# Inhibitory effect of resveratrol on angiotensin II-induced cardiomyocyte hypertrophy

劉如濟

Cheng TH;Liu JC;Lin H;Shih NL;Chen YL;Huang MT;Chan P;Cheng CF;Chen JJ

摘要

**Abstract**

Resveratrol is proposed to account in part for the protective effect of red wine on the cardiovascular system. Angiotensin II (Ang II) is a potent hypertrophic stimulus in cardiomyocytes. In this study, we determined the effect of resveratrol on Ang II-induced cardiomyocyte hypertrophy. Cultured neonatal rat cardiomyocytes were stimulated with Ang II, and [3H]leucine incorporation and -myosin heavy chain (-MyHC) promoter activity were examined. Intracellular reactive oxygen species (ROS) were measured by a redox-sensitive fluorescent dye, 2 7-dichlorofluorescin diacetate, and the extracellular signal-regulated kinase (ERK) phosphorylation was examined by Western blotting. Resveratrol inhibited Ang II-increased intracellular ROS levels. Furthermore, resveratrol, as well as the antioxidant N-acetyl-cysteine, decreased Ang II- or H2O2-increased protein synthesis, -MyHC promoter activity, and ERK phosphorylation. In summary, we demonstrate for the first time that resveratrol inhibits Ang II-induced cardiomyocyte hypertrophy via attenuation of ROS generation.