

WORLD CONGRESS ON RHEUMATIC HEART DISEASE

2-4 November 2023 • Abu Dhabi



Submission Id: 12

Title: Beneficial Effect of Resveratrol to Inhibit Pathological Myofibroblast Differentiation of Valvular Interstitial Cell in Experimental Heart Valve Model

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Background & Aims: Recent studies revealed that differentiation of valvular interstitial cell into myofibroblasts played an important role in pathological valve remodeling in rheumatic valvular disease. Objective. To investigate the beneficial effects of resveratrol on Transforming Growth Factor B1-induced fibrosis.

Methods: Valvular interstitial cell was isolated from 12-weeks male New Zealand rabbit (*Oryctolagus cuniculus*). Culture cells was divided into control group and treatment group (50 μ M/L Resveratrol). Both groups were exposed to 100 nM Transforming Growth Factor B1 for 24 hours.

Results: Immunochemical staining demonstrated that cells were completely differentiated into myofibroblasts with mean expression of A-smooth muscle actin (24522.64 ± 4566.994). Resveratrol significantly reduced A-smooth muscle actin expression (14176.2 ± 3343.3 , $p < 0.001$).

Conclusions: Our data showed resveratrol significantly reduce Transforming Growth Factor B1-induced valvular fibrosis.