PCT WORLD INTELLECTUAL PROPERTY ORGANIZATION
International Bureau

INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(51) International Patent Classification 6 : C12P 7/62, C07C 69/65 — A1

(11) International Publication Number: WO 97/22710

(43) International Publication Date: 26 June 1997 (26.06.97)

(21) International Application Number: PCT/US96/19423

(22) International Filing Date: 18 December 1996 (18.12.96)

(30) Priority Data:
08/575,334 20 December 1995 (20.12.95) US

(71) Applicant: SHERING CORPORATION [US/US]; 2000 Galloping Hill Road, Kenilworth, NJ 07033 (US).

(72) Inventors: NIELSEN, Christopher, M.; 101 Joseph Lane, Mine Hill, NJ 07803 (US). SUDHAKAR, Anantha; 18 Snowden Road, East Brunswick, NJ 08816 (US).

(74) Agents: JEANETTE, Henry, C. et al.; Schering-Plough Corporation, Patent Dept. K-6-1 1990, 2000 Galloping Hill Road, Kenilworth, NJ 07033-0530 (US).

(81) Designated States: AL, AM, AU, AZ, BA, BB, BG, BR, BY, CA, CN, CZ, EE, GE, HU, IL, IS, JP, KG, KR, KZ, LC, LK, LR, LT, LV, MD, MG, MK, MN, MX, NO, NZ, PL, RO, RU, SG, SI, SK, TJ, TM, TR, TT, UA, UZ, VN, ARIPO patent (KE, LS, MW, SD, SZ, UG), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG).

Published

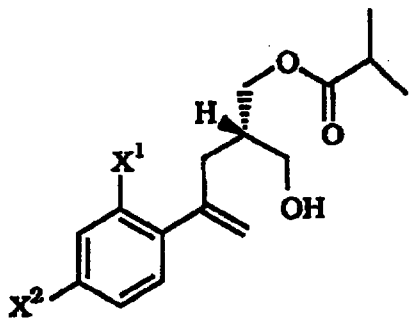
With international search report.

Before the expiration of the time limit for amending the claims and to be republished in the event of the receipt of amendments.

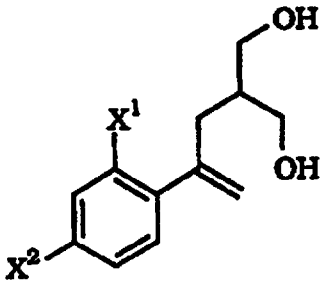
(54) Title: PROCESS FOR PREPARING INTERMEDIATES FOR THE SYNTHESIS OF ANTIFUNGAL AGENTS

(57) Abstract

A process for producing a crystalline chiral hydroxy ester of formula (1.0) is disclosed. The process comprises reacting a diol of formula (2.0), with an effective amount of isobutyric anhydride and an effective amount of a lipase enzyme in an effective amount of acetonitrile, said reaction being conducted at a low temperature, and wherein X^1 and X^2 are each independently selected from F or Cl.



(1.0)



(2.0)