

Example 3

[Pharmaceutical Product]

Objective:

- a) The objective of this project is to locate published patent applications/patents and non-patent literature which are published before date of priority of US Patent No. **9,205,052B2** and **9,192,575 B2** in order to invalidate the claimed invention therein.
- b) To conduct patent landscape for postoperative analgesia.

Drug: Bupivacaine HCl



YASHAM

Search Strategy- Patent No. 9,205,052B2

- **Key Features:**

Key Feature 1- Local anesthesia

Key Feature 2 - Administering a single dose

Key Feature 3 - Multivesicular liposome

Key Feature 4 - Bupivacaine phosphate

- **IPC class:**

A61K: PREPARATIONS FOR MEDICAL, DENTAL, OR TOILET PURPOSES (devices or methods specially adapted for bringing pharmaceutical products into particular physical or administering forms A61J 3/00; chemical aspects of, or use of materials for deodorisation of air, for disinfection or sterilisation, or for bandages, dressings, absorbent pads or surgical articles A61L; soap compositions C11D).

A61K 9/127: Liposomes


Results

EPIDURAL ADMINISTRATION OF THERAPEUTIC COMPOUNDS WITH SUSTAINED RATE OF RELEASE

Claims of US6428529 (B1)

A high quality text as facsimile in your desired language may be available amongst the following family members:

[AU699177 \(B2\)](#) [CA2226870 \(A1\)](#) [EP0839027 \(A4\)](#) [JPH11508900 \(A\)](#) [MX9800391 \(A\)](#) [NO326261 \(B1\)](#)
[RU2215522 \(C2\)](#) [WO9703652 \(A1\)](#) [EP2036542 \(A1\)](#) [JP2008143911 \(A\)](#) [JP2010031030 \(A\)](#) [JP2010043104 \(A\)](#)

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Original claims

Claims tree

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What is claimed is:

1. A method for epidural administration to a vertebrate of a therapeutic compound comprising encapsulating a therapeutic compound in a drug delivery system having a sustained release rate of the compound from about 2 to about 7 days, and introducing the drug delivery system in a single epidural dose to the vertebrate, wherein the drug delivery system comprises multivesicular liposomes produced from the group consisting of egg phosphatidylcholines, dipalmitoylphosphatidylcholines, distearoylphosphatidylcholines, dioleoylphosphatidylcholines, dipalmitoylphosphatidylglycerols, dioleoyl-phosphatidylglycerols, and suitable combinations thereof.
2. The method of claim 1 wherein the multivesicular liposomes further comprise at least one steroid.

Claims:

1. A method for epidural administration to a vertebrate of a therapeutic compound comprising encapsulating a therapeutic compound in a drug delivery system having a sustained release rate of the **compound from about 2 to about 7 days**, and introducing the drug delivery system in a single epidural dose to the vertebrate, wherein the drug delivery system comprises **multivesicular liposomes** produced from the group consisting of egg phosphatidylcholines, dipalmitoylphosphatidylcholines, distearoylphosphatidylcholines, dioleoylphosphatidylcholines, dipalmitoylphosphatidylglycerols, dioleoyl-phosphatidylglycerols, and suitable combinations thereof.

Modulation of drug loading in multivesicular liposomes

Page bookmark [US6106858 \(A\) - Modulation of drug loading in multivesicular liposomes](#)

Inventor(s): YE QIANG [US]; KATRE NANDINI [US]; SANKARAM MANTRIPRAGADA [US] ±

Applicant(s): SKYEPHARMA INC [US] ±

Classification: - international: [A61K31/485](#); [A61K31/7068](#); [A61K38/04](#); [A61K38/22](#); [A61K38/24](#); [A61K45/00](#); [A61K47/04](#); [A61K47/06](#); [A61K47/10](#); [A61K47/12](#); [A61K47/14](#); [A61K47/16](#); [A61K47/18](#); [A61K47/26](#); [A61K47/36](#); [A61K9/127](#); [A61P11/06](#); [A61P23/00](#); [A61P25/04](#); [A61P25/20](#); [A61P25/22](#); [A61P29/00](#); [A61P3/10](#); [A61P31/10](#); [A61P31/12](#); [A61P35/00](#); [A61P37/02](#); [A61P5/00](#); [A61P9/00](#); [A61P9/04](#); [A61P9/06](#); [A61P9/12](#); (IPC1-7): [A61K9/127](#)

- cooperative: [A61K9/127](#)

Application number: US19970925532 19970908

Priority number(s): US19970925532 19970908

Description:

Col. 10, lines 43-45

Representative examples of anti-nociceptives useful in the compositions and methods of the present invention include **bupivacaine**, hydromorphone, oxycodone, fentanyl, morphine, and meperidine.

19. **A process for controlling loading of at least one biologically active agent into multivesicular liposomes** having multiple non-concentric chambers with membranes distributed as a continuous network throughout comprising the steps of:
- forming a standard first immiscible component by dissolving at least one biologically active agent in a first aqueous solution and then measuring the osmolarity;