慶應義塾大学学術情報リポジトリ
Keio Associated Repository of Academic resouces

Title	Stereochemistry of hydrogenation of (-)-dehydrogriseofulvin to (+)-griseofulvin with a cell-free system of streptomyces cinereocrocatus
Sub Title	
Author	小田, 泰子(Oda, Taiko) 佐藤, 良博(Sato, Yoshihiro)
Publisher	共立薬科大学
Publication year	1985
Jtitle	共立薬科大学研究年報 (The annual report of the Kyoritsu College of Pharmacy). No.30 (1985.) ,p.107- 107
JaLC DOI	
Abstract	
Notes	抄録
Genre	Technical Report
URL	https://koara.lib.keio.ac.jp/xoonips/modules/xoonips/detail.php?koara_id=AN00062898-00000030-0107

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.

Stereochemistry of Hydrogenation of (−)-Dehydrogriseofulvin to (+)-Griseofulvin with a Cell-Free System of *Streptomyces cinereocrocatus**

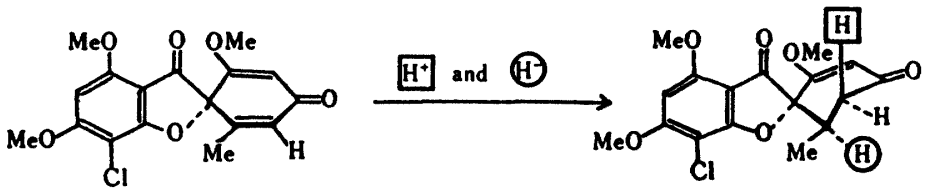
Taiko ODA and Yoshihiro SATO

小田泰子，佐藤良博

To elucidate the stereochemistry of the hydrogenation of (−)-dehydrogriseofulvin (**1**) to (+)-griseofulvin (**2**) by *streptomyces cinereocrocatus,* we have prepared from the microorganism a cell-free system which can transform **1** to **2**. The hydrogenation activity of the cell-free system increased in the presence of added reduced nicotinamide adenine dinucleotide phosphate (NADPH) (Table I). The stereochemistry of hydrogenation was determined by 400 MHz proton nuclear magnetic resonance (^{1}H-NMR) analysis of the products obtained by the enzymatic conversion of (−)-[5′-^{2}H]-dehydrogriseofulvin and also by the enzymatic conversion of **1** in medium containing deuterium oxide (Chart 1).

Table. I Effect of Cofactors on the Transformation of (−)-Dehydrogriseofulvin to (+)-Griseofulvin by Cell-free Systems of *Streptomyces cinereocrocatus*

cofactor	(+)-Griseofulvin formed (%)	(−)-Dehydrogriseofulvin recovered (%)
none	18	80
NADH (2mg/10ml)	18	78
NADPH (2mg/10ml)	64	36
NADH and NADPH (2mg each /10ml)	62	38



1 **2**

Chart 1.

* 本報告は，*Chem. Pharm. Bull.*, 33 (3), 1077—1082 (1985) に発表