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Evaluation of analgesic and anti-inflammatory potential of SPBV-02 in rodents

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The aim of the present study was to evaluate anti-inflammatory and analgesic potential of SPBV-02 (In-silico derived) using robust rodent models. The anti-inflammatory activity of SPBV-02 was investigated using carrageenan-induced paw edema and acetic acid induced vascular permeability in rats. Further, analgesic potential of SPBV-02 was screened using acetic acid induced writhing, eddy's hot plate induced algesia, tail immersion induced algesia and formalin test in rats. The results of present investigation revealed that oral administration of SPBV-02 (0.1mg/kg and 0.2mg/kg, orally) in carrageenan induced paw edema and acetic acid induced vascular permeability in rats produced a significant reduction in paw edema and dye extravasation in peritoneal fluid respectively in a dose dependent manner. Similarly, a prominent reduction in number of writhing and paw licking was also observed in acetic acid induced writhing and formalin test in rats. Moreover, SPBV-02 also exhibited a marked reduction in paw withdrawal latency in eddy's hot plate induced algesia and tail withdrawal latency in tail immersion induced algesia in rats in a dose dependent manner. In acetic acid induced pleurisy model, antioxidant studies revealed reduction in concentration of proteins and nitric oxide with marked elevation of superoxide dismutase and reduced glutathione enzymes in lung. Histopathology study of lung clearly indicated protective roles of SPBV-02 in acetic acid induced pleurisy model.

The results concluded that SPBV-02 has remarkable anti-inflammatory and analgesic potential. Yet advanced studies are needed to elucidate the possible mechanism of action of test compounds.

Speaker Biography

Saraswati Patel is currently working as a Ph.D scholar in Banasthali Vidyapith, India. Her area of interest are Metabolic diseases and their management and Molecular genetics. She has attended Fifteen days training programme on animal handling, models of pharmacological screening and instrumentation from Pinnacle Biomedical Research Institute (PBRI), Bhopal, India during 26th Dec, 2014 to and 7th Jan, 2015.

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