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**HRBC MEMBRANE STABILIZATION AS A MECHANISM OF THE ANTI-INFLAMMATORY ACTIVITY OF AQUEOUS AND METHANOL EXTRACT OF A COMPOUND PREPARATION**

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The main action of anti-inflammatory agents is the inhibition of cyclo-oxygenase enzymes which are responsible for the conversion of arachidonic acid to prostaglandins. Obesity itself results in an inflammatory state in metabolic tissues and research reveal that anti-inflammatory therapies for their potential in the treatment of obesity<sup>1</sup>. The study is to evaluate the anti-inflammatory activity of aqueous and methanol extract of the compound preparation. Aqueous and methanolic extract of the compound preparation was obtained. Fresh whole human blood (10ml) was collected and centrifuged at 3000 rpm for 10 minutes. Then this was washed three times with equal volume of normal saline. The volume of blood was measured and re constituted as 10% v/v suspension with normal saline. The reaction mixture contains 4.8 ml hypo saline, 0.5 ml HRBC suspension (10 % v/v) with 200µl of extracts of various concentrations (0.3125, 0.625, 1.25, 2.5, 5 mg/0.5ml). Standard drug aspirin was used as a positive control. As a negative 4.8 ml hypo saline, 0.5 ml HRBC suspension (10 % v/v) with 200µl DMSO and for blank 100µl DMSO, 2ml of hypo saline were mixed in centrifuge tubes. Then the whole setup was incubated at 56°C for 30 min and centrifuged at 3000 rpm for 15 minutes. The absorbance of supernatant was read using spectrophotometer at 560 nm. The experiment was performed in triplicates. The results revealed that both aqueous and methanol extracts contained principles that protected the erythrocyte membranes effectively. Moreover methanol extract showed highest protection against induced lyses in different concentrations. The study suggests that the methanolic extracts of the compound preparation possess enough potential to reduce inflammation. Hence under this particular conditions and further studies are suggested.

Keywords Anti-inflammatory activity, extracts, aqueous methanolic,