

Strategic Use of Intellectual Property Information

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June 23, 2014

- Why is IP information useful?
- Where to find information
- Examples of search

- Why gather IP information?
- Purposes
 - Search for inventions
 - State-of-the-art search
 - Patentability search
 - Monitor competition/market
 - Legal status search
 - Infringement/defense (validity) search
 - Name searches (key individuals)
- Include defensive disclosures

Introduction

- Standardized format of registered IP (especially patents) advantage and drawbacks
 - Often disclosure in claim form limited
 - But examples often helpful
- Lots of information, but not obvious how to mine large amounts of information
 - IPC not particularly helpful
 - Ownership often not updated
- Focus on registered IP might skew view
 - Not everything may be patentable subject matter (differences across jurisdictions)
 - Underlying choice by companies

- Esp@cenet

The screenshot shows the Esp@cenet Patent search website. At the top left is the logo of the European Patent Office (EPO) with the text 'Europäisches Patentamt', 'European Patent Office', and 'Office européen des brevets'. To the right is the 'Esp@cenet Patent search' logo. Further right are language options: 'Deutsch', 'English', 'Français', and a 'Contact' link. Below these is a 'Change country' dropdown menu. A navigation bar contains 'About Esp@cenet' and 'Other EPO online services'. Below this is a menu with 'Search', 'Result list', 'My patents list (0)', 'Query history', 'Settings', and 'Help'. The main content area features a 'Smart search' section with 'Advanced search' and 'Classification search' options. A search box contains 'Siemens EP 2007' and has 'Clear' and 'Search' buttons. Below the search box is a 'Maintenance news' section with a minus sign. Further down is a 'Scheduled maintenance' section with a plus sign, detailing outages in CET: 'Mon-Sun 05:00-05:30', 'Possible outages on Saturday the 28th of June from 10:00-18:00', and 'Possible INPADOC outages on Monday the 30th of June from 19:00', with a 'read more...' link. To the right of this is a 'New CPC-Browser in Esp@cenet' section with a plus sign, containing text about the launch of the CPC in January, revisions to the schema, and the introduction of a date picker. It also mentions three new buttons for showing/hiding 2000 series codes and interweaving them in the CPC hierarchy. Below this is a 'News flashes' section with a plus sign and a 'Latest updates' section with a plus sign. At the bottom of the page, there is a note: 'Don't forget to enable the "classification notices" in the Esp@cenet settings menu. This will activate the new interactive CPC notices.'

- Commercial databases (Derwent, DiscoverIP, etc)

- EPO examiner search reports



EUROPEAN SEARCH REPORT

Application Number
EP 10 18 1843

| DOCUMENTS CONSIDERED TO BE RELEVANT | | | |
|-------------------------------------|---|--------------------|---|
| Category | Citation of document with indication, where appropriate, of relevant passages | Relevant to claim | CLASSIFICATION OF THE APPLICATION (IPC) |
| X | US 4 764 522 A (IMHOF RENE [CH] ET AL) 16 August 1988 (1988-08-16) * abstract * * claims 1,4-10,12,13,16,17 * * column 22 - column 23; examples A-E * ----- | 1,2,4,5, 7,9-13 | INV. A61K31/47 A61K31/4738 A61K31/63 A61K31/00 A61K38/38 C12N15/09 C12Q1/56 C12Q1/34 A61P7/06 A61K38/17 C07K14/47 C07K14/505 G01N33/74 |
| Y | DE 100 10 423 A1 (BAYER AG [DE]) 6 September 2001 (2001-09-06) * abstract * * page 2, line 3 - line 5 * * page 5, line 61 - page 6, line 10 * * table 1; compounds 3-17 * * claims 11,13 * ----- | 1-13 | |
| Y | DE 100 10 425 A1 (BAYER AG [DE]) 6 September 2001 (2001-09-06) * abstract * * page 2, line 3 - line 6 * * page 9; table A; compounds 3-5 * * page 16, line 20 - line 40 * ----- | 1-13 | |
| Y | DE 100 10 426 A1 (BAYER AG [DE]) 6 September 2001 (2001-09-06) * abstract * * page 2, line 3 - line 5 * * page 13; compounds 3,5 * * page 14; compounds 1-4 * * page 19, line 11 - line 45 * | 1-13 | TECHNICAL FIELDS SEARCHED (IPC) A61K C12N C12Q |

- Non-patent literature (but differences across jurisdictions in citing prior art)

Two Shot Molding Process

IP.com Prior Art Database Disclosure
IP.com Disclosure Number: IPCOM000067424D Publication Date: 01-Aug-1979

[Find Similar](#) [Download](#)

Overview Text Preview First Page Image

Publishing Venue

IBM Technical Disclosure Bulletin (TDB 08-79 p903-904)

Related People

Friery, EJ - Author [+2](#)
Boulder

Abstract

This article relates to the article published in the IBM Technical Disclosure Bulletin 20, 883-884 (August 1977).

Language

English (United States)

Country

United States

Document File

- Interactions between different forms of registered IP
- For validity search, utility models particularly useful

[19] 中华人民共和国国家知识产权局

[51] Int. Cl.
H04Q 7/32 (2006.01)



[12] 实用新型专利说明书

专利号 ZL 200620017996.8

[45] 授权公告日 2007年9月5日

[11] 授权公告号 CN 200944653Y

[22] 申请日 2006.8.29

[21] 申请号 200620017996.8

[73] 专利权人 中兴通讯股份有限公司

地址 518057 广东省深圳市南山区高新技术产业园科技南路中兴通讯大厦 A 座 6 层

[72] 设计人 吴红 凌小兵

[74] 专利代理机构 深圳市永杰专利商标事务所
代理人 曹建军

- Information:
 - Geographic coverage (global activity)
 - Translations (but decent automatic translators exist)
 - Importance/value of invention

1-aminoalkylamino-4-hydroxymethyl (or 4-formyl)-thioxanthene derivatives

Page bookmark [US3294803 \(A\) - 1-aminoalkylamino-4-hydroxymethyl \(or 4-formyl\)-thioxanthene derivatives](#)

Inventor(s): DAVID ROSI; PERUZZOTTI GEORGE P ±

Applicant(s): STERLING DRUG INC ±

Classification: - international: [C07D311/82](#); [C07D311/86](#); [C12P17/06](#); [C12P17/18](#)
- cooperative: [C07D311/82](#); [C07D311/86](#); [C12P17/06](#); [C12P17/18](#); [Y10S435/911](#); [Y10S435/913](#); [Y10S435/917](#); [Y10S435/931](#)

Application number: **US** 19650463908 19650614

Priority number(s): [GB19640034612 19640824](#) ; [US19630307374 19630909](#)

Also published as: [NL6410359 \(A\)](#) [SE313316 \(B\)](#) [NL126381 \(C\)](#) → [MY6900164 \(A\)](#) → [IL21982 \(A\)](#) [FR4071 \(M\)](#)
[DK116663 \(B\)](#) [DE1518352 \(A1\)](#) [CH441376 \(A\)](#) [BE652609 \(A\)](#) → [less](#)

(190) 【発行国】日本国特許庁 (JP)

(441) 【公開日】平成25年6月27日 (2013. 6. 27)

【公報種別】公開商標公報

(210) 【出願番号】商願2013-42097 (T2013-42097)

(220) 【出願日】平成25年6月3日 (2013. 6. 3)

(540) 【商標】

iWatch

Entry announcement?



Entry announcement?

Marca Comercial (Producto)

Nº Solicitud: 796267
Nº Registro: 972307
Estado: Concedido

Fecha Presentación: 16/11/2007
Fecha Publicación: 30/05/2008
Fecha Registro: 15/11/2012

Titular(s)/Solicitante(s)

Nombre/Razón Social: PINKBERRY, INC.
Comuna:
País: ESTADOS UNIDOS DE AMERICA

Representante

Nombre/Razón Social: CLARKE MODET & CO CHILE LTDA.
Comuna: Santiago
País: CHILE

Marca

Tipo Marca: Mixta
Denominación: PINKBERRY
Etiqueta:



Entry announcement?



Entry announcement?

- Apple filed a trademark in Japan in June 2013 for *iWatch*
- There is no existing product – but is Apple (finally) introducing the *iWatch*?
- Pinkberry filed a trademark in Chile in November 2007
- There are no existing Pinkberry shops in Chile
- Do trademark filings serve as entry signals?

Complex IP strategies: IP Bundles

Product Evolution from an IP Perspective

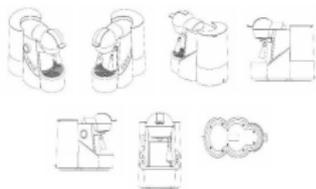
IT2005GE00077

19 Oct 2005



CD # 000593496-0001

21 Sep 2006



CTM #004735148

10 Nov 2005

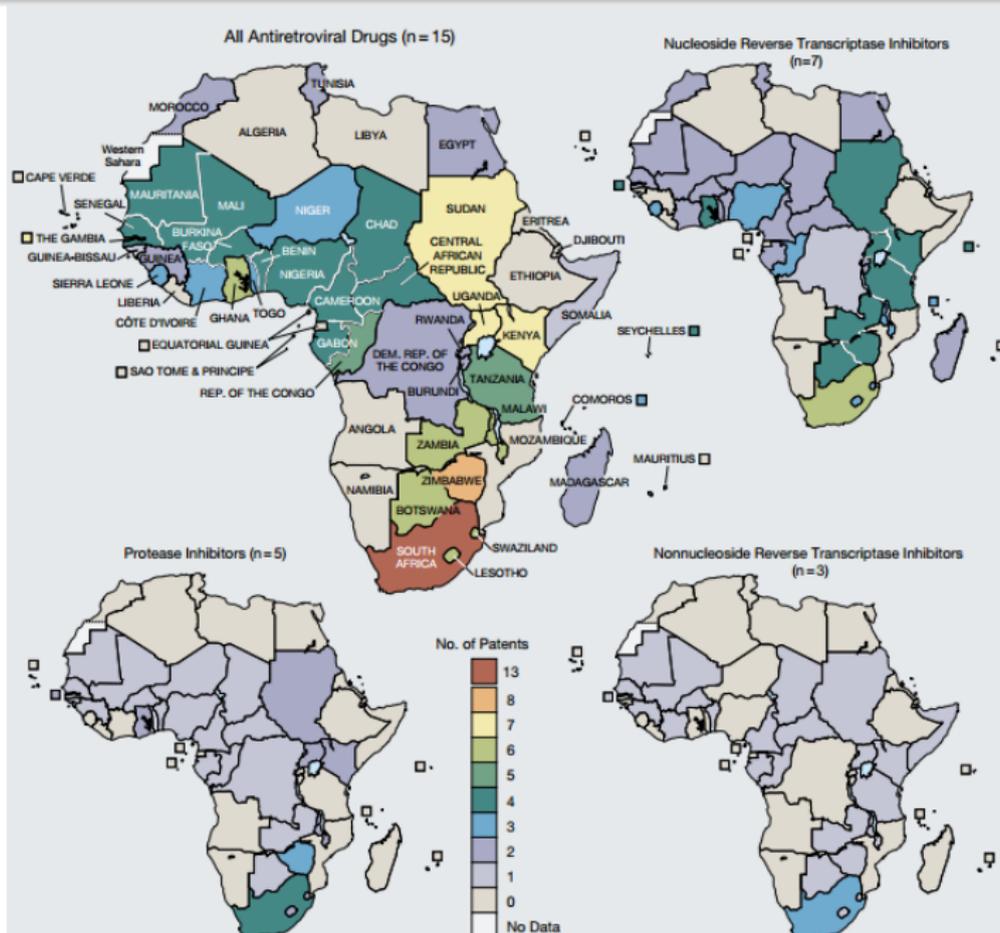


First listed

December 2006

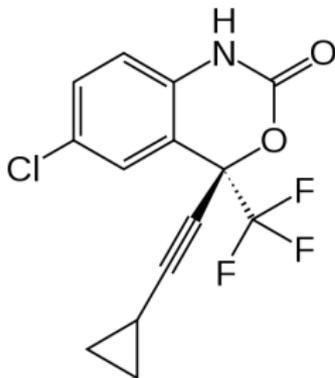


Freedom-to-operate: patents on HIV drugs (Attaran and Gillespie-White, 2001)



Patent-product search

- Pharmaceuticals: Efavirenz
- Active ingredients identified by International Nonproprietary Name (**INN**)
- Example: INN denomination for the active ingredient is *efavirenz*
- Patents use **IUPAC** (International Union of Pure and Applied Chemistry) classification
- IUPAC for efavirenz: (4S)-6-chloro-4-(2-cyclopropylethynyl)-4-(trifluoromethyl)-2,4-dihydro-1H-3,1-benzoxazin-2-one
- In patents active ingredients often described by **Markush structure**



- **Markush structure** comprises many functionally equivalent active ingredients
- IUPAC in contrast represents an individual active ingredient
- **Challenges:**
 - Find IUPAC that corresponds to INN
 - Determine which active ingredient is claimed by the patent – need to look at Markush formula in combination with examples provided in the patent application

- Search Chilean Health register for drugs that contain active ingredient **Efavirenz**:
 - Atripla comprimidos recubiertos
 - Efavirenz capsulas 200mg
 - Efavirenz comprimidos recubiertos 600mg
 - Stocrin capsulas 200mg
 - Stocrin comprimidos recubiertos 600mg
 - Stocrin solucion oral 30mg/ml

- Are these drugs patent-protected?
- 2 approaches:
 - ① U.S. FDA Orange Book & Merck Index
 - ② Direct matching

Search Orange book for active ingredient **Efavirenz**

| Appl No | TE Code | RLD | Active Ingredient | Dosage Form; Route | Strength | Proprietary Name | Applicant |
|---------|---------|-----|---|--------------------|---------------------|------------------|----------------------|
| N020972 | | Yes | EFAVIRENZ | CAPSULE; ORAL | 200MG | SUSTIVA | BRISTOL MYERS SQUIBB |
| N020972 | | No | EFAVIRENZ | CAPSULE; ORAL | 50MG | SUSTIVA | BRISTOL MYERS SQUIBB |
| N021360 | | Yes | EFAVIRENZ | TABLET; ORAL | 600MG | SUSTIVA | BRISTOL MYERS SQUIBB |
| N021937 | | Yes | EFAVIRENZ; EMTRICITABINE; TENOFOVIR DISOPROXIL FUMARATE | TABLET; ORAL | 600MG; 200MG; 300MG | ATRIPLA | GILEAD |

Search Orange book for active ingredient **Efavirenz** – find corresponding patents

| Appl No | Prod No | Patent No | Patent Expiration | Drug Substance Claim | Drug Product Claim | Patent Use Code |
|---------|---------|-------------|-------------------|----------------------|--------------------|-----------------|
| N021937 | 001 | 5519021*PED | Nov 21, 2013 | | | |
| N021937 | 001 | 5663169 | Sep 2, 2014 | | | U - 750 |
| N021937 | 001 | 5663169 | Sep 2, 2014 | | | U - 1170 |
| N021937 | 001 | 5663169*PED | Mar 2, 2015 | | | |
| N021937 | 001 | 5814639 | Sep 29, 2015 | Y | Y | |
| N021937 | 001 | 5814639*PED | Mar 29, 2016 | | | |
| N021937 | 001 | 5914331 | Jul 2, 2017 | Y | | |
| N021937 | 001 | 5914331*PED | Jan 2, 2018 | | | |
| N021937 | 001 | 5922695 | Jul 25, 2017 | Y | | U - 750 |
| N021937 | 001 | 5922695 | Jul 25, 2017 | Y | | U - 1170 |
| N021937 | 001 | 5922695*PED | Jan 25, 2018 | | | |
| N021937 | 001 | 5935946 | Jul 25, 2017 | Y | Y | U - 750 |
| N021937 | 001 | 5935946 | Jul 25, 2017 | Y | Y | U - 1170 |
| N021937 | 001 | 5935946*PED | Jan 25, 2018 | | | |
| N021937 | 001 | 5977089 | Jul 25, 2017 | Y | Y | U - 750 |
| N021937 | 001 | 5977089 | Jul 25, 2017 | Y | Y | U - 1170 |
| N021937 | 001 | 5977089*PED | Jan 25, 2018 | | | |
| N021937 | 001 | 6043230 | Jul 25, 2017 | | | U - 750 |
| N021937 | 001 | 6043230 | Jul 25, 2017 | | | U - 1170 |
| N021937 | 001 | 6043230*PED | Jan 25, 2018 | | | |
| N021937 | 001 | 6639071 | Feb 14, 2018 | Y | | |
| N021937 | 001 | 6639071*PED | Aug 14, 2018 | | | |
| N021937 | 001 | 6642245 | Nov 4, 2020 | | | U - 750 |
| N021937 | 001 | 6642245 | Nov 4, 2020 | | | U - 1170 |
| N021937 | 001 | 6642245*PED | May 4, 2021 | | | |

Search Merck Index for active ingredient **Efavirenz** – find corresponding patents

1. Benzoxazinones as inhibitors of HIV reverse transcriptase.

| | | | | | | |
|---|--|--|--|---|--|-------------------------------------|
| ★ | Inventor: YOUNG STEVEN D [US] TRAN LEKHANH O [US] (+3) | Applicant: MERCK & CO INC [US] | CPC: A61K45/06 C07D265/18 | IPC: A61K31/505 A61K31/52 A61K31/535 (+14) | Publication info: EP 0582455 (A1) 1994-02-09 EP 0582455 (B1) 2000-11-02 | Priority date: 1992-08-07 |
|---|--|--|--|---|--|-------------------------------------|

1. Benzoxazinones as inhibitors of HIV reverse transcriptase

| | | | | | | |
|---|--|--|--|--|--|-------------------------------------|
| ★ | Inventor: YOUNG STEVEN D [US] BRITCHER SUSAN F [US] (+3) | Applicant: MERCK & CO INC [US] | CPC: A61K2300/00 A61K31/535 A61K31/536 (+5) | IPC: A61K31/535 A61K31/536 A61K45/06 (+3) | Publication info: US 5519021 (A) 1996-05-21 | Priority date: 1992-08-07 |
|---|--|--|--|--|--|-------------------------------------|

Find national equivalents for patents found in Orange Book and Merck Index

Also published as: [EP0582455 \(B1\)](#) [YU53093 \(A\)](#) [YU49439 \(B\)](#) [WO9403440 \(A1\)](#) [TWI233436 \(B\)](#) [TW382014 \(B\)](#)
[SK16195 \(A3\)](#) [SK282276 \(B6\)](#) [SI9300419 \(A\)](#) [SI9300419 \(B\)](#) → [SG52698 \(A1\)](#) → [RU95107403 \(A\)](#)
[RU2186775 \(C2\)](#) [RO113641 \(B1\)](#) [PT582455 \(E\)](#) [PL176679 \(B1\)](#) → [PL307348 \(A1\)](#) [PL175615 \(B1\)](#)
[NZ255216 \(A\)](#) → [NO2008008 \(I1\)](#) → [NO950424 \(A\)](#) [NO304886 \(B1\)](#) → [NL300347 \(I1\)](#) → [NL300032 \(I1\)](#)
→ [NL300032 \(I2\)](#) → [MX9304775 \(A\)](#) → [MX192812 \(B\)](#) → [LV12719 \(A\)](#) [LV12719 \(B\)](#) → [LU91446 \(I2\)](#)
→ [LU90709 \(I2\)](#) [KR100272387 \(B1\)](#) [JPH06184124 \(A\)](#) → [JP7080860 \(B2\)](#) [IL106507 \(A\)](#) [HUT71219 \(A\)](#)
→ [HU223076 \(B1\)](#) → [HRP931102 \(A2\)](#) [HRP931102 \(B1\)](#) → [HK1009267 \(A1\)](#) [GR3034754 \(T3\)](#) [FI950508 \(A\)](#)
[FI115457 \(B\)](#) [ES2151897 \(T3\)](#) [DZ1707 \(A1\)](#) [DK0582455 \(T3\)](#) → [DE122008000034 \(I1\)](#)
[DE69329608 \(T2\)](#) → [DE10199013 \(I2\)](#) [CZ9500286 \(A3\)](#) → [CZ290447 \(B6\)](#) [CN1250652 \(A\)](#)
[CN1318031 \(C\)](#) [CN1221608 \(A\)](#) [CN1107505 \(C\)](#) [CN1090277 \(A\)](#) [CN1051767 \(C\)](#) [CA2101572 \(A1\)](#)
→ [CA2101572 \(C\)](#) → [BG99383 \(A\)](#) [BG62612 \(B1\)](#) → [AU4449693 \(A\)](#) [AU670300 \(B2\)](#) → [AT197295 \(T\)](#) → [less](#)

Find national equivalents for patents found in Orange Book and Merck Index



US 20010012518A1

(19) **United States**

(12) **Patent Application Publication**

Makooi-Morehead et al.

(10) **Pub. No.: US 2001/0012518 A1**

(43) **Pub. Date: Aug. 9, 2001**

(54) **FORMULATION OF FAST-DISSOLVING
EFAVIRENZ CAPSULES OR TABLETS
USING SUPER-DISINTEGRANTS**

non-provisional of provisional application No.
60/080,925, filed on Apr. 7, 1998.

(76) **Inventors: William T. Makooi-Morehead,**
Wallingford, PA (US); **John D.**
Buehler, Ambler, PA (US); **Brian R.**
Landmann, Hoboken, NJ (US)

Publication Classification

(51) **Int. Cl.⁷** **A61K 9/20**

(52) **U.S. Cl.** **424/465**

Correspondence Address:
Dupont Pharmaceuticals Company
Legal Department - Patents
1007 Market Street
Wilmington, DE 19898 (US)

(57) **ABSTRACT**

(21) **Appl. No.: 09/824,071**

(22) **Filed: Apr. 2, 2001**

Related U.S. Application Data

(63) Continuation of application No. 09/286,902, filed on
Apr. 6, 1999, now Pat. No. 6,238,695, which is a

The present invention provides improved oral dosage form formulations of efavirenz that are useful in the inhibition of human immunodeficiency virus (HIV), the prevention or treatment of infection by HIV, and in the treatment of the resulting acquired immune deficiency syndrome (AIDS). In particular, the present invention relates to compressed tablets or capsules comprising efavirenz that contain one or more disintegrants that enhance the dissolution rate of the efavirenz in the gastrointestinal tract thereby improving the rate and extent of absorption of efavirenz in the body. The present invention also relates to the process of making such tablets or capsules.

Find national equivalents for patents found in Orange Book and Merck Index

PATENTE DE INVENCIÓN

Instancias
Administrativas

USO EXCLUSIVO INAPI

| | | | |
|----|----------------------|----|--------------------|
| 21 | Nº de Solicitud | 22 | Fecha de Solicitud |
| | 199900647 | | 06/04/1999 |
| 43 | Fecha de Publicación | | Estado |
| | 13/10/1999 | | Concedida |
| 11 | Nº Registro Patente | 45 | Fecha Registro |
| | 45294 | | 02/06/2009 |

| | | | |
|----|--|-----------|--|
| 12 | Tipo de Solicitud | Prioridad | |
| | <input checked="" type="radio"/> Patente de Invención <input type="radio"/> Patente de Precaucional <input type="radio"/> Modelo de Utilidad <input type="radio"/> Diseño Industrial <input type="radio"/> Dibujo Industrial <input type="radio"/> Esquemas | 31 | Nº 80080925 |
| 51 | Clasificaciones IPC (5) | 32 | Fecha 07/04/1998 |
| | A61K31/535 A61K47/36 A61K9/20 A61K9/48 | 33 | País ESTADOS UNIDOS DE AMERICA |
| 54 | TÍTULO O MATERIA DE LA SOLICITUD | | |
| | COMPOSICION FARMACEUTICA EN FORMA DE CAPSULA O COMPRIMIDO QUE COMPRENDE EFAVIRENZ Y UNA CANTIDAD MAYOR AL 10% EN PESO DE UN DESINTEGRANTE; PROCEDIMIENTO DE PREPARACION, UTIL EN LA INHIBICION DEL VIRUS DE LA INMUNODEFICIENCIA HUMANA (VIH). | | |
| 71 | SOLICITANTE (Apellidos y Nombre o Razón Social, R.U.T - Domicilio, País - Región, Ciudad, Comuna, Correo Electrónico, Fono) | | |
| | DUPONT PHARMACEUTICALS COMPANY, 0, 1007 MARKET STREET, WILMINGTON, DELAWARE 19898, ESTADOS UNIDOS DE | | |

- Search patents filed with Chilean Intellectual Property Office that protect active ingredient **Efavirenz**:
 - Atripla comprimidos recubiertos: CL199300906 (MERCK); CL199900647 (DUPONT)
 - Efavirenz capsulas 200mg: CL199300906 (MERCK); CL200401647 (GLAXO WELLCOME)
 - Efavirenz comprimidos recubiertos 600mg: CL 199300906 (MERCK); CL200401647 (GLAXO WELLCOME)
 - Stocrin capsulas 200mg: CL199300906 (MERCK)
 - Stocrin comprimidos recubiertos 600mg: CL199300906 (MERCK); CL199900647 (DUPONT)
 - Stocrin solucion oral 30mg/ml: CL199300906 (MERCK); CL200401647 (GLAXO WELLCOME)

Direct matching

- Atripla comprimidos recubiertos:
 - CL199300906: primary patent – expiration date: 28 June 2014
 - CL199900647: secondary patent – expiration date: 02 June 2024
- Efavirenz capsulas 200mg & Efavirenz comprimidos recubiertos 600mg:
 - CL199300906: primary patent – expiration date: 28 June 2014
 - CL200401647: primary patent – in process
- Stocrin capsulas 200mg:
 - CL199300906: primary patent – expiration date: 28 June 2014
- Stocrin comprimidos recubiertos 600mg:
 - CL199300906: primary patent – expiration date: 28 June 2014
 - CL199900647: secondary patent – expiration date: 02 June 2024,
- Stocrin solucion oral 30mg/ml:
 - CL199300906: primary patent – expiration date: 28 June 2014
 - CL200401647: primary patent – in process

- Registered IP provides freely accessible information
- Registered IP source of useful business intelligence
- Also useful information in non-patent literature
- Collecting and interpreting information not straightforward