

Title	Role of the 8-double bond of lanosterol in the enzyme-substrate interaction of cytochrome P-450 _{14DM} (lanosterol 14 α -demethylase)
Sub Title	
Author	青山, 由利(Aoyama, Yuri) 吉田, 雄三(Yoshida, Yuzo) 園田, よし子(Sonoda, Yoshiko) 佐藤, 良博(Sato, Yoshihiro)
Publisher	共立薬科大学
Publication year	1989
Jtitle	共立薬科大学研究年報 (The annual report of the Kyoritsu College of Pharmacy). No.34 (1989.) ,p.101- 101
JaLC DOI	
Abstract	
Notes	抄録
Genre	Technical Report
URL	https://koara.lib.keio.ac.jp/xoonips/modules/xoonips/detail.php?koara_id=AN00062898-00000034-0101

慶應義塾大学学術情報リポジトリ(KOARA)に掲載されているコンテンツの著作権は、それぞれの著作者、学会または出版社/発行者に帰属し、その権利は著作権法によって保護されています。引用にあたっては、著作権法を遵守してご利用ください。

The copyrights of content available on the KeiO Associated Repository of Academic resources (KOARA) belong to the respective authors, academic societies, or publishers/issuers, and these rights are protected by the Japanese Copyright Act. When quoting the content, please follow the Japanese copyright act.

Role of the 8-Double Bond of Lanosterol in the Enzyme-Substrate Interaction of Cytochrome P-450_{14DM} (Lanosterol 14 α -demethylase) *

Yuri AOYAMA**, Yuzo YOSHIDA**, Yoshiko SONODA and Yoshihiro SATO

青山由利**, 吉田雄三**, 園田よし子, 佐藤良博

The role of the 8-double bond of lanosterol in the enzyme-substrate interaction of yeast cytochrome P-450_{14DM} (lanosterol 14 α -demethylase) was studied by analyzing metabolism of 8-lanostene-3 β ,32-diol, 7-lanostene-3 β ,32-diol, 6-lanostene-3 β ,32-diol and lanostane-3 β ,32-diol by the cytochrome. 8-Lanostene-3 β ,32-diol was actively metabolized by cytochrome P-450_{14DM} and converted to the 32-nor-14-unsaturated metabolite. 7-Lanostene-3 β ,32-diol was also metabolized by the cytochrome, but the rate of metabolism was low. However, the cytochrome failed to catalyze the conversion of 6-lanostene-3 β ,32-diol and lanostane-3 β ,32-diol to their 32-nor metabolites. Spectral analysis of the sterol-cytochrome complexes and kinetics of cytochrome P-450_{14DM} reduction in the presence of sterols indicated that 6-lanostene-3 β ,32-diol and lanostane-3 β ,32-diol could not interact with the substrate site of the cytochrome. These results revealed that the 8-double bond of lanosterol plays an important role in the enzyme-substrate interaction of cytochrome P-450_{14DM}.

* 本報告は *Biochem. Biophys. Acta.*, **1001**, 196—200 (1989) に発表.

** 武庫川女子大学・薬学部