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## Molecule mechanism of shou tai decoction on URSA by regulating the function of dendritic cells

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**Objective:** To investigate the role of dendritic cells (DC) in unexplained recurrent spontaneous abortion (URSA) and to study the molecular mechanism of Traditional Chinese Medicine Shou Tai Decoction (STD) on URSA treatment by regulating the function of DC.

**Methods:** Thirty cases of normal pregnancy women and thirty cases of URSA patients were taken as control group and URSA group respectively. URSA patients were treated with Shou Tai Decoction. PBMC were taken from both control group and URSA group before and after STD administration. The proportion of CD11c+HLA-DR+, CD11c+CD80+ cells and CD11c+CD86+ cells in peripheral blood were measured by flow cytometry. Moreover, the mRNA expression of HLA-DR, CD80, CD86 and Indoleamine2,3-dioxygenase (IDO) in venous blood were detected by RT-PCR assay. The protein expression of IDO was detected by Western Blot. Furthermore, the cytokines, including IL-12p70 and IL-6, in the blood serum were measured by ELISA.

**Results:** Compared with normal pregnancy women, the proportion of CD11c+HLA-DR+, CD11c+CD80+, CD11c+CD86+ cells and the mRNA expression of HLA-DR, CD80, CD86 of URSA patients in peripheral blood were both increased significantly ( $P < 0.05$ ), while the mRNA and protein expression of IDO were decreased markedly ( $P < 0.05$ ). Additionally, the level of IL-12p70 and IL-6 in serum of URSA women were significantly increased ( $P < 0.01$ ). When compared with URSA patients before STD administration, the proportion of CD11c+HLA-DR+, CD11c+CD80+, CD11c+CD86+ cells and the mRNA expression of HLA-DR, CD80, CD86 decreased significantly after STD administration ( $P < 0.05$ ), while the mRNA and protein expression of IDO increased markedly after STD administration ( $P < 0.05$ ). Meanwhile, compared with before STD administration, serum protein level of IL-12p70 and IL-6 of URSA patients decreased significantly after STD treatment ( $P < 0.01$ ).

**Conclusion:** The changes of proportion and function of DC were involved in URSA. The regulatory effect of STD on DC proportion and function contribute to the treatment of URSA.

### Biography

Xia Li has completed her PhD from Shandong University of Traditional Chinese Medicine and Postdoctoral studies from Shandong University. She is the PI of Laboratory for TCM Immunology and Epigenetics, Institute of Basic Medicine, Shandong Academy of Medical Sciences. She had published more than 10 papers in reputed journals and had been serving as an Editorial Board Member of repute.

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