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Review on Screening and Analysis of Anti-Inflammatory Drugs through Biochemical Techniques

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Abstract: *Non-steroidal anti-inflammatory drugs (NSAIDs) are competitive inhibitors of cyclooxygenase (COX), the enzyme that promotes the bioconversion of arachidonic acid to inflammatory prostaglandins (PGs). Their use is associated with adverse consequences, including as gastrointestinal and renal damage. The inhibition of COX-2 provides the therapeutic anti-inflammatory action, but the decrease of COX-1 activity causes the unwanted side effects of NSAIDs. Therefore, it was thought that more targeted COX-2 inhibitors might have fewer negative effects. Several selective COX-2 inhibitors (rofecoxib, celecoxib, valdecoxib, etc.) were created as safer NSAIDs with an improved stomach safety profile. However, the recent removal of several COXIBs from the market, such as rofecoxib, due to their negative effects on the cardiovascular system clearly encourages researchers to look for and evaluate other templates that have COX-2-inhibiting properties. The identification of new uses for selective COX-2 inhibitors in the treatment of cancer and neurological disorders like Parkinson's disease continues to pique interest in the development of these medications*

Keywords: Selective COX-2 Inhibitors, Cyclooxygenase, SAR, NSAIDs, and Coxibs

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