

Metabolism of goniiothalamine in animal and microbial system

ABSTRACT

Of the twenty microorganisms screened for metabolism of goniiothalamine only *Streptomyces aureofaciens* ATCC 10762 and *Nocardia* species NRRL 5646 produced two metabolites, 3,4-dihydrogoniiothalamine and 3,4,7,8 tetrahydrogoniiothalamine. The identity of the isolated metabolites were established using TLC, HPLC, MS, IR, and ¹H- and ¹³C-NMR spectroscopy. In addition, the substrate had been transformed into two unknown metabolites by *Aspergillus niger* ATCC 11394 and *Streptomyxa affinis* ATCC 6737 in low yield. Three of the metabolites were also detected and identified in the urine and blood samples of the goniiothalamine-treated Sprague-Dawley rats. The obtained results are in agreement with and support the principle of microbial models of mammalian metabolism.

Keyword: Biotransformation; Goniiothalamine; *Goniiothalamus* spp.; Metabolites; Sprague-Dawley rat