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(54) Title: DRUG MICROPARTICLES

(57) Abstract: Provided are microparticles of active pharmaceutical ingredients, drug delivery vehicles comprising same, and methods for making them.

INTERNATIONAL SEARCH REPORT

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A. CLASSIFICATION OF SUBJECT MATTER
IPC 7 A61K9/14

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 7 A61K

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)

WPI Data, PAJ, EPO-Internal, EMBASE

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	WO 95 08987 A (KRKA TOVARNA ZDRAVIL) 6 April 1995 (1995-04-06)	1-7, 17-20
Y	page 7; example 1 page 8; example 4B page 9; example 8 figure 3	8-16
Y	WO 91 04733 A (THE MENTHOLATUM COMPANY LIMITED) 18 April 1991 (1991-04-18) claim 1	8-16
A	WO 01 89485 A (HANMI PHARM. CO., LTD.) 29 November 2001 (2001-11-29) page 7 -page 8; example 1	1-20
A	FR 2 199 973 A (BOEHRINGER MANNHEIM G.M.B.H.) 19 April 1974 (1974-04-19) page 7, line 8 - line 15	1-20
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Patent family members are listed in annex.

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Date of the actual completion of the international search

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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.
A	WO 93 18757 A (PFIZER INC.) 30 September 1993 (1993-09-30) page 4, line 20 - line 23 page 11 -page 12; example 1 -----	1-20

INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/US 03/09327

Patent document cited in search report	A	Publication date	Patent family member(s)	Publication date
WO 9508987	A	06-04-1995	SI 9300504 A	30-04-1995
			CZ 9600900 A3	11-09-1996
			EP 0721329 A1	17-07-1996
			FI 961394 A	27-03-1996
			HR 940611 A1	31-10-1996
			HU 75643 A2	28-05-1997
			NO 961242 A	09-05-1996
			PL 313712 A1	22-07-1996
			WO 9508987 A1	06-04-1995
			SK 37996 A3	05-02-1997
WO 9104733	A	18-04-1991	AU 6504190 A	28-04-1991
			CA 2067131 A1	27-03-1991
			EP 0493496 A1	08-07-1992
			WO 9104733 A1	18-04-1991
			GB 2239600 A	10-07-1991
			JP 5502440 T	28-04-1993
WO 0189485	A	29-11-2001	CN 1380829 T	20-11-2002
			EP 1283703 A1	19-02-2003
			WO 0189485 A1	29-11-2001
			US 2003185886 A1	02-10-2003
			US 2002001617 A1	03-01-2002
FR 2199973	A	19-04-1974	DE 2246013 A1	28-03-1974
			AT 324568 B	10-09-1975
			CH 579394 A5	15-09-1976
			FR 2199973 A1	19-04-1974
			GB 1381588 A	22-01-1975
			IT 998618 B	20-02-1976
			JP 49069819 A	05-07-1974
			SE 395366 B	15-08-1977
			US 3885026 A	20-05-1975
			WO 9318757	A
AU 3057592 A	21-10-1993			
BR 9207104 A	05-12-1995			
CA 2131089 A1	18-09-1993			
CZ 9402258 A3	18-01-1995			
DE 69212503 D1	29-08-1996			
DE 69212503 T2	12-12-1996			
DK 630237 T3	26-08-1996			
EP 0630237 A1	28-12-1994			
ES 2089581 T3	01-10-1996			
FI 944309 A	16-09-1994			
GR 3020666 T3	31-10-1996			
HU 75616 A2	28-05-1997			
IL 105016 A	12-09-1996			
JP 2559206 B2	04-12-1996			
JP 7501829 T	23-02-1995			
MX 9301435 A1	01-10-1993			
NO 943461 A	16-09-1994			
NZ 247168 A	28-03-1995			
WO 9318757 A1	30-09-1993			
US 5529789 A	25-06-1996			
ZA 9301858 A	16-09-1994			