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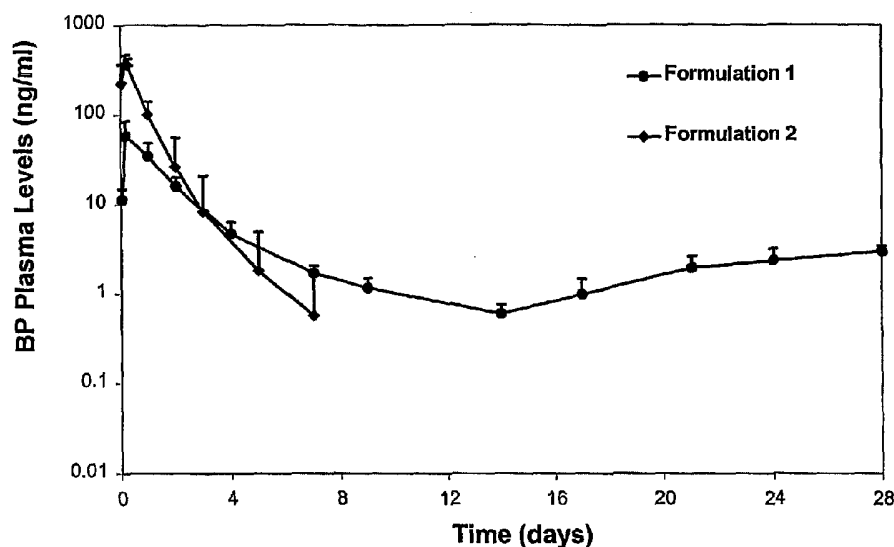
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- Published:**
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[Continued on next page]

(54) Title: SUSTAINED RELEASE DOSAGE FORMS OF ANESTHETICS FOR PAIN MANAGEMENT



(57) Abstract: Drug delivery systems and kits are provided that release an anesthetic, such as bupivacaine, over a short duration. Methods of administering and preparing such systems are also provided. Drug delivery systems include a short duration gel vehicle and an anesthetic dissolved or dispersed in the gel vehicle. The gel vehicle comprises a low molecular weight bioerodible, biocompatible polymer and a water-immiscible solvent in an amount effective to plasticize the polymer and form a gel with the polymer. In some instances, a component solvent is used along with the water-immiscible solvent. An efficacy ratio, which is one way to measure the efficacy of a delivery system, can be controlled based on, for example, the construction of the gel vehicle to achieve a desired release profile.



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For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

INTERNATIONAL SEARCH REPORT

International Application No

PCT/US 03/34763

A. CLASSIFICATION OF SUBJECT MATTER <div style="display: flex; justify-content: space-around;"> A61K9/00 A61K47/10 A61K47/14 </div>		
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) <div style="text-align: center;">A61K</div>		
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, PAJ, WPI Data, BIOSIS, MEDLINE, EMBASE, CHEM ABS 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 98/27962 A (ALZA CORPORATION; BRODBECK, KEVIN, J; SHEN, THEODORE, T) 2 July 1998 (1998-07-02) abstract page 5, line 1 - page 6, line 10 page 7, lines 15-21 page 8, line 11 - page 9, line 2 page 10, line 15 claims <div style="text-align: center;">----- -/--</div>	1,5-7, 10,11, 16-51, 56-122
<div style="display: flex; justify-content: space-between;"> <input checked="" type="checkbox"/> Further documents are listed in the continuation of box C. <input checked="" type="checkbox"/> Patent family members are listed in annex. </div>		
° Special categories of cited documents :		
<div style="display: flex;"> <div style="flex: 1;"> <p>"A" document defining the general state of the art which is not considered to be of particular relevance</p> <p>"E" earlier document but published on or after the international filing date</p> <p>"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)</p> <p>"O" document referring to an oral disclosure, use, exhibition or other means</p> <p>"P" document published prior to the international filing date but later than the priority date claimed</p> </div> <div style="flex: 1;"> <p>"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention</p> <p>"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</p> <p>"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.</p> <p>"&" document member of the same patent family</p> </div> </div>		
Date of the actual completion of the international search <div style="text-align: center;">30 November 2005</div>		Date of mailing of the international search report <div style="text-align: center;">07/12/2005</div>
Name and mailing address of the ISA European Patent Office, P.B. 5818 Patentlaan 2 NL - 2280 HV Rijswijk Tel. (+31-70) 340-2040, Tx. 31 651 epo nl, Fax: (+31-70) 340-3016		Authorized officer <div style="text-align: center;">Villa Riva, A</div>

INTERNATIONAL SEARCH REPORT

International Application No

PCT/US 03/34763

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 03/041685 A (ALZA CORPORATION) 22 May 2003 (2003-05-22) paragraphs '0009!, '0012!, '0014! paragraph '0018! paragraphs '0048!, '0049! paragraphs '0053! - '0058!, '0064!, '0067! examples -----	1-122
X	US 2002/037300 A1 (NG STEVEN Y ET AL) 28 March 2002 (2002-03-28) abstract paragraphs '0008! - '0011! paragraph '0044! paragraphs '0128!, '0132!, '0143! example 2 -----	1,8-11, 22-39, 73-97, 101-105, 122
X	GB 1 218 430 A (BURTON PARSONS CHEMICALS INC) 6 January 1971 (1971-01-06) example 1 -----	1
X	US 2002/054915 A1 (GOLDENHEIM PAUL ET AL) 9 May 2002 (2002-05-09) paragraphs '0024!, '0032!, '0038! paragraphs '0049!, '0133! examples -----	36-39, 66-72, 97,121, 122
A	MANK R ET AL: "PARENTERALE DEPOTARZNEIFORMEN AUF DER BASIS VON BIOLOGISCH ABBAUBAREN POLYMEREN" PHARMAZIE, DIE, GOVI VERLAG, ESCHBORN, DE, vol. 46, no. 1, January 1991 (1991-01), pages 9-18, XP000208772 ISSN: 0031-7144 the whole document -----	1-122
A	HASSAN H G ET AL: "EFFECTS OF ADJUVANTS TO LOCAL ANAESTHETICS ON THEIR DURATION. III. EXPERIMENTAL STUDIES OF HYALURONIC ACID" ACTA ANAESTHESIOLOGICA SCANDINAVICA, vol. 29, no. 4, 1985, pages 384-388, XP000647952 ISSN: 0001-5172 the whole document -----	1-122

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US 03/34763

Box I Observations where certain claims were found unsearchable (Continuation of item 1 of first sheet)

This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☒ Claims Nos.:
because they relate to subject matter not required to be searched by this Authority, namely:

Although claims 73-100 are directed to a method of treatment of the human/animal body, the search has been carried out and based on the alleged effects of the compound/composition.
2. ☐ Claims Nos.:
because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically:
3. ☐ Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box II Observations where unity of invention is lacking (Continuation of item 2 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

1. ☐ As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.
2. ☐ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:
4. ☐ No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

Remark on Protest

- ☐ The additional search fees were accompanied by the applicant's protest.
- ☐ No protest accompanied the payment of additional search fees.

INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/US 03/34763

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