

**Alpha-amylase inhibition activity of Leaves of *Alstonia scholaris* R Br.**A. D. Wanjari<sup>\*1</sup>, A O Maske<sup>3</sup>, S.C. Akare<sup>2</sup>, R D Motghare<sup>1</sup>, A Y Sahare<sup>3</sup>, S S Bodhankar<sup>1</sup> and T P Nimbekar<sup>2</sup><sup>1</sup>Department of Pharmacology, Bajiraoji Karanjekar College of Pharmacy, Sakoli, Dist. Bhandara (M.S) 441802<sup>2</sup>Department of Pharmacognosy, Bajiraoji Karanjekar College of Pharmacy, Sakoli, Dist. Bhandara (M.S) 441802<sup>3</sup>Department of Pharmaceutical Chemistry, Bajiraoji Karanjekar College of Pharmacy, Sakoli, Dist. Bhandara (M.S) 441802**Abstract**

The present study was carried out to study the influence of alcoholic and aqueous extracts of leaves of *Alstonia scholaris* R Br. on  $\alpha$ -amylase inhibition activity by *in-vitro* antidiabetic model. Among the aqueous and alcoholic extract, The alcoholic extract of leaves of *Alstonia scholaris* R Br. exhibited significant alpha amylase inhibition *in-vitro*. Present study has revealed the significant alpha amylase inhibitory potential of leaves of *Alstonia scholaris* R Br.

**Keywords:** *Alstonia scholaris* R Br.,  $\alpha$ -amylase.

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**1. Introduction**

*Alstonia scholaris* R Br. (Apocynaceae) is commonly known as Saptaparna in Sanskrit and Saptaparni in Marathi widely distributed in India.[1,2] The traditional claim reported that the leaves are Stimulant, carminative, stomachic, bitter tonic, astringent aphrodisiac, expectorant, and anthelmintic activity.[3]

The leaves contain biochemical constituents such as alshomine, isoalschomine, tubotaiwine, lagunamine, 19-episolarimine, scholiracine, picraline, picrinine, picrarinal, nareline[4] non alkaloid compound along with lupeol acetate and  $\beta$ -sitosterol. The plant contain alkaloid iosabine 6,7-seco angustilobine B.[5] The earlier phytochemical investigation revealed leaves of *Alstonia scholaris* R Br. contain alkaloids, flavonoids, triterpenoides sterols, phenolic compounds In recent years, there is an increasing interest in research of natural anti-diabetic drugs. [6-10] Hence present study was planned to determine the claim of traditional use of leaves of *Alstonia scholaris* in diabetes.

**2. Material and Methods****2.1 Collection of Plant Material**

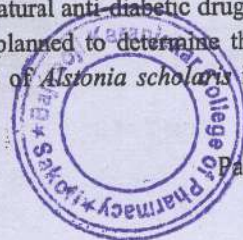
The leaves of plant were collected from Sakoli Bhandara District, Maharashtra, in the month of May 2009. The collected plant identified and authenticated by a botanist Dr. Arun Zingre, Department of Botany, M.B. Patel College of Science Sakoli, (Maharashtra).

**2.2 Extraction of plant material**

The collected leaves of plant were shade dried and coarsely powdered and extracted with ethanol by hot percolation and aqueous extraction by cold maceration. The solvent was removed at low temperature and both extracts were stored in refrigerator for further used.

**2.3 In vitro antidiabetic activity**

*In vitro* antidiabetic activity was carried out by previously reported method by Bauer *et al* [11]. From the stock extracts the various concentrations of alcoholic and aqueous extracts was prepared. A series of dilution of  $\alpha$ -amylase solution (1:1) was prepared and mixed with alcoholic and aqueous extract at various concentrations



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