

## **In vitro assessment of trypsin inhibitory activity in seed extracts of medicinal legume *Mucuna pruriens***

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**Keywords:** *Mucuna pruriens*, proteases, proteins, trypsin inhibitors.

Disturbances in the tight regulation of trypsin activity was identified as the cause of certain fatal human diseases. Trypsin inhibitory proteins are recognized as a potential treatment strategy against such diseases. Seeds of legumes have been recognized as potential natural source of novel trypsin inhibitory proteins. The present study was designed to assess the activity of trypsin inhibitory proteins present in seed extract of *M. pruriens* local breed. Trypsin inhibitory activity of a concentration series of the extract was assessed by method explained by modified Kunitz (1947). Crude protein extract was subjected to fractionation using ammonium sulphate precipitation. The total protein content of the extract was estimated by modified Bradford assay (1976). The highest trypsin inhibitory activity ( $83.60 \pm 3.60\%$ ) was exerted by 20% concentration of the extract. Total protein content of crude protein extract was  $2.11 \pm 0.05$  mg/ml. The maximum specific trypsin inhibitory activity was observed in 20% crude protein extract. The specific trypsin inhibitory activity of *M. pruriens* seeds indicated a dose-dependent ( $r = 0.94$ ) activity. Maximum percentage trypsin inhibitory activity ( $81.20 \pm 1.21\%$ ) was shown by the protein fraction precipitated by the 60% ammonium sulphate saturation. The present study revealed that the seed of local breed of *M. pruriens* demonstrate a substantial trypsin inhibitory activity.