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[Continued on next page]

(54) Title: FOAMS, INCLUDING MICROCELLULAR FOAMS, CONTAINING COLLOIDAL PARTICULATES

polymer : drug : PS = 4 : 1 : 10

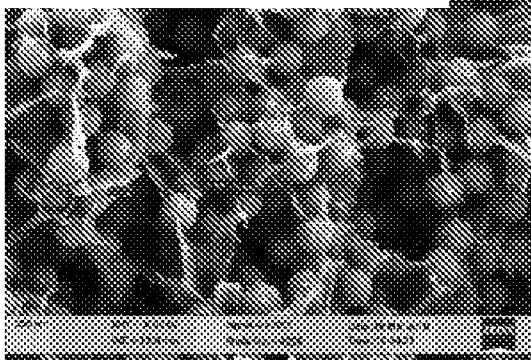


Fig. 3D

(57) Abstract: The present invention generally relates to foams and particles made from such foams, for applications such as drug delivery. The foams or particles may comprise a pharmaceutically acceptable polymeric carrier. In some cases, the foams may include colloidal particulates. A first aspect of the present invention is generally related to polymer-based foams or particles containing pharmaceutically active agents. In some cases, the foam or particle may contain smaller colloidal particulates therein. Such colloidal particulates may be used, for example, to limit the amount of material within certain regions of the foam, or exclude pharmaceutically active agents from being located within certain portions of the foam, which may be useful for enhancing release of pharmaceutically active agents from the foam. In some cases, the colloidal particulates may cause the foam or particle to have an unexpectedly high specific surface area. The foam, in certain embodiments, can exhibit a relatively high loading of the pharmaceutically active agent. The foam may be microcellular in certain instances. The foam may also be created using a supercritical fluid, for example, supercritical CO₂. For instance, a precursor to the foam, containing a pharmaceutically

active agent, a pharmaceutically acceptable polymeric carrier, and colloidal particulates, can be mixed with a foaming agent. The pressure may then be decreased, thereby causing the foaming agent to expand and causing a foam to form. The foam may also be ground or milled, or otherwise processed, to form particles such as nanoparticles.



TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

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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)
A61L 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)

EPO-Internal, WPI Data

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	WO 2005/023215 A2 (JANSSEN PHARMACEUTICA NV [BE]; VERRECK GEERT [BE] JANSSEN PHARMACEUTIC) 17 March 2005 (2005-03-17) claims 2,5,6,9 page 52, lines 17-20 page 65, lines 15-18 -----	1-139
X	WO 2004/032901 A1 (VECTURA LTD [GB]; TOBYN MICHAEL [GB]; STANIFORTH JOHN NICHOLAS [GB]; C) 22 April 2004 (2004-04-22) page 67; claims 25,38-40,43,61,74,94,138 ----- -/-	1-10, 20-23, 25-31, 34-68, 70-79, 81, 86-88, 133-139



Further documents are listed in the continuation of Box C.



See patent family annex.

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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	YOUHEI FUJIMOTO ET AL: "Well-Controlled Biodegradable Nanocomposite Foams: From Microcellular to Nanocellular", MACROMOLECULAR: RAPID COMMUNICATIONS, WILEY VCH VERLAG, WEINHEIM, DE, vol. 24, no. 7, 7 May 2003 (2003-05-07), pages 457-461, XP002647593, ISSN: 1022-1336 the whole document -----	1

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No

PCT/US2011/037377

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