Short Communication

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Phenolic acid tethered co-drugs of isoniazid: Synthesis, pharmacokinetics and investigation of antimycobacterial and hepatoprotective potential

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Abstract

According to WHO statistics of 2018, there were an estimated 1.2 million TB deaths among HIVnegative people. Isoniazid is being used for more than 60 years in the treatment of this deadly disease, but emergence of resistance towards this drug and metabolic and morphological aberrations in the liver have raised serious concerns regarding its continued use in future. To overcome these hazardous effects, a novel hepatoprotective and antimycobacterial prodrug strategy was developed by combining INH with phenolic acids (gallic acid, syringic acid &vanillic acid) as antioxidant promoeities for probable synergistic effect. Prodrugs synthesized by Schotten Baumann reaction were characterized by spectral analysis and in vitro and in vivo release studies were carried out using HPLC. Their hepatoprotective potential was evaluated in male Wistar rats by performing the liver function tests, oxidative stress markers and histopathology studies. The antimycobacterial efficacy of prodrugs was examined in terms of its ability to decrease the lung bacillary load in Balb/c mice infected intravenously with Mycobacterium tuberculosis..

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Biography

Neha V. Bhilare has completed her PhD recently from BharatiVidyapeeth's Poona College of Pharmacy. She is currently working as an Associate Professor at Arvind Gavali College of Pharmacy and is actively involved in research, learning and teaching. She has published papers in reputed journals with good impact factors and also authored a chapter on "Prodrugs for Lipophilicity enhancement".

