POSTER PRESENTATION



Open Access

In vitro anti-HIV activity of crude extracts from *Tinospora cordifolia*

Mamidala Estari^{*}, Lunavath Venkanna, Annem Srinivas Reddy

From First International Science Symposium on HIV and Infectious Diseases (HIV SCIENCE 2012) Chennai, India. 20-22 January 2012

Background

Human immunodeficiency virus (HIV) infection causes acquired immune deficiency syndrome (AIDS) and is a global public health issue. Anti-HIV therapy involving chemical drugs has improved the life quality of HIV/ AIDS patients. However, emergence of HIV drug resistance, side effects and the necessity for long-term anti-HIV treatment are the main reasons for failure of anti-HIV therapy. Therefore, it is essential to isolate novel anti-HIV therapeutics from natural resources. The aim of the present study was to evaluate the invitro anti-HIV activity of *T. cordifolia* plant extracts.

Methods

Extracts were prepared from dried leaves in n-hexane, dichloromethane, ethyl acetate and n-butanol. A toxicity study was performed on all crude extracts using peripheral mononuclear blood cells (PBMCs) isolated from whole blood. HIV-1 RT inhibition activity of the all solvent extracts of *T. cardifolia* was determined using a commercial kit.

Results

Among the tested extracts, the n-hexane and n-butanol crude extracts of *T. cordifolia* showed moderate cytotoxic activities against PBMCs with CC50 values ranging from 5.7-12.0 μ g/ml. In the HIV-1 reverse transcriptase assay *T. cardifolia* plant extracts showed good inhibitory activity, which was near that of the reference drug. Ethyl acetate extract shows 85 percentage of HIV-1 RT inhibition activity at a concentration of 20 mg/ml.

* Correspondence: estari08@gmail.com

Infectious Diseases Research Lab, Department of Zoology, Kakatiya University, Warangal, Andhra Pradesh, India



The leaves of *T. cardifolia* extracts are shows anti-HIV 1 activity and this plant has great potential for developing useful drugs. Extraction of important biologically-active phytochemicals from this plant will certainly be helpful in protecting and treating various viral diseases in human beings.

Published: 4 May 2012

doi:10.1186/1471-2334-12-S1-P10 Cite this article as: Estari *et al*.: In vitro anti-HIV activity of crude extracts from *Tinospora cordifolia*. *BMC Infectious Diseases* 2012 12(Suppl 1):P10.

Submit your next manuscript to BioMed Central and take full advantage of:

- Convenient online submission
- Thorough peer review
- No space constraints or color figure charges
- Immediate publication on acceptance
- Inclusion in PubMed, CAS, Scopus and Google Scholar
- Research which is freely available for redistribution

) BioMed Central

Submit your manuscript at www.biomedcentral.com/submit



© 2012 Estari et al; licensee BioMed Central Ltd. This is an Open Access article distributed under the terms of the Creative Commons Attribution License (http://creativecommons.org/licenses/by/2.0), which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited.