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DESIGN AND SYNTHESIS OF SELECTIVE COX-2 INHIBITORS AS POTENTIAL ANTI-INFLAMMATORY AGENTS

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Design and Synthesis of Selective COX-2 Inhibitors as Potential Anti-Inflammatory Agents

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ABSTRACT

Inflammation is a common immune response to harmful pathogens or damaged cells. Non-steroidal anti-inflammatory drugs (NSAIDs) are commonly used to treat inflammation as they inhibit the cyclooxygenase enzyme systems (COX). Selectivity for inhibition of the COX-2 pathway is an aim in the development of NSAIDs, as their adverse side effects are associated with the inhibition of the COX-1 pathway. We have designed and synthesized several hybrid conjugates of ibuprofen with various amino acid linkers showing promising anti-inflammatory properties and decreased gastric ulcer formation. The current developing new hybrid conjugates are based on the rational drug design process.

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