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(54) Title: SELF-ASSEMBLED TOROIDAL-SPIRAL PARTICLES AND MANUFACTURE AND USES THEREOF

(57) Abstract: Toroidal-spiral shaped particles, their method of manufacture, and uses thereof are disclosed. The toroidal-spiral particles can contain at least one active agent, such as a drug, and provide a controlled, sustained release of the active agent.

INTERNATIONAL SEARCH REPORT

International application No.
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A. CLASSIFICATION OF SUBJECT MATTER

A61K 47/30(2006.01)i, A61K 9/24(2006.01)i, A61K 9/20(2006.01)i

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)

A61K 47/30; A61K 9/14; A61K 9/00; A61K 31/737; A61P 1/00

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Korean utility models and applications for utility models

Japanese utility models and applications for utility models

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

eKOMPASS(KIPO internal), PubMed, JPO, USPTO, Google & Keywords: toroidal, spiral, particle

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 2008-0317666 A1 (ELIAS FATTAL et al.) 25 December 2008 See Abstract; Paragraph [0047],[0051]; Claims.	1-22
A	WO 2008-061963 A2 (N.V. ORGANON et al.) 29 May 2008 See Abstract; Claim 1.	1-22
A	US 2005-0084534 A1 (YAWEI NI et al.) 21 April 2005 See Abstract; Claims.	1-22

☐ Further documents are listed in the continuation of Box C.

☒ See patent family annex.

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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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Date of the actual completion of the international search	Date of mailing of the international search report
28 JULY 2011 (28.07.2011)	**28 JULY 2011 (28.07.2011)**
Name and mailing address of the ISA/KR Korean Intellectual Property Office Government Complex-Daejeon, 189 Cheongsa-ro, Seo-gu, Daejeon 302-701, Republic of Korea Facsimile No. 82-42-472-7140	Authorized officer Kim, Moon kyoung Telephone No. 82-42-481-5610

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INTERNATIONAL SEARCH REPORT

Information on patent family members

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