

ANNUAL VARIATION IN CAMPTOTHECIN AND 9-METHOXY CAMPTOTHECIN ACCUMULATION AND ITS DETERMINATION IN DIFFERENT PARTS OF *NOTHAPODYTES NIMMONIANA* BY HPLC ANALYSIS

Bull. Pharm. Res. 2016;6(1):14-20.

Nothapodytes nimmoniana is a rich source of camptothecin (CPT) and 9-methoxy camptothecin (9-MCPT), a well known anticancer alkaloid. We investigated annual variation in the concentration of CPT and 9-MCPT in different parts of *N. nimmoniana*, collected during three consecutive year starting from 2008 to 2010. The CPT and 9-MCPT content in *N. nimmoniana* extracts was determined by HPLC analysis. The maximum CPT and 9-MCPT accumulation in different parts of *N. nimmoniana* was found during the year 2010, followed by year 2008 and 2009. The CPT and 9-MCPT accumulation in different parts of *N. nimmoniana* collected during all the three years was in the following order root > fruit > stem > leaf. The root collected in the month of February 2010, showed higher accumulation of CPT (2.65%) and 9-MCPT (1.06%) than fruit, stem and leaf of *N. nimmoniana*. The root showed more than 2-fold accumulation of CPT and 9-MCPT than fruit, stem and leaves of *N. nimmoniana*. The months starting from October to February were characterized by high humidity, low air temperature and less evaporation rate which enhanced CPT and 9-MCPT accumulation in different parts of *N. nimmoniana* during all the three years (2008 to 2010). Moreover the variations in CPT and 9-MCPT accumulation might be because of changes in seasonal patterns, weather events, temperature changes, biotic and abiotic stresses. These findings indicate that the accumulation of CPT and 9-MCPT in different parts of *N. nimmoniana* vary annually.



Corresponding author: **Dr. Ajay Sharma**

Tel.: +251 948422663

Research Paper Received: Dec 26, 2015; Accepted: Jan 21, 2016

Published: Apr 30, 2016

Total pages: 07; References: 30

© Bulletin of Pharmaceutical Research 2016

Access the article at ResBib, DRJI, Google Scholar, OAJI, DAIJ,

① <http://www.researchbib.com>

② <http://www.drji.org>

③ <http://scholar.google.co.in>

④ <http://oaji.net/>

⑤ <http://www.daij.org/>

Sharma A, Sharma P, Gurav AM

Department of Pharmacy, College of Health Sciences,
Mizan-Tepi University, Mizan Teferi, Ethiopia
e-mail: ajaysharmapharma1979@gmail.com

