

Paeoniflorin Attenuates LPS-Induced Inflammation in Nucleus Pulposus Cells via Nrf-2/HO-1/HMGB1/NF- κ B Pathway

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SUMMARY. The aim of this study was to investigate the effects of paeoniflorin (PA) on lipopolysaccharides (LPS)-induced nucleus pulposus cells. Our results demonstrated that PA significantly reduced LPS induced inflammatory factors including interleukin-1 β (IL-1 β), tumor necrosis Factor- α (TNF- α) and interleukin-6 (IL-6) in nucleus pulposus cells. PA also decreased of malondialdehyde (MDA) and increased superoxide dismutase (SOD) induced by LPS. Moreover, the expression of the protein levels of Nrf-2/HO-1/HMGB1/NF- κ B was increased after LPS challenges, which were significantly restored after PA. Our results demonstrated PA reduced LPS-mediated inflammation in nucleus pulposus.

RESUMEN. Este estudio fue realizado para investigar los efectos de la peoniflorina (PA) en las células del núcleo pulposo inducidas por lipopolisacáridos (LPS). Nuestros resultados demostraron que la PA redujo significativamente los factores inflamatorios inducidos por LPS, incluida la interleucina-1 β (IL-1 β), el factor de necrosis tumoral- α (TNF- α) y la interleucina-6 (IL-6) en las células del núcleo pulposo. La PA también disminuyó el malondialdehído (MDA) y aumentó la superóxido dismutasa (SOD) inducida por LPS. Además, la expresión de los niveles de proteína de Nrf-2/HO-1/HMGB1/NF- κ B aumentó después de los desafíos de LPS, que se restablecieron significativamente después de PA. Nuestros resultados demostraron que PA redujo la inflamación mediada por LPS en el núcleo pulposo.

KEY WORDS: inflammation, oxidative stress, Nrf-2/HO-1/HMGB1/NF- κ B, nucleus pulposus cells, paeoniflorin.

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