ABSTRACT

Diabetes mellitus (DM), one of the most common endocrine metabolic disorders has caused significant morbidity and mortality due to microvascular (retinopathy, neuropathy and nephropathy) and macrovascular (heart attack, stroke and peripheral vascular disease) complications. The present research work was aimed to design and synthesize 2-allyl amino 4-methyl sulfanyl butyric acid (AMSB) and to evaluate its antidiabetic role in STZ induced experimental diabetic rats. The AMSB showed effective inhibition against α-amylase and α-glucosidase. Further, the effect of AMSB on carbohydrate metabolic enzymes, lipid profile, protein, glycoprotein and oxidative stress in STZ induced diabetic rats were investigated. On post treatment biochemical estimations were analyzed and found to be nearly normalized. These findings suggest that AMSB showed antidiabetic effects and may be used for further development of new therapeutic agents.