

Title	Inhibitory effect of 15-oxygenated sterols on cholesterol synthesis from 24, 25-dihydrolanosterol
Sub Title	
Author	森崎, 益雄(Morisaki, Masuo) 園田, よし子(Sonoda, Yoshiko) 牧野, 智美(Makino, Tomomi) 荻原, 典子(Ogihara, Noriko) 池川, 信夫(Ikekawa, Nobuo) 佐藤, 良博(Sato, Yoshihiro)
Publisher	共立薬科大学
Publication year	1986
Jtitle	共立薬科大学研究年報 (The annual report of the Kyoritsu College of Pharmacy). No.31 (1986.) ,p.55- 55
JaLC DOI	
Abstract	
Notes	抄録
Genre	Technical Report
URL	https://koara.lib.keio.ac.jp/xoonips/modules/xoonips/detail.php?koara_id=AN00062898-00000031-0055

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.

Inhibitory Effect of 15-Oxygenated Sterols on Cholesterol Synthesis from 24, 25-Dihydrolanosterol*

MASUO MORISAKI, YOSHIKO SONODA, TOMOMI MAKINO, NORIKO OGIHARA,
Nobuo IKEKAWA**, and Yoshihiro SATO

森崎益雄, 園田よし子, 牧野智美, 荻原典子, 池川信夫,** 佐藤良博

Several 15-oxygenated sterols were examined as to their inhibitory activity toward cholesterol synthesis from [24,25-³H]-24,25-dihydrolanosterol in the 10,000×g supernatant fraction of a rat liver homogenate (Table 1). At 40 μM, three 15α-hydroxylated compounds, 14α-ethylcholest-7-ene-3β,15α-diol, 14α-methylcholest-7-ene-3β,15α-diol, and lanost-7-ene-3β,15α-diol, were found to be extremely potent inhibitors (more than 90% inhibition) of dihydrolanosterol metabolism. The inhibitory effect of the C-15 substituents appears to be in the order of : 15α-hydroxyl>15-ketone>15β-hydroxyl.

Table I. Cholesterol biosynthesis during incubation of the S-10 fraction of a rat liver homogenate with [24,25-³H]-24,25-dihydrolanosterol in the presence of oxygenated sterols.

Compound	Distribution of radioactivity in		Inhibition (%)
	Dihydrolanosterol fr. (%)	Cholesterol fr. (%)	
None (Control)	32.0	31.2	—
Cholest-8(14)-ene-3β,15β-diol	32.1	29.7	5
Cholest-(14)-en-3β-ol-15-one	49.3	18.1	42
14α-Methylcholest-7-en-3β-ol-15-one	51.8	16.2	48
14α-Methylcholest-7-ene-3β,15α-diol	89.9	1.3	96
14α-Ethylcholest-7-en-3β-ol-15-one	66.3	8.8	72
14α-Ethylcholest-7-ene-3β,15α-diol	88.5	2.3	93
14α-Ethylcholest-7-ene-3β,15β-diol	63.1	10.0	68
Lanost-7-en-3β-ol-15-one	85.6	4.2	87
Lanost-7-ene-3β,15α-diol	88.5	1.2	96
Lanost-7-ene-3β,15β-diol	55.9	15.3	51
15ξ-Fluorolanost-7-en-3β-ol	59.4	12.3	61
Lanost-7-en-3β-ol	39.6	25.6	18

* 本報告は *J. Biochem.*, **99**, 597—600 (1986) に発表.

** 東京工業大学理学部.