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Inhibitory Activity of 9-Butyl-9,10-dihydrochromeno[8,7-*e*][1,3]oxazin-2[8*H*]-one (BDM) against Pro-Inflammatory Mediators Secretion Induced by Lipopolysaccharide in RAW264.7 Macrophage Cells

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***SUMMARY*. Chemical compound 9-butyl-9,10-dihydrochromeno[8,7-*e*][1,3]oxazin-2[8*H*]-one (BDM) showed promising anti-inflammatory potential in our previous study. But its anti-inflammatory activity has never been studied. Therefore, in present study we investigated the anti-inflammatory effects of BDM and elucidated its mechanism of action in lipopolysaccharide (LPS)-induced RAW264.7 macrophages. Pretreatment with BDM significantly inhibited production of tumor necrosis factor (TNF)-α and interleukin 6 (IL-6). Furthermore, BDM inhibited activity of mitogen-activated protein kinases (MAPK) signaling pathway. Thus, the results of this study demonstrated promising anti-inflammatory activity of BDM and provided an explanation of its mechanism of action in macrophages via inhibition of MAPK signaling pathway.**

RESUMEN. El compuesto químico 9-butil-9,10-dihidrochromeno [8,7-*e*] [1,3] oxazin-2 [8*H*]-ona (BDM) mostró un potencial anti-inflamatorio prometedor en nuestro estudio anterior. Pero su actividad antiinflamatoria nunca había sido estudiada. Por lo tanto, en el presente estudio se investigaron los efectos anti-inflamatorios de BDM y se ha elucidado su mecanismo de acción en los macrófagos RAW264.7 inducidos por lipopolisacárido (LPS). El pretratamiento con BDM inhibió significativamente la producción del factor de necrosis tumoral (TNF)-α y la interleucina 6 (IL-6). Además, BDM inhibe la actividad de proteína-kinasas activadas por mitógenos (MAPK) sobre la vía de señalización. Por tanto, los resultados de este estudio demostraron una actividad antiinflamatoria prometedora de BDM y proporcionaron una explicación de su mecanismo de acción en los macrófagos mediante la inhibición de la vía de señalización de MAPK.

KEY WORDS: 9-butyl-9,10-dihydrochromeno[8,7-*e*][1,3]oxazin-2[8*H*]-one (BDM), lipopolysaccharide (LPS), MAPK, RAW264.7 macrophages.

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