

Title (en)  
STABILIZED BIOACTIVE PREPARATIONS AND METHODS OF USE

Title (de)  
STABILISIERTE, BIOAKTIVE ZUBEREITUNGEN UND IHRE VERWENDUNG

Title (fr)  
PREPARATIONS BIOACTIVES STABILISEES ET LEUR PROCEDES D'UTILISATION

Publication  
**EP 1019020 A1 20000719 (EN)**

Application  
**EP 98950824 A 19980929**

Priority

- US 9820613 W 19980929
- US 6033797 P 19970929
- US 10693298 A 19980629
- US 13384898 A 19980814

Abstract (en)  
[origin: WO9916422A1] Stabilized dispersions are provided for the delivery of a bioactive agent to the respiratory tract of a patient. The dispersions preferably comprise a plurality of perforated microstructures dispersed in a suspension medium that typically comprises a hydrofluoroalkane propellant. As density variations between the suspended particles and suspension medium are minimized and attractive forces between microstructures are attenuated, the disclosed dispersions are particularly resistant to degradation, such as, by settling or flocculation. In particularly preferred embodiments, the stabilized dispersions may be administered to the lung of a patient using a metered dose inhaler.

IPC 1-7  
**A61K 9/00; A61K 9/51**

IPC 8 full level  
**A61K 9/00** (2006.01); **A61K 9/12** (2006.01); **A61K 9/16** (2006.01); **A61K 9/22** (2006.01); **A61K 9/51** (2006.01); **A61K 9/72** (2006.01); **A61K 45/00** (2006.01); **A61K 47/24** (2006.01); **A61K 49/04** (2006.01); **A61P 11/00** (2006.01); **A61P 39/00** (2006.01)

CPC (source: EP KR NO)  
**A61K 9/00** (2013.01 - KR NO); **A61K 9/0073** (2013.01 - EP NO); **A61K 9/0075** (2013.01 - EP NO); **A61K 9/0078** (2013.01 - EP); **A61K 9/008** (2013.01 - EP); **A61K 9/1611** (2013.01 - EP); **A61K 9/1617** (2013.01 - EP); **A61K 9/1641** (2013.01 - EP); **A61K 9/1652** (2013.01 - EP); **A61K 9/1694** (2013.01 - EP); **A61K 9/51** (2013.01 - KR); **A61K 31/685** (2013.01 - EP); **A61K 45/00** (2013.01 - NO); **A61K 47/24** (2013.01 - NO); **A61P 5/00** (2018.01 - EP); **A61P 9/00** (2018.01 - EP); **A61P 11/00** (2018.01 - EP); **A61P 11/02** (2018.01 - EP); **A61P 11/08** (2018.01 - EP); **A61P 23/00** (2018.01 - EP); **A61P 25/00** (2018.01 - EP); **A61P 27/16** (2018.01 - EP); **A61P 29/00** (2018.01 - EP); **A61P 31/00** (2018.01 - EP); **A61P 31/04** (2018.01 - EP); **A61P 31/06** (2018.01 - EP); **A61P 35/00** (2018.01 - EP); **A61P 37/08** (2018.01 - EP); **A61P 39/00** (2018.01 - EP); **A61P 43/00** (2018.01 - EP); **A61K 9/1635** (2013.01 - EP); **Y10S 977/904** (2013.01 - EP); **Y10S 977/906** (2013.01 - EP); **Y10S 977/926** (2013.01 - EP)

Designated contracting state (EPC)  
AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE

DOCDB simple family (publication)  
**WO 9916422 A1 19990408**; AT E238035 T1 20030515; AT E239447 T1 20030515; AT E248583 T1 20030915; AU 1064499 A 19990423; AU 1185799 A 19990423; AU 750567 B2 20020725; AU 756693 B2 20030123; AU 757153 B2 20030206; AU 757337 B2 20030220; AU 757337 C 20051103; AU 9677098 A 19990423; AU 9677298 A 19990423; BG 104253 A 20001130; BG 64816 B1 20060531; BR 9812693 A 20000822; CA 2304819 A1 19990408; CA 2304819 C 20080408; CA 2304820 A1 19990408; CA 2304820 C 20090623; CA 2304973 A1 19990408; CA 2304973 C 20091117; CA 2304975 A1 19990408; CA 2304975 C 20090616; CN 1169520 C 20041006; CN 1272058 A 20001101; CZ 20001115 A3 20000913; CZ 300758 B6 20090805; DE 69813853 D1 20030528; DE 69813853 T2 20040129; DE 69813853 T3 20110512; DE 69814428 D1 20030612; DE 69814428 T2 20040513; DK 1019021 T3 20031110; DK 1019021 T4 20130107; DK 1019022 T3 20030728; DK 1019022 T4 20101108; EA 002562 B1 20020627; EA 003665 B1 20030828; EA 200000375 A1 20001225; EA 200200036 A1 20020425; EE 04628 B1 20060615; EE 200000194 A 20010416; EP 1019020 A1 20000719; EP 1019021 A1 20000719; EP 1019021 B1 20030903; EP 1019021 B2 20121226; EP 1019022 A1 20000719; EP 1019022 B1 20030423; EP 1019022 B2 20100728; EP 1019023 A1 20000719; EP 1019023 B1 20030507; ES 2195408 T3 20031201; ES 2195408 T5 20101125; ES 2195415 T3 20031201; ES 2205560 T3 20040501; ES 2205560 T5 20130416; HK 1031680 A1 20010622; HR P20000175 A2 20010630; HR P20000175 B1 20040630; IL 135126 A0 20010520; IL 135126 A 20060410; IS 2154 B 20061013; IS 5415 A 20000324; JP 2001517691 A 20011009; JP 2001517692 A 20011009; JP 2003525841 A 20030902; JP 2003525842 A 20030902; JP 2010047615 A 20100304; JP 2011116788 A 20110616; JP 2013199497 A 20131003; JP 2013216688 A 20131024; JP 2014169335 A 20140918; JP 4526702 B2 20100818; JP 5372306 B2 20131218; JP 5739197 B2 20150624; JP 6078498 B2 20170208; JP 6100114 B2 20170322; KR 100572171 B1 20060419; KR 100575070 B1 20060503; KR 100589926 B1 20060615; KR 100599634 B1 20060712; KR 20010030787 A 20010416; KR 20010030788 A 20010416; KR 20010030801 A 20010416; KR 20010030810 A 20010416; ME P4108 A 20100210; NO 20001618 D0 20000328; NO 20001618 L 20000519; NO 340149 B1 20170313; NZ 503464 A 20020531; PL 195212 B1 20070831; PL 339732 A1 20010102; PT 1019022 E 20030829; RS 50182 B 20090506; SK 285068 B6 20060504; SK 4492000 A3 20000912; TR 200000819 T2 20010621; WO 9916419 A1 19990408; WO 9916419 A9 19990819; WO 9916421 A1 19990408; YU 18300 A 20030228

DOCDB simple family (application)  
**US 9820615 W 19980929**; AT 98950826 T 19980929; AT 98953220 T 19980929; AT 98954933 T 19980929; AU 1064499 A 19980929; AU 1185799 A 19980929; AU 9677098 A 19980929; AU 9677298 A 19980929; BG 10425300 A 20000317; BR 9812693 A 19980929; CA 2304819 A 19980929; CA 2304820 A 19980929; CA 2304973 A 19980929; CA 2304975 A 19980929; CN 98809603 A 19980929; CZ 20001115 A 19980929; DE 69813853 T 19980929; DE 69814428 T 19980929; DK 98950826 T 19980929; DK 98953220 T 19980929; EA 200000375 A 19980929; EA 200200036 A 19980929; EE P200000194 A 19980929; EP 98950824 A 19980929; EP 98950826 A 19980929; EP 98953220 A 19980929; EP 98954933 A 19980929; ES 98950826 T 19980929; ES 98953220 T 19980929; ES 98954933 T 19980929; HK 01100524 A 20010119; HR P20000175 A 20000328; IL 13512600 A 20000316; IL 13512698 A 19980929; IS 5415 A 20000324; JP 2000513557 A 19980929; JP 2000513558 A 19980929; JP 2000513559 A 19980929; JP 2000513560 A 19980929; JP 2009274003 A 20091201; JP 2011058608 A 20110316; JP 2013142326 A 20130708; JP 2013145351 A 20130711; JP 2014128936 A 20140624; KR 20007003367 A 20000329; KR 20007003368 A 20000329; KR 20007003401 A 20000329; KR 20007003416 A 20000329; ME P4108 A 19980929; NO 20001618 A 20000328; NZ 50346498 A 19980929; PL 33973298 A 19980929;

PT 98953220 T 19980929; SK 4492000 A 19980929; TR 200000819 T 19980929; US 9820602 W 19980929; US 9820613 W 19980929;  
YU 18300 A 19980929