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# Search Patents or Risk Missing Important Research

Patent Content in SciFinder®



# SciFinder supports your research needs with preliminary patentability searching and patent analysis

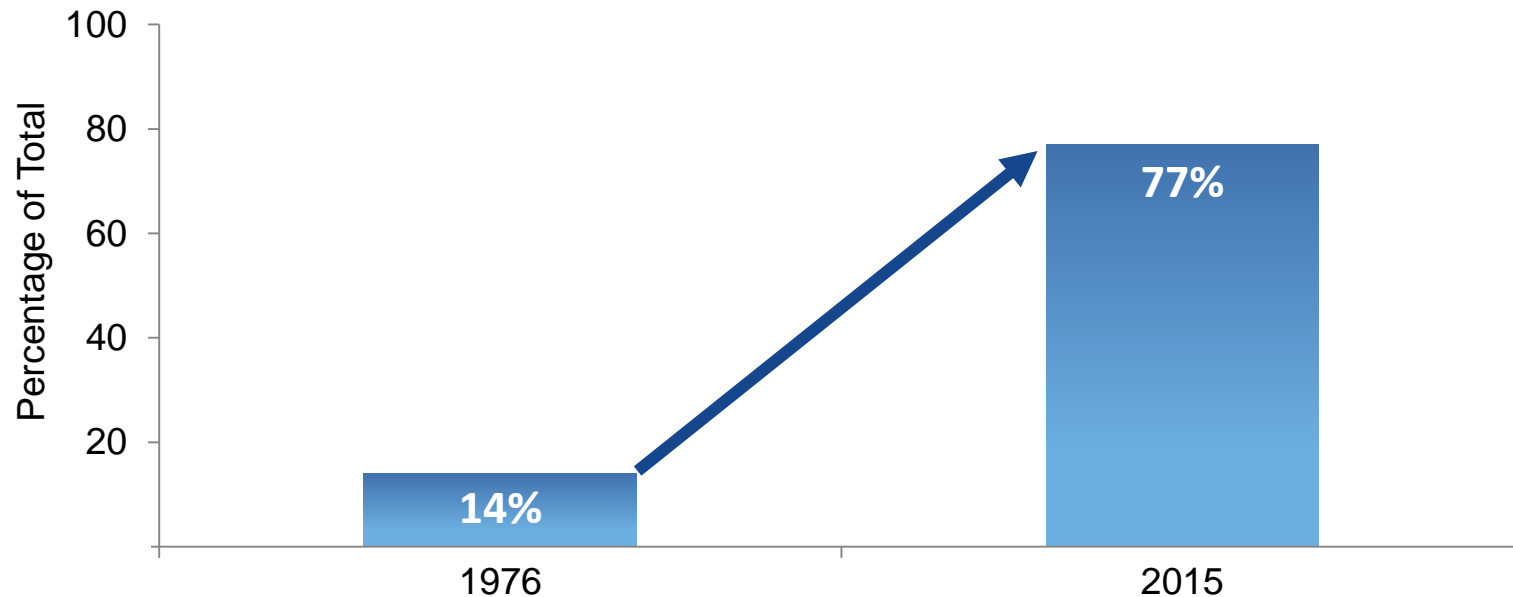
This presentation describes

- Why patents matter for your research
- What patent content coverage is available in SciFinder
- How to understand a Patent Information table
  - Priority applications
  - Basic patents and “double basics”
  - Kind codes
- What a patent family is—and why it matters to you

Patenting law is complex and the rules vary from one country to another. For thorough patentability searches, consult a patent attorney, information professional or Science IP<sup>®</sup>, the CAS search service.

# Increasingly, new compounds and novel reactions in the literature are first disclosed in patents

## Percentage of New Compounds from Patents



# CAS informs your research by providing comprehensive coverage of science including 63 patenting authorities

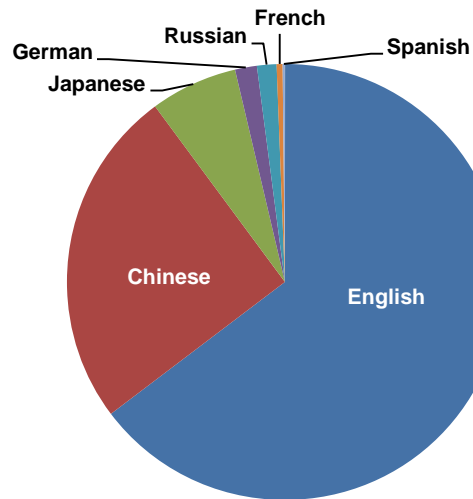
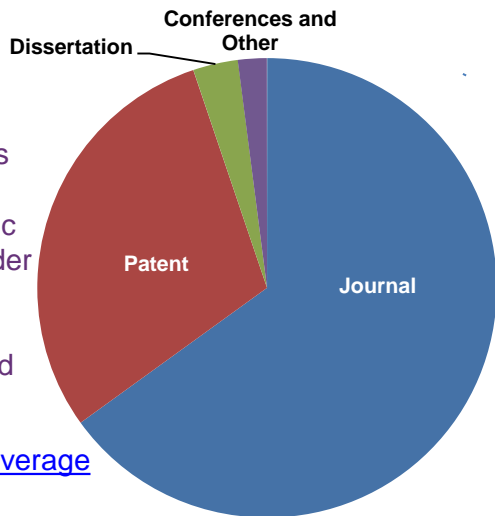
## 63 Patent Authorities

- 25% more than any other scientific information provider

## Disclosure types

- 35% not published in journals

More about [CAS Coverage of patents](#)



## Original publication languages

- 35% not published in English

Data as of 11/2016

## Patent publications from 9 major patenting authorities are added to SciFinder within 2 days of being issued (no one is faster!)



- Canadian Intellectual Property Office (CIPO)
- European Patent Office (EPO)
- French Patent Office (INPI - Institut National de la Propriete Industrielle)
- German Patent Office (DPMA)
- Japanese Patent Office (JPO)
- Russian Patent Office (ROSPATENT - Russian Agency for Patents and Trademarks)
- United Kingdom Intellectual Property Office (UK-IPO)
- United States Patent and Trademark Office (USPTO)
- World Intellectual Property Organization (WIPO)

\*Patents are selected from over 35,000 International Patent Classification (IPC) codes and 99 U.S. National Patent Classification Codes.

# Patent documents are written in many languages; use the English abstracts and scientific indexing to easily find what you need

(19) 中华人民共和国国家知识产权局

(12) 发明专利申请

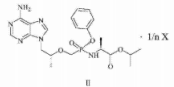
(10) 申请公布号 CN 105085571 A  
(43) 申请公布日 2015.11.25

(21) 申请号 201410213317.3  
(22) 申请日 2014.05.20  
(71) 申请人 四川海思科制药有限公司  
地址 611130 四川省成都市温江区成都海峡两岸科技产业开发园百利路136号  
(72) 发明人 赵雄 袁道义 程睿 罗杰 向志祥  
(51) Int. Cl.  
G07F 9/8561(2006.01)  
A61K 31/675(2006.01)  
A61P 31/12(2006.01)  
A61P 31/20(2006.01)  
A61P 31/18(2006.01)

权利要求书3页 说明书34页

(54) 发明名称  
普诺福韦艾拉酚胺复合物及其制备方法和用途

(57) 摘要  
本发明涉及式II所示的普诺福韦艾拉酚胺复合物。本发明还涉及所述普诺福韦艾拉酚胺复合物的制备方法。含有该普诺福韦艾拉酚胺复合物的药物组合物,以及该普诺福韦艾拉酚胺复合物在制备预防和/或治疗病毒感染,特别是乙型肝炎病毒(HBV)和/或人类免疫缺陷病毒(HIV)感染的药物中的应用。

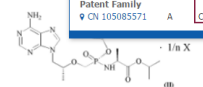


CN 105085571 A

22. **Tenofovir alafenamide complex, preparation method thereof and use thereof**

Quick View PATENTPAK

Patent No. WO 2015176602 A1 Chinese  
By Zhao, Xiong, Yi et al From PCT Int. App. Kind AI Language Chinese  
Patent Family CN 105085571 A Chinese



no, Bingjun; Li, Xuechao; Li, Fangqun; Luo, Jie; Xiang, Zhiqiang; Sun, Peng; Language: Chinese, Database: CAPLUS

present invention relates to tenofovir alafenamide complex defined by formula II. The present invention also relates to a method for said tenofovir alafenamide complex, pharmaceutical compos. conta. the tenofovir alafenamide complex, and uses of the tenofovir alafenamide complex in **prepg.** medicines for preventing and/or Human

The consistent scientific and substance indexing help you to easily find all pertinent references on your topic of interest.

**Indexing**

Pharmaceuticals (Section63-6)

**Concepts**

|                   |                                |
|-------------------|--------------------------------|
| Antiviral agents  | Drug bioavailability           |
| Hepatitis B virus | Homo sapiens                   |
| Human             | Human immunodeficiency virus 1 |
| Viral infection   |                                |

tenofovir alafenamide complex, **prepn.** method thereof and use thereof

**Ligroine**

tenofovir alafenamide complex, **prepn.** method thereof and use thereof










Other use, unclassified; Uses

**Substances**

|  |                      |
|--|----------------------|
| 9004-34-6 Cellulose, biological studies  | Page 49 in PATENTPAK |
| microcryst.; tenofovir alafenamide complex, <b>prepn.</b> method thereof and use thereof |                      |
| Therapeutic use; Biological study; Uses  |                      |
| 60-29-7 Ethyl ether, uses  | Page 66 in PATENTPAK |
| 64-17-5 Ethanol, uses  | Page 66 in PATENTPAK |
| 67-56-1 Methanol, uses   | Page 66 in PATENTPAK |
| 67-63-0 Isopropanol, uses  | Page 66 in PATENTPAK |
| 67-64-1 Acetone, uses  | Page 66 in PATENTPAK |
| 67-66-3 Chloroform, uses   | Page 66 in PATENTPAK |
| 71-23-8 Propanol, uses   | Page 66 in PATENTPAK |
| 71-36-3 Butanol, uses  | Page 66 in PATENTPAK |
| 75-05-8 Acetonitrile, uses   | Page 66 in PATENTPAK |
| 75-09-2 Methylene chloride, uses   | Page 66 in PATENTPAK |
| 78-93-3 Butanone, uses   | Page 66 in PATENTPAK |
| 79-20-9 Methyl acetate   | Page 66 in PATENTPAK |
| 107-21-1 Ethylene glycol, uses   | Page 66 in PATENTPAK |
| 108-20-3 Isopropyl ether   | Page 66 in PATENTPAK |
| 108-21-4 Isopropyl acetate   | Page 66 in PATENTPAK |
| 108-88-3 Toluene, uses   | Page 66 in PATENTPAK |
| 108-94-1 Cyclohexanone, uses   | Page 66 in PATENTPAK |
| 109-86-4 Ethylene glycol monomethyl ether  | Page 66 in PATENTPAK |
| 109-94-4 Ethyl formate   | Page 66 in PATENTPAK |
| 109-99-9 Tetrahydrofuran, uses   | Page 66 in PATENTPAK |
| 110-54-3 n-Hexane, uses  | Page 66 in PATENTPAK |
| 110-71-4 Ethylene glycol dimethyl ether  | Page 66 in PATENTPAK |

# CAS analysts save you time by identifying patent families from around the world

- A patent family is a set of patents that describe the same invention
  - It is a convenient way to summarize the worldwide patent protection sought by an applicant for the same invention
  - These publications cite common date(s) and priority application number(s)
  - The patents in a family are often written in various languages so that you can select the language of your choice




| Patent Information   |   |          |             |                 |                  |              |
|----------------------|---|----------|-------------|-----------------|------------------|--------------|
| Patent No.           | Kind  | Language | Date        | Application No. | Date             |              |
| WO 2012030170        |  PATENTPAK | A2       | Mar 8, 2012 | WO 2011-KR6474  | Aug 31, 2011     |              |
| WO 2012030170        |  PATENTPAK | A3       | Korean      | Jun 28, 2012    |                  |              |
| CN 103153999         |  PATENTPAK | A        | Chinese     | Jun 12, 2013    | CN 2011-80049022 | Aug 31, 2011 |
| CN 103153999         |   | B        |             | Jun 1, 2016     |                  |              |
| EP 2617723           |  PATENTPAK | A2       | English     | Jul 24, 2013    | EP 2011-822145   | Aug 31, 2011 |
| KR 2013099930        |  PATENTPAK | A        | Korean      | Sep 6, 2013     | KR 2013-7005744  | Aug 31, 2011 |
| JP 2013536836        |  PATENTPAK | T        | Japanese    | Sep 26, 2013    | JP 2013-527016   | Aug 31, 2011 |
| JP 5859544           |  PATENTPAK | B2       | Japanese    | Feb 10, 2016    |                  |              |
| IN 2013CN01476       |   | A        |             | Aug 31, 2016    | IN 2013-CN1476   | Feb 22, 2013 |
| US 20130158025       |  PATENTPAK | A1       | English     | Jun 20, 2013    | US 2013-13819601 | Feb 27, 2013 |
| US 8975264           |  PATENTPAK | B2       | English     | Mar 10, 2015    |                  |              |
| Priority Application |   |          |             |                 |                  |              |
| KR 2010-85042        |   | A        |             | Aug 31, 2010    |                  |              |
| WO 2011-KR6474       |   | W        |             | Aug 31, 2011    |                  |              |

This patent information table is associated with the patent publication titled, "Preparation of pyrazolo[1,5-a]pyrimidine compounds as cannabinoid receptor-1 inhibitors."



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## The Patent Information (PI) Table provides you with a convenient summary of the publications for an invention

| Patent Information   |      |          |              |                  |              |
|--|------|----------|--------------|------------------|--------------|
| Patent No.   | Kind | Language | Date         | Application No.  | Date         |
| WO 2014064046   | A1   |          | May 1, 2014  | WO 2013-EP71961  | Oct 21, 2013 |
| EP 2722669      | A1   | German   | Apr 23, 2014 | EP 2012-189463   | Oct 22, 2012 |
| CA 2889066   | A1   |          | May 1, 2014  | CA 2013-2889066  | Oct 21, 2013 |
| AU 2013336795  | A1   |          | May 7, 2015  | AU 2013-336795   | Oct 21, 2013 |
| EP 2909633   | A1   |          | Aug 26, 2015 | EP 2013-780125   | Oct 21, 2013 |
| US 20150268257  | A1   | English  | Sep 24, 2015 | US 2015-14436952 | Apr 20, 2015 |
| Priority Application   |      |          |              |                  |              |
| EP 2012-189463   | A    |          | Oct 22, 2012 |                  |              |
| WO 2013-EP71961  | W    |          | Oct 21, 2013 |                  |              |

This patent information table is associated with the patent publication titled, "Method and device for detecting illegal drugs."

- The Patent No. section identifies the patent number for each patenting authority as well as the publication stage which is represented by a Kind Code
  - Identify kind codes at: <https://www.cas.org/content/references/patkind>
  - The Application No. section identifies the application numbers
- The Priority Application section identifies the first application(s) filed



## A basic patent document is the document indexed by CAS Analysts; it is usually a published application

- WIPO (WO) allows an inventor to file a single patent application that protects an invention in many countries
  - WIPO does not grant patents
  - To proceed with patenting, the inventor progresses to the national phase and applies for a patent in specific member countries
- The WIPO application and the first national phase publication are often both treated as basics—which is the definition for “double basics”
  - If more than one national phase publication is filed on the same day, then a patent can have multiple basics

## Double and multiple basic patents frequently have the same title

- Identical titles can also appear for other reasons, such as for continuation-in-parts patents, so review the PI Table—and when needed the actual patents—for details

- This PI Table is for the family shown on slide 8, but this table is associated with the EP patent application.
- These two documents share Priority Application numbers and are therefore double basics.

14. Method and device for detecting illegal drugs

Quick View PATENTPAK

By Klaus, Sebastian; From PCT Int. App. WO 2014064046

The invention sample-taking method allow single sample anal. device probe introduction, analyte ...

language: German, Database: CAPLUS

alytes, in particular illegal drugs, in a sample, and test elements, for performing said method. The claimed immunoassay anal. pioids, natural, semisynthetic and synthetic **cannabinoids**) in a "lateral flow chromatog." and ELISA technol. The immunoassay appropriate housing; the zones serve for eluent introduction, analyzed

Patent No. WO 2014064046 Kind A1 Language German

Patent Family

- EP 2722669 A1 German
- US 20150268257 A1 English

15. Preparation of 2-cycloalkyl-resorcinol compound as cannabinergic ligands

16. Method and device for detecting illegal drugs

Quick View PATENTPAK

By Klaus, Sebastian; Schwiieger, Frank; Zimmermann, Verena; From Eur. Pat. Appl. (2014) EP 2722669 A1 20140423. | Language: German, Database: CAPLUS

The claimed immunoassay anal. method allows detection of multiple illegal drugs (opioids, natural, semisynthetic and synthetic **cannabinoids**) in a single sample using an anal. device based on the "lateral flow chromatog." and ELISA technol. The immunoassay anal. device has 5 consecutive zones in an appropriate housing; the zones serve for eluent introduction, analyzed probe introduction, analyte optical detection, and collection of spent eluent. The detection zone in the form of a chromatog. test strip contains lines with mammalian/human opioid ( $\kappa$ ,  $\mu$ 1,  $\mu$ 2) and **cannabinoid** (CB1, CB2) receptors...

| Patent Information   |      |          |              |                  |              |  |
|----------------------|------|----------|--------------|------------------|--------------|--|
| Patent No.           | Kind | Language | Date         | Application No.  | Date         |  |
| EP 2722669           | A1   |          | Apr 23, 2014 | EP 2012-189463   | Oct 22, 2012 |  |
| CA 2889066           | A1   |          | May 1, 2014  | CA 2013-2889066  | Oct 21, 2013 |  |
| WO 2014064046        | A1   | German   | May 1, 2014  | WO 2013-EP71961  | Oct 21, 2013 |  |
| AU 2013336795        | A1   |          | May 7, 2015  | AU 2013-336795   | Oct 21, 2013 |  |
| EP 2909633           | A1   |          | Aug 26, 2015 | EP 2013-780125   | Oct 21, 2013 |  |
| US 20150268257       | A1   | English  | Sep 24, 2015 | US 2015-14436952 | Apr 20, 2015 |  |
| Priority Application |      |          |              |                  |              |  |
| EP 2012-189463       | A    |          | Oct 22, 2012 |                  |              |  |
| WO 2013-EP71961      | W    |          | Oct 21, 2013 |                  |              |  |

## Since the content of patent family documents may vary—including what appears in the claims\*—look for “Chemical Indexing Equivalent” to save time when reviewing patent documents

- When the claims are identical, CAS analysts apply the identical substance indexing to the patents
  - CAS analysts also identify them as Chemical Indexing Equivalents in the Reference Detail

**SOURCE**  
*PCT Int. Appl.*  
42pp.; Chemical Indexing  
Equivalent to 164:221075  
(US)  
**Patent**  
2016  
CODEN:PIXXD2

**SOURCE**  
*U.S. Pat. Appl. Publ.*  
22pp.; Chemical Indexing  
Equivalent to 164:221074  
(WO)  
**Patent**  
2016  
CODEN:USXXCO

- The number, for example 164:221075, is a unique document identifier that is searchable in SciFinder

\*The written patent can vary for several reasons such as the legal requirements in a country.

# Patent families range from simple to complex

- Simple patent families—as shown on the previous pages—have common priority application number(s)
- Complex (or extended) patent families are often related to more than one priority application
  - To understand complex patent families, consider seeking assistance from a patent professional
- The inverted tear drop (💧) indicates the basic patents in this family
  - PatentPak™ subscribers\* can open the basic patents in the Viewer

**37. Preparation of substituted 7-azabicyclo[2.2.1]heptyl derivatives useful for the prevention and treatment of central nervous system disorders and diseases mediated by a Nicotinic Acetylcholine Receptor**

By: Stevens, Christian; De Blicq, Ann; Heugebaert, Thomas  
Assignee: Universiteit Gent, Belg.

**Patent Information**

| Patent No.     | Kind           | Language | Date         | Application No.  | Date         |
|----------------|----------------|----------|--------------|------------------|--------------|
| US 20100093807 | 💧 PATENTPAK A1 |          | Apr 15, 2010 | US 2009-612452   | Nov 4, 2009  |
| US 8389561     | 📄 PATENTPAK B2 | English  | Mar 5, 2013  |                  |              |
| US 20090275616 | A1             |          | Nov 5, 2009  | US 2008-188524   | Aug 8, 2008  |
| US 7884125     | B2             |          | Feb 8, 2011  |                  |              |
| WO 2011054885  | 💧 PATENTPAK A1 | English  | May 12, 2011 | WO 2010-EP66764  | Nov 3, 2010  |
| EP 2496579     | A1             |          | Sep 12, 2012 | EP 2010-781853   | Nov 3, 2010  |
| EP 2496579     | 📄 PATENTPAK B1 | English  | Oct 21, 2015 |                  |              |
| US 20120245196 | 💧 PATENTPAK A1 | English  | Sep 27, 2012 | US 2012-13504618 | Apr 27, 2012 |
| US 8809365     | 📄 PATENTPAK B2 | English  | Aug 19, 2014 |                  |              |

**Priority Application**

|                  |    |  |              |  |  |
|------------------|----|--|--------------|--|--|
| US 2008-61049023 | P  |  | Apr 30, 2008 |  |  |
| US 2008-188524   | A2 |  | Aug 8, 2008  |  |  |
| GB 2009-19325    | A  |  | Nov 4, 2009  |  |  |
| US 2009-612452   | A  |  | Nov 4, 2009  |  |  |
| WO 2010-EP66764  | W  |  | Nov 3, 2010  |  |  |

Example of a complex patent family

\*For more information about how PatentPak can save you time, visit our [website](#).

## Be sure to include patents in your SciFinder searches since important research information is often first disclosed in patents

- The extensive patent coverage in SciFinder is an asset to your research
- English abstracts and indexing make it easy to find all documents relevant to your research
- The concise Patent Information table provides an easy to understand summary about patent family documents

Patenting law is complex and the rules vary from one country to another. For thorough patentability searches, consult a patent attorney, information professional or Science IP<sup>®</sup>, the CAS search service.

# The experts in the CAS Customer Center can answer questions and provide quality support in a variety of areas and subjects

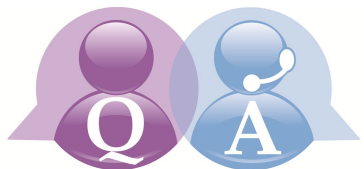
How do I find patents about renewable energy from solid oxide fuel cells



How do I find the latest developments in peptide therapeutics



How can I verify that my drug lead is not under patent already



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*We do more than just answer questions –  
we're your **partner in advancing your research.***