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Analgesic and Anti-inflammatory Potential of Four Varieties of Bell Pepper (*Capsicum Annum L.*) in Rodents

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Use of *Capsicum annum L.* for culinary purpose dates to centuries. Its medicinal benefits have also been investigated in past few days. Analgesic and anti-inflammatory activity in 4 different colored (green, yellow, orange, and red) sweet bell peppers (*Capsicum annum L.*) were investigated in the doses of 200 and 400 mg/kg. Current research is being directed at authenticating if *Capsicum* can be used as an analgesic and anti-inflammatory comparing the effect of most used analgesic aspirin. The effects of ethanol extract of *Capsicum annum L.* were determined for analgesic activity by acetic acid induced writhing, tail immersion and hot plate test. Animals were divided into 10 groups (n=7): (1) Control (2) CAG 200 (3) CAG 400 (4) CAR 200 (5) CAR 400 (6) CAO 200 (7) CAO 400 (8) CAY 200 (9) CAY 400 (10) Standard. All the extracts given intraperitoneally in rat hind paw of seven animals in each of four treatment groups received 200, 400 mg/kg. Acute toxicity was also determined by increasing the dose till 3000 mg/kg, which showed no evidence of mortality. Statistical calculation was done by SPSS software to compare the effects of aspirin and *Capsicum* extract. Positive results were obtained as compared to control group; analgesic effect was statistically significant ($P < 0.05$). These observations revealed that the fresh fruits extract of four kinds of Bell pepper at doses of 200 mg/kg and 400 mg/kg possess anti-inflammatory and pain suppressing activities possibly mediated via PG synthesis inhibition.

Keywords: *Capsicum annum*; analgesic; anti-inflammatory