

# 3<sup>rd</sup> International Conference and Exhibition on **Biowaivers, Biologics & Biosimilars**

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## ***In vivo* interaction studies of lisinopril with flurbiprofen and ibuprofen on carrageenan induced inflammation**

Safila Naveed<sup>1,2</sup>, Najma Sultana<sup>1</sup> and M Saeed Arayne<sup>1</sup>

<sup>1</sup>University of Karachi, Pakistan

<sup>2</sup>Jinnah University for Women, Pakistan

**Background:** Both anti-hypertensive and non-steroidal anti-inflammatory drugs are frequently prescribed together because hypertension and musculoskeletal problems are two of the frequent conditions.

**Objectives:** *In vivo* interaction studies of ACE inhibitor (Lisinopril) was carried out with commonly used NSAIDs flurbiprofen and ibuprofen in carrageenan induced inflammation (CII) rats to check the anti-inflammatory response of NSAIDs with lisinopril and alone.

**Methodology:** In our study, the altered anti-inflammatory response was observed for NSAIDs when given simultaneously with lisinopril by comparing decrease in paw size. Results were expressed in % reduction in paw size for every hour and were calculated for edema rate and percentage reduction using the formula, Edema rate (E%)= $\frac{VT-VO}{VO} \times 100$  Where, VO=Rat's hind paw volume before 1% Carrageenan administration and VT=Rat's hind paw volume at t hour. Percentage reduction (R%)= $\frac{EC-ET}{EC} \times 100$  Where, EC=Edema rate of control group and ET=Edema rate of test compound at t hour.

**Results:** The combination of lisinopril and NSAIDs showed decreased activity of NSAIDs as depicted by inhibition of % reduction and increase in edema rate. But since this study has certain limitation as a number of tested animals were small and the duration for which the anti-inflammatory response was checked for NSAIDs alone and in combination with ACE inhibitors was just few hours, further studies required to establish this relationship.

[safila117@yahoo.com](mailto:safila117@yahoo.com)