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Título	Effects of Formyl Peptide Receptor Agonists Ac9-12 and WKYMV in In Vivo and In Vitro Acute Inflammatory Experimental Models
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Resumo	Formyl peptide receptors (Fprs) are a G-protein-coupled receptor family mainly expressed on leukocytes. The activation of Fpr1 and Fpr2 triggers a cascade of signaling events, leading to leukocyte migration, cytokine release, and increased phagocytosis. In this study, we evaluate the effects of the Fpr1 and Fpr2 agonists Ac9-12 and WKYMV, respectively, in carrageenan-induced acute peritonitis and LPS-stimulated macrophages. Peritonitis was induced in male C57BL/6 mice through the intraperitoneal injection of 1 mL of 3% carrageenan solution or saline (control). Pre-treatments with Ac9-12 and WKYMV reduced leukocyte influx to the peritoneal cavity, particularly neutrophils and monocytes, and the release of IL-1β. The addition of the Fpr2 antagonist WRW4 reversed only the anti-inflammatory actions of WKYMV. In vitro, the administration of Boc2 and WRW4 reversed the effects of Ac9-12 and WKYMV, respectively, in the production of IL-6 by LPS-stimulated macrophages. These biological effects of peptides were differently regulated by ERK and p38 signaling pathways. Lipidomic analysis evidenced that Ac9-12 and WKYMV altered the intracellular lipid profile of LPS-stimulated macrophages, revealing an increased concentration of several glycerophospholipids, suggesting regulation of inflammatory pathways triggered by LPS. Overall, our data indicate the therapeutic potential of

	Ac9-12 and WKYMV via Fpr1 or Fpr2-activation in the inflammatory response and macrophage activation.
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