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- (71) **Applicant (for all designated States except US):** CADILA HEALTHCARE LIMITED [IN/IN]; Zydus Tower, Satellite Cross Road, Ahmedabad-380 015, Gujarat (IN).
- (72) **Inventors; and**
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- (81) **Designated States (unless otherwise indicated, for every kind of national protection available):** AE, AG, AL, AM, AO, AT, AU, AZ, BA, BB, BG, BH, BR, BW, BY, BZ, CA, CH, CL, CN, CO, CR, CU, CZ, DE, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LY, MA, MD, ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PE, PG, PH, PL, PT, QA, RO, RS, RU, RW, SC, SD, SE, SG, SK, SL, SM, ST, SV, SY, TH, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW.
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(54) **Title:** PROCESS FOR PREPARING FLUTICASONE PROPIONATE/FUROATE

(57) **Abstract:** The present invention relates to an improved process for the preparation of substituted Fluticasone derivatives. The invention also reveals the processes for the purification of Fluticasones and related intermediates to provide the highly pure product.



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INTERNATIONAL SEARCH REPORT

International application No PCT/IN2011/000600

A. CLASSIFICATION OF SUBJECT MATTER INV. C07J31/00 C07J41/00 ADD.				
According to International Patent Classification (IPC) or to both national classification and IPC				
B. FIELDS SEARCHED				
Minimum documentation searched (classification system followed by classification symbols) C07J				
Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched				
Electronic data base consulted during the international search (name of data base and, where practical, search terms used) EPO-Internal, BEILSTEIN Data, CHEM ABS Data				
C. DOCUMENTS CONSIDERED TO BE RELEVANT				
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.		
X	DATABASE CA [Online] CHEMICAL ABSTRACTS SERVICE, COLUMBUS, OHIO, US; MALANGA, FRANCO ET AL: "Process for the preparation of androstadienecarbothioates", XP002672503, retrieved from STN Database accession no. 2009:1191620	1-15		
Y	abstract & IT 2005 MI2 419 A1 (FARMABIOS S.P.A., ITALY) 20 March 2006 (2006-03-20) ----- -/--	1-15		
<input checked="" type="checkbox"/> Further documents are listed in the continuation of Box C. <input checked="" type="checkbox"/> See patent family annex.				
* Special categories of cited documents : <table style="width: 100%; border: none;"> <tr> <td style="width: 50%; border: none; vertical-align: top;"> "A" document defining the general state of the art which is not considered to be of particular relevance "E" earlier document but published on or after the international filing date "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified) "O" document referring to an oral disclosure, use, exhibition or other means "P" document published prior to the international filing date but later than the priority date claimed </td> <td style="width: 50%; border: none; vertical-align: top;"> "T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention "X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone "Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art. "&" document member of the same patent family </td> </tr> </table>			"A" document defining the general state of the art which is not considered to be of particular relevance "E" earlier document but published on or after the international filing date "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified) "O" document referring to an oral disclosure, use, exhibition or other means "P" document published prior to the international filing date but later than the priority date claimed	"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention "X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone "Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art. "&" document member of the same patent family
"A" document defining the general state of the art which is not considered to be of particular relevance "E" earlier document but published on or after the international filing date "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified) "O" document referring to an oral disclosure, use, exhibition or other means "P" document published prior to the international filing date but later than the priority date claimed	"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention "X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone "Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art. "&" document member of the same patent family			
Date of the actual completion of the international search 28 March 2012	Date of mailing of the international search report 11/04/2012			
Name and mailing address of the ISA/ European Patent Office, P.B. 5818 Patentlaan 2 NL - 2280 HV Rijswijk Tel. (+31-70) 340-2040, Fax: (+31-70) 340-3016	Authorized officer Watchorn, Peter			

INTERNATIONAL SEARCH REPORT

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C(Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	WO 2004/001369 A2 (SUN PHARMACEUTICAL IND LTD [IN]; JADAV KANAKSINH JESINGBHAI [IN]; KAMB) 31 December 2003 (2003-12-31) cited in the application page 1, line 18 - page 2, line 14; examples 4-8 -----	1-15
Y	US 4 335 121 A (PHILLIPPS GORDON H ET AL) 15 June 1982 (1982-06-15) cited in the application column 11-12 - preparation XIX; column 13-14, preparation XXXI examples 5, 19 column 21-22, preparation LIV -----	1-15
Y	WO 02/12265 A1 (GLAXO GROUP LTD [GB]; BIGGADIKE KEITH [GB]; COOTE STEVEN JOHN [GB]; NI) 14 February 2002 (2002-02-14) cited in the application page 38, line 1 - page 40, line 8 example 1 -----	1-15
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Y	US 2006/009435 A1 (KASPI JOSEPH [IL] ET AL) 12 January 2006 (2006-01-12) paragraph [0033] paragraph [0039] -----	1-15

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