Abstract

Background: Everyday studies prove the increasing need for newer and safer agents to control cellular inflammatory response, an underlying cause for the pathophysiology of many other clinical cases. **Results**: Two newly designed sets of schiff **5a-h** and chlacone **6a-f** substituted pyrazoles were synthesized and evaluated for their *in vivo/ vitro* anti-inflammatory activities. Most potent representatives were chosen for investigation of ulcerogenic and molecular docking properties**. Conclusion:** The synthesized compounds showed considerable edema inhibition percentage range if compared to celecoxib (13-93% and 58-93%, respectively) at different time intervals. Compound **6e** showed the best screening results if compared to celecoxib (inhibition %= 93.62% and 93.51% at 5 hours, COX-1/COX-2 selectivity index SI= 215.44 and 308.16 and ulcer index= 7.25 and 8, respectively).