

Biotransformation of Cholic Acid Using Different Fungi

Amal Al-Aboudi

Chemistry Department, University of Jordan, Amman, Jordan

Tel. 00962-6-5355000/2355; Fax: 00962-6-5355560

e-mail: alaboudi@ju.edu.jo, amal001@hotmail.com

Microbial hydroxylation has been frequently employed to achieve the functionalization of inactive saturated carbon atoms, which are inaccessible by chemical methods. It is believed that hydroxylation of biologically active steroids may influence their binding to their receptors and may enhance existing properties or lead to new biological activities. Biotransformation of the well-known bile acid, cholic acid, one, was investigated using six different fungi, namely *Aspergillus niger*, *Rhizopus stolonifer*, *Culvularia lunata*, *Cephalosporium aphidicola* and *Fusarium lini*. The results showed that only two of the fungi were effective, these where *Aspergillus niger* and *Rhizopus stolonifer*. The transformation lead to the isolation of a number of new hydroxylated derivatives of cholic acid. The transformed products of each of the two fungi showed different hydroxylation patterns indicating that this method might be used for specific hydroxylation of cholic acid and probably steroids.