(12) International Application Status Report

Received at International Bureau: 27 April 2001 (27.04.2001)
Information valid as of: (..)
Report generated on: 24 February 2020 (24.02.2020)

(10) Publication number:
WO2001/079194

(43) Publication date:
25 October 2001 (25.10.2001)

(26) Publication language:
Spanish (ES)

(21) Application Number:
PCT/ES2001/000143

(22) Filing Date:
10 April 2001 (10.04.2001)

(25) Filing language:
Spanish (ES)

(31) Priority number(s):
P 200000989 (ES)

(31) Priority date(s):
14 April 2000 (14.04.2000)

(31) Priority status:
Priority document received (in compliance with PCT Rule 17.1)

(51) International Patent Classification:
C07D 213/61 (2006.01); ***C07D 401/12*** (2006.01)

(71) Applicant(s):
ESTEVE QUIMICA, S.A. [ES/ES]; Avda. Mare de Deu de Montserrat, 12 E-08024 Barcelona (ES) *(for all designated states except US)*
COPPI, Laura [IT/ES]; Avda. Mare de Deu de Montserrat, 12 E-08024 Barcelona (ES) *(for US only)*
BERENGUER MAIMÓ, Ramón [ES/ES]; Avda. Mare de Deu de Montserrat, 12 E-08024 Barcelona (ES) *(for US only)*

(72) Inventor(s):
COPPI, Laura; Avda. Mare de Deu de Montserrat, 12 E-08024 Barcelona (ES)
BERENGUER MAIMÓ, Ramón; Avda. Mare de Deu de Montserrat, 12 E-08024 Barcelona (ES)

(74) Agent(s):
CARPINTERO LOPEZ, Francisco; Herrero & Asociados, S.L. Alcalá, 35 E-28014 Madrid (ES)

(54) Title (EN): METHOD FOR OBTAINING DERIVATIVES OF [[(PYRIDIL SUBSTITUTED)METHYL]THIO]BENZIMIDAZOL

(54) Title (FR): PROCEDE PERMETTANT D'OBTENIR DES DERIVES DE [[(PYRIDIL SUBSTITUE)METHYL]THIO]BENZIMIDAZOLE

(54) Title (ES): PROCEDIMIENTO PARA LA OBTENCIÓN DE DERIVADOS DE [[(PIRIDIL SUSTITUIDO)METIL]TIO]BENCIMIDAZOL

(57) Abstract:

(EN): The invention relates to a method for obtaining derivatives of [[(pyridil substituted)methyl]thio] benzimidazol (I), wherein R_1, R_3 and R_4 independently represent hydrogen, alkyl, alkoxy or fluorinated alkoxy with 1 to 6 carbon atoms; R_2 represents nitro, halogen, alkoxy or halogenated alkoxy with 1 to 6 carbon atoms or a $-O-(CH_2)_n-OR_8$ group, wherein n is a whole number from 1 to 6 and R_8 represents hydrogen or an alkyl group with 1 to 6 carbon atoms. The method involves the following steps: (a) reacting a methylpyridine N-oxide with a carboxylic acid or sulfonic acid anhydride and (b) reacting the intermediate product formed in step (a) with a corresponding mercaptobenzimidazole. The compounds (I) are useful for synthesizing [[(pyridil substituted)methyl]thio] benzimidazol, for instance, omeprazole, lansoprazole, rabeprazole o pantoprazole.

(FR): L'invention concerne un procédé permettant d'obtenir des dérivés de [[(pyridil substitué)méthyl]thio]benzimidazole (I), dans lequel R_1, R_3 et R_4, représentent chacun indépendamment, hydrogène, alkyle, alcoxy ou alcoxy fluoré contenant entre 1 et 6 atomes de carbone, et R_2 représente nitro, halogène, alcoxy ou alcoxy halogéné contenant entre 1 à 6 atomes de carbone ou un groupe $-O-(CH_2)_n-OR_8$, dans lequel n vaut un entier compris entre 1 et 6 et R_8 représente hydrogène ou un groupe alkyle contenant entre 1 et 6 atomes de carbone. Ce procédé consiste (a) à faire réagir un N-oxyde d'une méthylpyridine avec un anhydride d'acide carboxylique activé ou d'acide sulfonique, et (b) à faire réagir l'intermédiaire formé dans l'étape (a) avec un mercaptobenzimidazole correspondant. Les composés selon l'invention (I) conviennent pour synthétiser des dérivés de [[(pyridil substitué)méthyl]thio]benzimidazole, tels que l'oméprazole, le lansoprazole, le rabeprazole ou le pantoprazole.

(ES): El procedimiento para la obtención de derivados de [[(piridil sustituido)metil]tio]bencimidazol (I), donde cada uno de R1, R3 y R4, independientemente entre sí, es hidrógeno, alquilo, alcoxi o alcoxi fluorado de 1 a 6 átomos de carbono, y R2 es nitro, halógeno, alcoxi o alcoxi halogenado de 1 a 6 átomos de carbono, o un grupo -O-(CH2)n-OR8, donde n es un número entero comprendido entre 1 y 6, y R8 representa hidrógeno o un grupo alquilo de 1 a 6 átomos de carbono, comprende (a) hacer reaccionar un N-óxido de una metilpiridina con un anhídrido de ácido carboxílico activado o de ácido sulfónico, y (b) hacer reaccionar el intermedio formado en la etapa (a) con un mercaptobencimidazol correspondiente. Los compuestos (I) son útiles para sintetizar derivados de [[(piridil sustituido)metil]sulfinil]bencimidazol, como por ejemplo omeprazol, lansoprazol, rabeprazol o pantoprazol.

International search report:
Received at International Bureau: 24 July 2001 (24.07.2001) [ES]

International Report on Patentability (IPRP) Chapter II of the PCT:
Chapter II demand received: 05 November 2001 (05.11.2001)

(81) Designated States:
AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW
European Patent Office (EPO) : AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR
African Intellectual Property Organization (OAPI) : BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG
African Regional Intellectual Property Organization (ARIPO) : GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW
Eurasian Patent Organization (EAPO) : AM, AZ, BY, KG, KZ, MD, RU, TJ, TM