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**Declarations under Rule 4.17:**

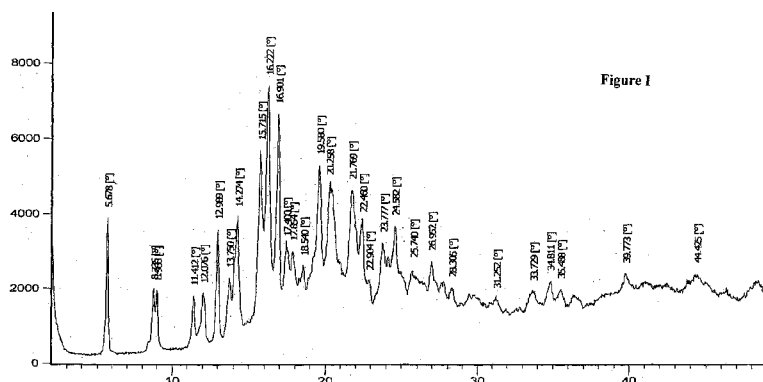
— of inventorship (Rule 4.17(iv))

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[Continued on next page]

(54) **Title:** PROCESS FOR PREPARATION OF 4-[4-(4-(HYDROXYDIPHENYLMETHYL)-1-PIPERIDINYL]-1-OXOBUTYL]- $\alpha,\alpha$ -DIMETHYLBENZENE ACETIC ACID METHYL ESTER AND USE THEREOF



(57) **Abstract:** The present invention provides an improved process for preparing fexofenadine, its pharmaceutically acceptable salts and solvates thereof, the process comprising reacting methyl-4-(4-halo-1-oxobutyl)- $\alpha,\alpha$ -dimethylphenyl acetate with  $\alpha,\alpha$ -diphenyl-4-piperidinemethanol in an alkyl nitrile solvent to prepare 4-[4-(4-(hydroxydiphenylmethyl)-1-piperidinyl]-1-oxobutyl]- $\alpha,\alpha$ -dimethylbenzene acetic acid alkyl ester, which is further converted into fexofenadine.

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## INTERNATIONAL SEARCH REPORT

International application No.  
PCT/IN 2009/000250

## A. CLASSIFICATION OF SUBJECT MATTER

IPC<sup>8</sup>: **C07D 211/22** (2006.01)

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)

IPC<sup>8</sup>: C07D

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 practicable, search terms used)

EPOQUE: EPODOC, WPI, TXT; CAS: REGISTRY, CA

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 5750703 A (D'AMBRA, Thomas E.) 12 May 1998 (12.05.1998) [cited in the application] <i>Claim 9, description col. 16-17, examples 5-7</i>	1-3
X	WO 1995/000480 A1 (MERRELL DOW PHARMA) 5 January 1995 (05.01.1995) <i>Claim 17, scheme L, example 46</i>	1-3
X	WO 2005/019175 A1 (CIPLA Ltd. et al.) 3 March 2005 (03.03.2005) <i>Description pages 20, 21, 26, examples 1-4, claims</i>	1-15

 Further documents are listed in the continuation of Box C. See patent family annex.

## \* Special categories of cited documents:

"A" document defining the general state of the art which is not considered to be of particular relevance

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"P" document published prior to the international filing date but later than the priority date claimed

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"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

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"&amp;" document member of the same patent family

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International application No.  
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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.
X	WO 2002/080857 A2 (TEVA PHARMA et al.) 17 October 2002 (17.10.2002) <i>Claims 44-50, 93-109, examples 1-37</i>	4-10, 14, 15
X	WO 2007/007347 A1 (WOCKHARDT Ltd. et al.) 18 January 2007 (18.01.2007) <i>Description page 10, examples 3 and 5</i>	1-3, 14, 15

## INTERNATIONAL SEARCH REPORT

Information on patent family members

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