



## Effects of modified Shoutaiwai recipe on integrin $\beta 3$ and leukemia-inhibitory factor in endometrium of controlled ovarian hyperstimulation mice during the implantation window

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**ABSTRACT.** We investigated the effects of a modified Shoutaiwai recipe on integrin  $\beta 3$  and leukemia-inhibitory factor (LIF) in the endometrium of controlled ovarian hyperstimulation (COH) mice during the implantation window. Seventy non-pregnant mice were randomly divided into 3 groups: a traditional medicine (TCM) treatment group (N = 30), an aspirin treatment (N = 30) group, and a control group (N = 10). After the model was successfully established, mice in the drug treatment groups and the control group were respectively treated with the modified Shoutaiwai recipe, aspirin, or 0.9% physiological saline. During the implantation window of mice, the middle segment of the mouse uterus was recovered, and integrin  $\beta 3$  and LIF expressions in the endometrium were respectively detected using an immunohistological two-step method and reverse transcription-PCR. Expressions of integrin  $\beta 3$  and LIF in the endometrium of mice in the TCM treatment group were

significantly increased compared to aspirin-treated and control mice, and those of aspirin-treated mice were increased compared to the control group. Our modified Shoutaiwai recipe may improve the endometrial receptivity of COH mice by increasing the expression of integrin  $\beta$ 3 and LIF in the endometrium during the implantation window.

**Key words:** Modified Shoutaiwai recipe; Controlled superovulation; Implantation window; Endometrial receptivity; Integrin  $\beta$ 3; Leukemia inhibitory factor