased than that in the CP only treated group (84.7%, $p < 0.05$). Also, RLF was increasing sperm motility in a statistical significant manner.

Conclusion: In conclusion, RLF could play an efficient role in improving sperm motility and CREM expression in testes, especially for CP induced infertile mice.

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Characteristics of the thermal stimuli produced by ultrasonic moxas with plane surfaces



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Purpose: This study considers simulation on the thermal distribution of the target tissue exposed to an ultrasonic moxa whose surface is flat. The present simulation aimed to test the

fluence of the diameter and frequency of the ultrasonic moxa on the thermal distribution.

Methods: The acoustic field from the ultrasonic moxa and the resulting thermal distributions were calculated using a FEM method with PZFlux (Version 3.0, Weidlinger Associates Inc, USA). The diameters considered were 5, 10, 15, and 20 mm to cover those of traditional indirect moxas and the frequency ranged from 1 to 2, 3, 4, and 5 MHz.

Results: The simulation results showed that, even though the ultrasonic transducer has plane surfaces, the acoustic field produced by the moxa have a natural beam focus whose location was determined by the diameter and frequency, as expected. Accordingly the subdermal thermal distribution was affected by the diameter and frequency, indicating the careful choice of the parameters are of importance to meet the clinical requirements of moxibustion.

Conclusion: The modification of the transducer surface and placing ultrasonic coupling pad were discussed to actively control the location of the thermal stimulus by an ultrasonic moxa.

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Analgesic Effect of Electroacupuncture on Paclitaxel-induced Neuropathic Pain via Spinal Opioidergic and Adrenergic Mechanisms in Mice



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Purpose: This study was designed to determine the antinociceptive effect and related neuronal mechanism of electroacupuncture (EA) on the paclitaxel (PTX)-induced neuropathic pain in mice.

Methods: PTX (4 mg/kg, i.p.) was administered once a day for 5 consecutive days to induce neuropathic pain. EA stimulation (2 mA, 2 Hz, 30 min) was applied at the ST36 acupoint bilaterally once every 2 days.

Results: Repeated EA stimulation significantly attenuated PTX-induced mechanical allodynia and thermal hyperalgesia. In a separate set of experiment, antinociceptive effect of single EA stimulation at a day 8 after PTX treatment was reduced by intrathecal pretreatment with naloxone (opioid receptor antagonist), idazoxan (alpha2-adrenoceptor antagonist) or propranolol (beta-adrenoceptor antagonist), but not prazosin (alpha1-adrenoceptor antagonist). Moreover, EA remarkably suppressed the PTX-enhanced phosphorylation of NMDA receptor NR2B subunit in spinal dorsal horn and intrathecal