

2nd International Conference and Exhibition on **Traditional & Alternative Medicine** August 25-26, 2014 DoubleTree by Hilton Beijing, China

Effects of *Pothos scandens* L. extracts and isolated 5-oxoundecyl-3-hydroxypentanoate on experimental allergic rhinitis in rats

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The present study was carried out to clarify the effects of extracts and isolated compound of the aerial part of *P. scandens* L. on Type I hypersensitivity reaction experimental allergic rhinitis (AR) models. The test drugs like (PSE, PSA and 5OHP) are administered p.o. after the challenge with allergen. PS extracts and 5OHP at maximum dose levels was able to significantly decrease the time spent in nasal rubbing in Wistar rats sensitized to OVA (10 µg /10µl/nostril), in pre-antigen (OVA and alum mixture), while mean value indicated that only at 200 mg/kg showed significant ($P<0.001$) enhanced ability in reducing the number of sneezes, time spent in nasal rubbing and inducing a greater time lag in the onset of sneezing. In Lipopolysaccharide induced hyperplasia in rat model early and late symptoms evaluated in nasal lavage fluid (NLF) i.e Total (WBC) and differential leucocytes count (DLC) levels in NLF. Similarly estimation of histamine in nose tips and histological changes in nasal septal mucosa were evaluated. The results reveal a significant increase in WBC and DLC and in LPS induced AR. However, these elevated level of WBC and DLC significantly ($p<0.001$) reduced by PSE, PSA and 5OHP at maximum dose level in NLF. While, PSE at 200 mg kg⁻¹ demonstrated uniform inhibition of WBC and DLC count levels like eosinophil, neutrophil and monocyte count and elevation of lymphocyte count) in the NLF. Similar observations obtain for histamine in nose tip. However, the mean value indicated that the PSE at 200 mg/kg showed a significant restoration in all the parameters. Histopathology revealed justifies the effectiveness. The present finding provides evidence that *P. scandens* extract and isolated 5OHP inhibits Type I hypersensitivity reaction in allergic rhinitis. *P. scandens* is a potential herbal medicine for AR.

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