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In vitro COX inhibitory activity of novel α-aminoarylpropionic acid derivatives

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The structure activity relationship of NSAIDs evidences that arylpropionic acid derivatives - one of the wide used group for treatment of inflammation diseases, possess cycloxygenase inhibiting activity. In view of this, in previous investigations it was synthesized the new derivatives of α-aminoarylpropionic acid and assessed their pharmacological activity. Obtained results demonstrated *in vivo* anti-inflammatory and anti-nociceptive activities of novel synthesized α-aminoarylpropionic acid derivatives. In presented work it was studied *in vitro* COX-1 and COX-2 inhibitory activity of mentioned compounds. The COX inhibitory activity was measured using COX Inhibitor Screening Assay Kit, according to the protocol. Experimental data evident that testified compounds possess both human recombinant COX-1 and COX-2 non selective inhibitor activity (IC 50<10 μM), with different affinity to COX isoforms. The phenyl-alanine derivative appear comparable more activity to COX1 (IC 50=1.9 μM). The S-triazole derivative shows a highest inhibitor activity with more selectivity to COX 2 (IC 50=0.9 μM). Thus, the study suggests that triazoles derivatives of α-aminoarylpropionic acid could be used as a starting point for the development of novel COX inhibitors.

Biography

A G Zhamharyan has completed her PhD at the age of 29 years from Yerevan State Medical University and now preparing postdoctoral studies from the same university. She is the head of Department of Pharmacy in Yerevan State Medical University. She has published more than 25 papers in reputed journals connecting to study of the natural and chemical compound anti-inflammatory and anti-nociceptive activities.

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