ABSTRACT BOOK ABSTRACTS



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AUTOIMMUNE CONNECTIVE TISSUE DISEASES

SALVIANOLIC ACID B ATTENUATES EXPERIMENTAL SKIN FIBROSIS OF SYSTEMIC SCLEROSIS

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Background:Systemic sclerosis (SSc) is a connective tissue disease characterized mainly by fibrosis of skin and internal organs. Our previous study proved that Salvianolic acid B (SAB) was one of the most essential ingredient to treat SSc-related dermal and pulmonary fibrosis in traditional Chinese medicine Yiqihuoxue formula.

Objective: The aim of the present study was to evaluate the effect of SAB on skin fibrosis and explore its underlying anti-fibrotic mechanism.

Materials and Methods: For the in vivo study, bleomycin induced SSc mouse model was used to study the effect of SAB on skin fibrosis. For the in vitro study, Proliferation assay, real-time PCR, Western blot analysis and RNA-seq were carried out.

Results: SAB was capable of alleviating skin fibrosis in bleomycin induced SSc mouse model, alleviating skin thickeness and reduced collagen deposition. In vitro study indicated SAB could reduce SSc skin fibroblast proliferation, downregulate extracellular matrix gene transcription and collagen protein expression. TGF- β /SMAD and MAPK/ERK pathway activation were also proved to be suppressed in SAB treated fibroblasts. Moreover, RNA-seq revealed the anti-fibrotic effect of SAB might be related with antioxidant activity, cell cycle and p53 signaling pathway.

Conclusions: Our results suggest that SAB has the ability to alleviate SSc related skin fibrosis both in vivo and in vitro. These findings provide convincing evidence suggesting that SAB is an effective drug for the treatment of skin fibrosis.



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