

Antidiarrhoeal and hypoglycemic effects of *Synedrella nodiflora*

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Abstract

The present study was designed to investigate antidiarrhoeal and hypoglycemic potential of the methanolic extract of *Synedrella nodiflora* (SN) (Asteraceae) leaves. The extract studied for antidiarrhoeal property using castor oil induced diarrheal model in mice. At the doses of 200 and 400 mg/kg body weight, the extract showed the antidiarrhoeal activity considerably 58.97% and 73.91% inhibition after 4h. Hypoglycemic effect was evaluated in normal and alloxan induced diabetic rat. The intraperitoneal administration of plant extract at a dose of 150 and 300 mg/kg body weight was given to fasting glucose loaded rat with regard to normal control during 1 hr. study period and in alloxan induced (110 mg/kg body weight) diabetic rat in comparison with reference drug Metformin Hydrochloride (100 mg/kg) during 3 days study period. Considerable drop in elevated blood glucose level was observed in the normoglycemic and alloxan induced diabetic rat. At a dose of 150 and 300 mg/kg the extract showed glucose level reduction of 57.87% and 66.83% in alloxan induced rat while 72% was found for Metformin after 3 days. Altogether, these results suggest that the MeOH extract could be used as a potential antidiarrhoeal agent along with its hypoglycemic potentiality. This is the first report of antidiarrhoeal and hypoglycemic potential of *Synedrella nodiflora*.

Keywords: *Synedrella nodiflora*, antidiarrhoeal, alloxan;

Introduction

Diarrhea is an alteration in the normal bowel movement, characterized by increased frequency of bowel sound and movement, wet stool, and abdominal pain (Guerrant et al., 2001). Clinically it is used to describe increased liquidity of stool, usually associated with increased stool weight and frequency (Suleiman et al., 2008). Oral rehydration therapy (ORT) has been identified as a key factor in the decline of child mortality rate due to diarrh-