Docking Studies on Identified Constituents of Helicteres isora as Antidiabetic Agents

Abstract

Diabetes mellitus is one of the major disease currently affecting an estimated 143 million people worldwide and the number is growing rapidly. Now a day, as there is a renewed interest in the traditionally used herbal drugs, the present study was aimed to screen the identified constituents of Helicteres isora for determining the potent constituent with antidiabetic activity using insilico approach. Docking studies of the constituents were carried out using autodock 4.0 and the receptors used were aldose reductase and insulin receptor protein. Analysis of the results showed that, with both the receptors, yohimbine had the best binding energy and so most potent antidiabetic constituent among the identified constituents of Helicteres isora.

References

- Oubre, A. Y; Carlson, T. J; King, S. R; Reaven, G. M. From plant to patient: an ethanobotanical approach to the identification of new drugs for the treatment of NIDDM.
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- CSIR. The Wealth of India: Raw materials. 1988,
- Filomena, C; Giancarlo, A. S; Rosa, T; Monica, R. L; Farnesco, M. Invitro activities of Citrus medica diamante relevant to treatment of diabetes and alzheimer’s disease. Phytother res. 2007, 21, 427-433.
- PDB Database:http://www.rcsb.org/pdb/home/home.do
- Thompson; Mark, A. &quot;Argus lab 4.01&quot; www.arguslab.com plknaria software LLC, Seattle, WA.
- Sundararajan, S; BAlajee, M; Dhanarajan, M. S. comparative docking analysis of neuraminidase with various inhibitors. 2010, 2(3), 83-5.
- Jayasree, G; Aashish,B; Sarfaraz,L. Molecular docking studies of banana flower flavonoids as insulin receptor tyrosine kinase activators as a cure for diabetes mellitus. 2012, 8(5), 216-220.

Index Terms

Computer Science
Applied Sciences

Keywords
Docking  Antidiabetic Study  Autodock 4.0  Interdisciplinary Research  Insilico Approach  Helicteres Isora.