Ali Kuru et al., Int J Chem Res 2018
http://dx.doi.org/10.18689/2642-1615.a1.003

Microbial Transformation of Testosterone by *Cladosporium cladosporioides*

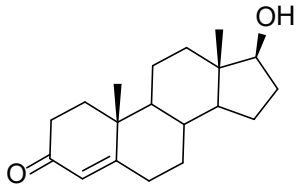
Ali Kuru* and **Kudret Yildirim**
Chemistry Department, Sakarya University, Turkey

Fungal steroid bio transformations have been widely used to produce more valuable and functionalized compounds such as steroid drugs and hormones due to their high regio and stereo selectivities.

Cladosporium is a large genus of the Ascomyta. *Cladosporium* species are mostly saprobes and also include common endophytes, plant pathogens and even hyperparasites of other fungi. Some *Cladosporium* species are also considered pathogenic to humans and animals.

Cladosporium cladosporioides is an endophytic fungus widely distributed around the world and it is pathogenic to some plants. This fungus is also considered pathogenic to animals and humans. As far as biotransformations by *C. cladosporioides* are concerned, there are no reports on steroid biotransformations.

In this work, testosterone was incubated with *C. cladosporioides* MRC 70282 for 5 days. Incubation of testosterone with the fungus mainly afforded some hydroxylated or oxidised metabolites at C-16. Oxidation and epimerisation of ***I*** at C-17 were also observed.



(***I***)

The metabolites were separated by column chromatography. Structures of the metabolites were determined by comparison of their melting points, ^{1}H NMR, ^{13}C NMR and IR spectra with those of the starting material.

Biography

Dr. Ali Kuru was born in 1982, in Kahramanmaras/Turkey. He graduated Yuzuncu Yıl University, Faculty of Education, Chemistry Teaching Department at 2008 and had a master degree from Yuzuncu Yıl University, Health Sciences Institute, Biochemistry branch at 2011. Same year he started his career at Chemistry Department of Sakarya University as a research assistant and at the same time started his PhD at Biochemistry branch of same university and graduated at 2017.