

COL.LEGI OFICIAL DE QUÍMICS DE CATALUNYA
Secció Tècnica PATENTS

Ciclo de conferencias-coloquio:
"Las patentes en la actividad laboral del químico"

Cómo un químico puede formarse sobre patentes

Prof. Pascual Segura

Ldo. en química por la Univ. de Valencia y Dr. por la Univ. de Barcelona (UB)

Agente de la propiedad industrial de la UB y director de su Centro de Patentes

Elected member of the first Academic Advisory Board of the European Patent Academy, EPO

President de la Secció Tècnica PATENTS del Col.legi Oficial de Químics de Catalunya

Barcelona, 26 de mayo de 2010



Ciclo de conferencias-coloquios

LAS PATENTES EN LA ACTIVIDAD LABORAL DEL QUÍMICO

Organizado por la

Secció Tècnica Patents
del Col·legi de Químics de Catalunya

En colaboración con el

Centre de Patents
de la Universitat de Barcelona

Martes 16 de marzo de 2010

"Las patentes como salida profesional para los químicos: agencias, empresas y oficinas de patentes", por Bernabé Zea.

Jueves 15 de abril de 2010

"La importancia de las patentes para las empresas químicas y farmacéuticas, y la necesidad del conocimiento sobre patentes en el trabajo habitual del químico", por Bernabé Zea.

Martes 4 de mayo de 2010

"El químico como perito en conflictos de patentes", por Pascual Segura.

Miércoles 26 de mayo de 2010

"Cómo un químico puede formarse sobre patentes", por Pascual Segura.

COL.LEGI DE QUÍMICS DE CATALUNYA
Secció Tècnica PATENTS

Curs PATENTS QUÍMIQUES AL COL.LEGI

Sesión 6. Barcelona, 5 y 6 de marzo de 2008

***Qué se puede patentar en
biotecnología y biomedicina***

Lídia Casas

Bioquímica colegiada

Técnico de patentes y tutora del Centre de Patents de la Universitat de Barcelona

La documentación de todo el curso está disponible para descarga en www.quimics.cat (Seccions Tècniques / S.T. Patents)

Qué se puede patentar en química y farmacia

Montserrat Jané

Química colegiada

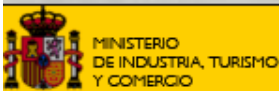
Técnico de patentes y tutora del Centre de Patents de la UB

Qualified European Patent Attorney

Socia de la agencia de patentes y marcas ZBM Patents



OEPM



Oficina Española
de Patentes y Marcas

www.oepm.es

Pag. Inicio

AVISOS Y NOTICIAS

La Directora General de la Oficina Española de Patentes y Marcas (OEPM) y el Rector de la Universidad de Barcelona han formalizado la voluntad de cooperación entre ambas entidades mediante la firma de un Convenio de Colaboración para la organización conjunta de actividades de información, divulgación y formación sobre propiedad industrial.

Abril 2006

Ps Castellana 75. Madrid



B.O.P.I.	Conócenos	Propiedad Industrial	Modalidades	Oficina Virtual
--------------------------	---------------------------	--------------------------------------	-----------------------------	---------------------------------

Oficina Virtual

individual o por lotes

- Solicitud-e de invenciones
- Solicitud de registro de Diseños Industriales
- Presentación de recursos



- Marcas
- Nombres comerciales
- Patentes
- Modelo de utilidad
- Diseños industriales
- Topografías de productos semiconductores

Portales OEPM

- Información Tecnológica
- Calidad
- Piratería
- Archivo Histórico y Museo
- Acceso CCRR
- CEVI CEVIPYME

Agenda OEPM

Noticias

Premios al inventor europeo del año 2010

Marzo 2010 - Febrero 2011: "Curso práctico para preparar el European Qualifyin..."

Abril 2010: "Course on Japanese Patent System: Law, Case-law and Practice on J..."

Bases de datos

- Localizador de marcas
- Situación de expedientes
- Inventiones y Diseños en español: INVENES
- Inventiones en otros idiomas: esp@cenet
- Inventiones Latinoamericanas: Latipat
- Clasificación Internacional de Patentes
- Clasificación Internacional de Productos y Servicios (Marcas)

Formularios

- Tasas 2010
- Otras Informaciones
- Estadísticas
- Centros Regionales de Información en Propiedad Industrial
- Legislación
- Ayudas
- Empleo
- Perfil del Contratante

A continuación le presentamos las últimas noticias referentes a nuestra entidad. Si lo desea, puede buscar en el histórico de noticias que tiene habilitado en la parte inferior de ésta página.

Resultado de la búsqueda - Se mostrarán las 60 últimas noticias.

- ▶ 25-01-2010 / 22 de marzo 2010 - "Jornada de estudio y actualización en materia de patentes (Lunes de Patentes)"
- ▶ 25-01-2010 / Abril 2010: "Course on Japanese Patent System: Law, Case-law and Practice on JP Patents"
- ▶ 25-01-2010 / Marzo 2010 - Febrero 2011: "Curso práctico para preparar el European Qualifying Examination (EQE)"
- ▶ 12-01-2010 / Marzo y Junio 2010 (Barcelona), y Noviembre 2010 (Madrid): "Curso sobre patentes y modelos de utilidad: Fundamentos, Documentación, Transferencia y Redacción".
- ▶ 31-07-2008 / Septiembre 2008 - Junio 2010 - II Curso en Derecho Europeo de Patentes
- ▶ 26-04-2006 / Pago de tasas de solicitudes de Signos distintivos por internet.

UB

CEIPI

Módulo ampliado de Fundamentos

El sistema de patentes: políticas de protección, patentabilidad e infracción



Módulo de Documentación

Bases de datos y servicios de información tecnológica de la OEPM, la OEP y otras oficinas



Centre de Patents
de la Universitat de Barcelona



Módulo de Transferencia

Transferencia de patentes y de know-how:
redacción de contratos de cesión y de licencia

XXIII Edición, Barcelona, marzo y junio de 2010
XXIV Edición, Madrid, noviembre de 2010

Módulo ampliado de Redacción

La práctica de la redacción de memorias
y reivindicaciones

Curso sobre patentes y modelos de utilidad

Fundamentos
Documentación
Transferencia
Redacción

Módulo ampliado de Fundamentos

El sistema de patentes: políticas de protección, patentabilidad e infracción

Fechas

Barcelona: 1-4 de marzo o 28 de junio a 1 de julio

Madrid: 15-18 de noviembre

A quién va dirigido

A quien precise una introducción detallada a las patentes porque va a trabajar en el tema o prevea asistir a cualquiera de los otros módulos

Profesor

Bernabé Zea

Licenciado en química. Técnico en patentes y documentalista del Centro de Patentes de la UB. Agente de la Propiedad Industrial colegiado. Socio de ZBM Patents. Miembro de la Asociación Catalana de Peritos Judiciales.

Contenido

- **Introducción a la propiedad intelectual-industrial (PI).** Instituciones involucradas en la consecución y defensa de los derechos de PI. Objetivos del sistema de patentes: promoción de la innovación tecnológica. Modalidades de protección: derechos de autor, marcas, indicaciones geográficas, diseños y patentes. Competencia desleal. Secreto industrial. Para qué sirven las patentes y para qué no.
- **Principales conceptos relativos a las patentes.** Qué se puede patentar. Ejemplos sobre invenciones patentables y otro tipo de creaciones. Derechos conferidos por las patentes. El derecho negativo de impedir a los terceros la explotación de la invención patentada. Cómo las patentes por sí mismas no dan derecho a la explotación de las invenciones. Determinación de la titularidad y la inventoría: riesgos de su asignación incorrecta en una patente. Derechos del inventor y del titular.

Contenido (cont.)

- **Requisitos de patentabilidad.** Carácter técnico. Excepciones a la patentabilidad. Aplicabilidad industrial. Definición del estado de la técnica. Quién es el experto en la materia a efectos de patentabilidad. Novedad. Actividad inventiva. Determinación de la actividad inventiva mediante la aproximación problema-solución llevada a cabo por la EPO (*European Patent Office*). Indicios secundarios de actividad inventiva. Particularidades de los modelos de utilidad. Estado de la técnica aplicable a los modelos de utilidad. El concepto de novedad nacional de acuerdo con las decisiones del Tribunal Supremo.
- **Protección de las invenciones.** Política de empresa en relación con la propiedad industrial. Decisión de patentar frente al mantenimiento del secreto industrial. Aspectos básicos en la redacción de patentes. Identificación de las invenciones a partir de la información suministrada por el inventor. Cómo pasar de un producto a una invención. Tipos de reivindicaciones disponibles: entidad (producto) y actividad (usos, métodos y procedimientos) Qué, cómo, cuándo y dónde patentar.
- **Extensión de la protección a distintos países.** Derecho de prioridad como inicio de la protección. Familias de patentes: patentes equivalentes en diversos países. Procedimientos de tramitación de la protección en el extranjero: nacional en las diferentes oficinas, patente europea y solicitud internacional (PCT). Validación de patentes europeas: cambios debidos al Acuerdo de Londres. Costes asociados a la protección por patente: redacción de la patente, contestación a acciones oficiales, traducción, tasas de mantenimiento. Honorarios de trámite y tasas oficiales.
- **Política de protección.** Idioma de la solicitud prioritaria y oficina para la primera presentación. Aspectos sobre redacción: adaptación a las necesidades específicas de cada titular. Necesidad de primera solicitud en España. US *provisionals* como medio de conseguir una primera protección en Estados Unidos. Estrategia según la naturaleza del solicitante: universidades, centros públicos de investigación, pequeñas empresas dedicadas a investigación, grandes empresas con centros de investigación y empresas de genéricos. Preparación para superar una *IP due diligence* (auditoría que se llevará a cabo por terceros en el momento en que estén interesados en la compra o participación en los activos de propiedad industrial del titular).



Módulo ampliado de Fundamentos

El sistema de patentes: políticas de protección, patentabilidad e infracción

Contenido (cont.)

- **Interpretación de un documento de patente.** Identificación de las distintas partes del documento. Primera página como fuente de datos bibliográficos e interpretación de la situación registral del documento. Códigos INID asignados por todas las oficinas de patentes. Códigos de publicación. Duración de las patentes, incluyendo los cambios en España y Estados Unidos.
- **Infracción de patentes.** Derechos concedidos y actos prohibidos. Alcance de la protección de las reivindicaciones (independientes y dependientes). Regla de la simultaneidad de todos los elementos. Análisis elemento-por-elemento. Doctrina de los equivalentes. Infracción directa (literal o por equivalencia) e infracción indirecta (por contribución). Acciones judiciales. Inversión de la carga de la prueba. Diligencias de comprobación de hechos. Medidas cautelares. Consecuencias de la infracción.
- **Peculiaridades del sistema estadounidense.** El inventor como solicitante. *First to invent vs. first to file*. Procedimientos de interferencia para determinar la titularidad. Novedad mixta a diferencia de la novedad absoluta y mundial del sistema europeo. La existencia en la práctica de un "año de gracia". *Best mode*. Publicación de algunas solicitudes de patentes frente a la única publicación de la patente concedida. Cuadernos de laboratorio como prueba para determinación de la fecha de invención.

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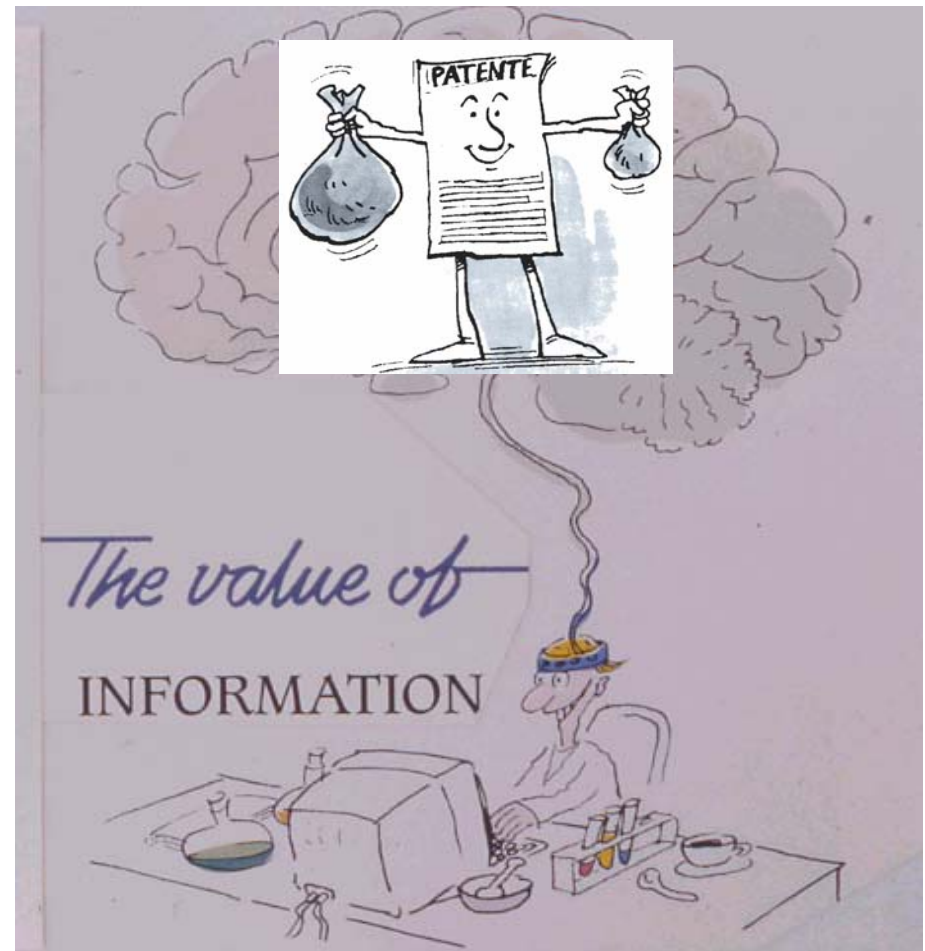
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Aunque **un científico o ingeniero** no tenga nada que patentar, o no piense en el beneficio económico, en su vida profesional **no puede ignorar las patentes** porque:

- Son la mayor fuente de información técnica (más de un millón de solicitudes al año)
- En la mayoría de los casos **son la primera publicación** donde se publica esa información
- El **70-85%** de toda esta información técnica **no se publica por ningún otro medio.**



Módulo de Documentación

Bases de datos y servicios de información tecnológica de la OEPM, la OEP y otras oficinas

Fechas

Barcelona: 5 de marzo

Madrid: 19 de noviembre

A quién va dirigido

A cualquiera que tenga algún conocimiento sobre patentes, o que haya asistido al módulo de Fundamentos

Profesor

Carmen Toledo

Doctora en farmacia. Jefe del Área de Documentación y Búsquedas del Departamento de Patentes e Información Tecnológica, Oficina Española de Patentes y Marcas.

Contenido

- **Información en Internet.** Información administrativa: trámites ante la OEPM, solicitud electrónica, ayudas y subvenciones, publicaciones electrónicas (BOPI y Boletines de Vigilancia Tecnológica). Bases de datos oficiales de patentes, de ámbito internacional : *Esp@cenet*, *Epoline* (OEP) y *PatentScope* (OMPI). Bases de datos de patentes de oficinas nacionales: *INVENES* (oficina española), *PatFT* (oficina norteamericana), *PAJ* (oficina japonesa), *KIPRIS* (oficina coreana), bases de datos de las oficinas china, india, etc. Bases de datos no oficiales de patentes: *Google Patents*, *Boliven*, *Patent Lens*, *IP Newsflash*, *PatentMatic*, *FreePatentsOnline*, etc. Bases de datos de contenido jurídico.
- **Servicios de información tecnológica.** Informes tecnológicos de patentes, búsquedas retrospectivas e informes de vigilancia tecnológica a medida.

3.- Buscar los antecedentes

Aunque no esté en el mercado, habrá antecedentes, más o menos próximos. Hay que localizarlos (mediante búsqueda en bases de datos) para juzgar la novedad y actividad inventiva.



Lo primero que hay que hacer cuando se cree tener una invención patentable: buscar antecedentes en bases de datos de artículos (Medline, Excerpta Medica...) y de patentes (SciFinder...); evitar la divulgación prematura (congresos, artículos, tesis, tesinas...) que impida su patentabilidad; hablar con un experto.

ISI Web of Knowledge: <http://go5.isiknowledge.com/>

The screenshot shows the ISI Web of Knowledge homepage. At the top, there is a navigation bar with the logo and a dropdown menu for 'Products & Features'. Below the logo, a welcome message is displayed. A search bar is prominently featured with a 'SEARCH' button and a 'More information' link. The main content area is divided into 'Searchable Database Products' and 'Analytical Tools'. The 'Searchable Database Products' section lists several databases, with 'Web of Science' and 'Derwent Innovations Index' highlighted with red boxes. The 'Analytical Tools' section includes 'Journal Citation Reports', 'Essential Science Indicators', 'ISI HighlyCited.com', and 'BiologyBrowser'. On the right side, there is a 'Sign In' section with input fields for 'E-mail Address' and 'Password', and a 'SIGN IN' button. Below the sign-in section are links for 'Citation Alerts' and 'My Journal List'. A red circle highlights the logos of the 'MINISTERIO DE EDUCACIÓN Y CIENCIA' and 'FECYT' in the top right corner. A yellow box with red text is positioned in the upper right, and another yellow box with black text is at the bottom right, with red arrows pointing to the highlighted database and sign-in areas respectively.

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Lo paga el MEC para organismos públicos

¡ El ISI no cubre patentes !

Derwent's World Patents Index (WPI) es la mejor base de datos comercial sobre patentes electromecánicas

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CrossSearch Search across multiple products

Enter a topic [SEARCH] [More search fields](#)
[What databases am I searching?](#)

Example: quark* and spin

Searchable Database Products

Web of Science
Science Citation Index Expanded
Index Chemicus
Current Chemical Reaction
Social Sciences Citation Index
Arts & Humanities Citation Index

Current Contents Connect GO
Current journals, Web sites, and books - updated daily

ISI Proceedings GO
International conferences and meetings literature

Derwent Innovations Index GO
International patents

Analytical Tools

Journal Citation Reports GO
Journal performance metrics, including Impact Factor

Essential Science Indicators GO
Scientific performance measures

Other Resources

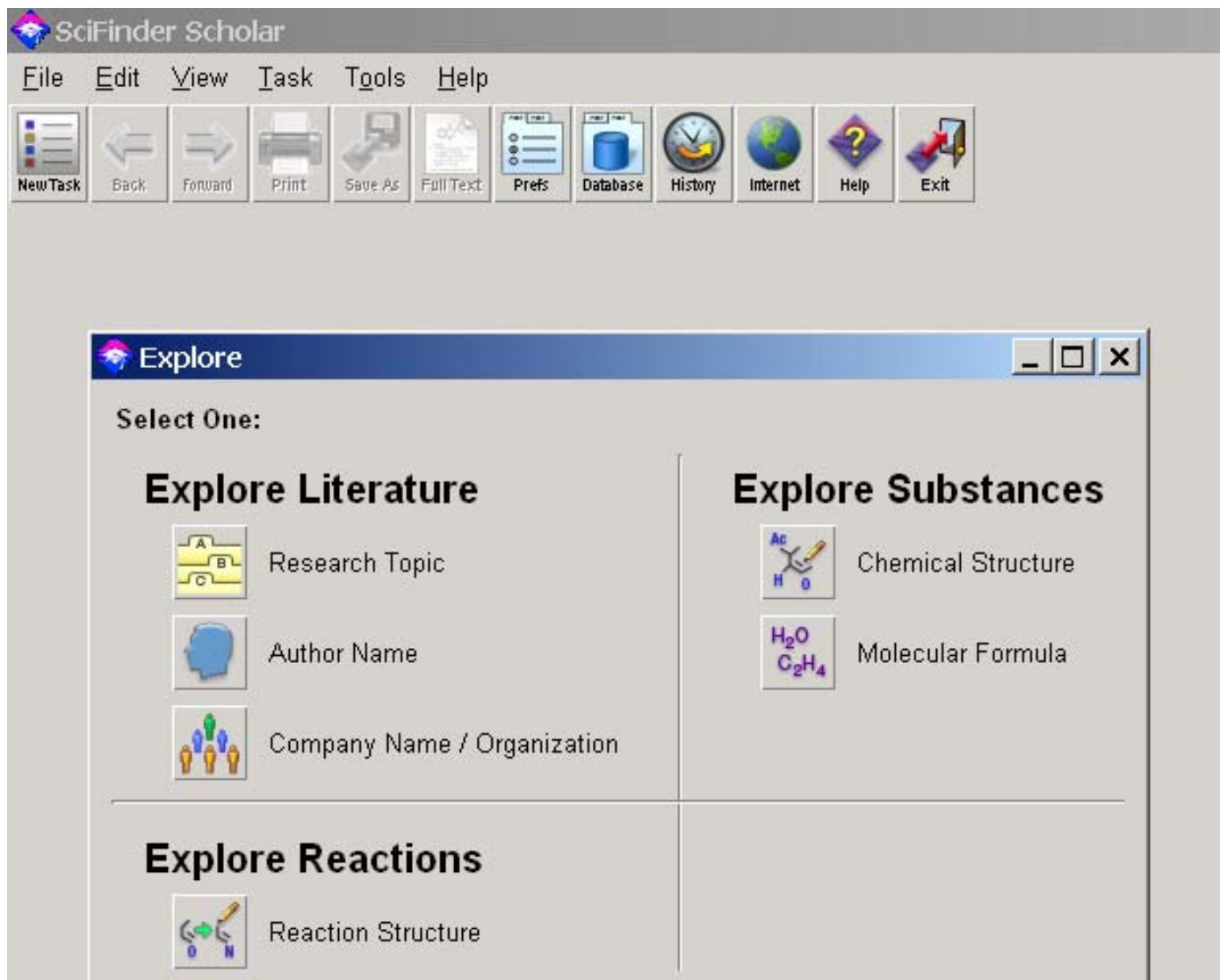
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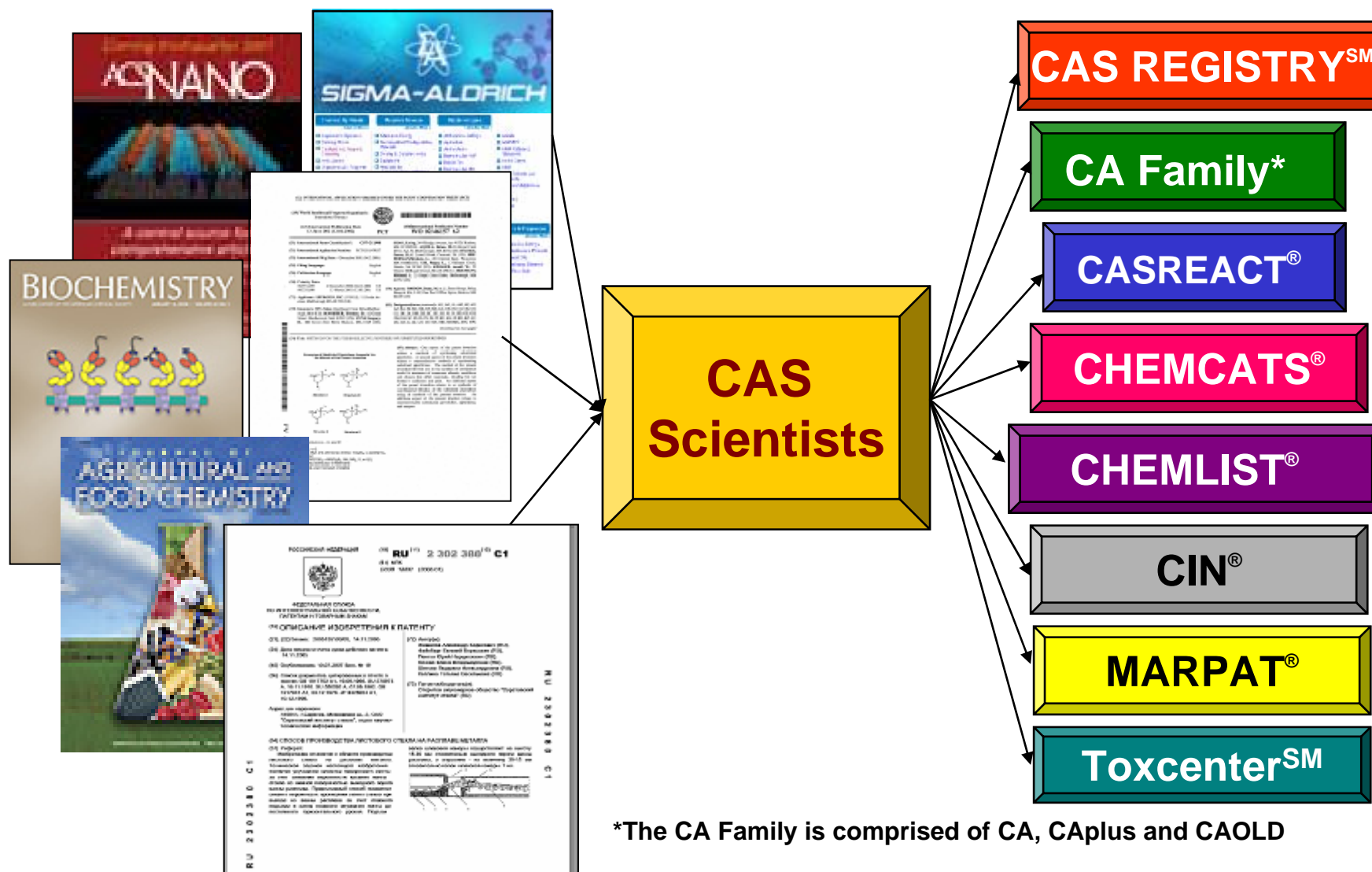
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La mayoría de universidades y muchas empresas son suscriptoras de SciFinder

SciFinder (en esta versión o en la versión web) de CAS cubre las patentes químico-farmacéuticas-biológicas de 50 oficinas/países (Medline, Excerpta Medica, Science Citation Index... no cubren patentes)

CAS resume e indiza los contenidos de muchas fuentes, produciendo bases de datos de gran calidad



*The CA Family is comprised of CA, CAPlus and CAOLD

SciFinder

- Es el sistema de información científico-técnica y de patentes, **integrado, exhaustivo y fácil de usar**, que CAS ofrece para su **uso directo** por el usuario final (no por el profesional, que sigue usando las bdd de STN Int.).
- Además de la **indización habitual** (*index terms, Registry Numbers, CAS roles...*), incorpora "**inteligencia de búsqueda**" adicional (detrás del telón) que **resuelve, de forma rápida y segura, la mayoría de necesidades** de información sin salir del sistema, facilitando el acceso al documento completo.
- **Integra** las bases de datos de CAS (CAplus, REGISTRY, CASREACT, CHEMCATS, CHEMLIST) y MEDLINE, con muchas posibilidades de **consultas cruzadas, incluidas subestructuras**.
- Más de 28M de refs. desde 1907 provenientes de más de 9.000 revistas y patentes de más de 50 oficinas. Más de 16M de refs. Medline desde 1950.
- Más de 33M de sustancias y unos 60M de biosecuencias (¡casi todas!)
- Más de 14M de reacciones. Más de 70M de fichas de 800 catálogos.



'ENVIAGRADOS Los efectos colaterales de la pastilla azul a los diez años de su nacimiento.

"VIAGRA ® nació para ayudar a los afectados de disfunción eréctil y se ha convertido en moda para muchos. A sus casi diez años de vida, los efectos colaterales de las pastillas sexuales son ya asunto social: uso abusivo, disgustos de pareja y malestar por hacer del acto competición y negocio." (EL PAÍS SEMANAL 14.10.2007)

Otro "efecto colateral" de sus diez años en el mercado será la **aparición de genéricos de sildenafilo en España en 2008, si las patentes no lo pueden retrasar** (al menos hasta 2013, como donde hay reivindicación de producto sobre el principio activo).



VIZARSIN de KERN PHARMA

Primer sildenafilo distinto de Viagra® lanzado en España

A Viagra le sale el primer «clon»

6 Diciembre 09 - Sergio Alonso

Compártelo:

«Corregir la disfunción eréctil está, por fin, más al alcance de todos» es el lema con el que se anunciará el fármaco.

MADRID- Viagra, el mítico producto contra la disfunción eréctil que revolucionó las terapias sexuales y que inauguró en todo el mundo la era de los medicamentos «galácticos», va a tener pronto un clon. No se trata de ninguno de los otros dos fármacos innovadores destinados a combatir la impotencia que existen ya en el mercado, y que presentan un diferente mecanismo de acción para lograr la misma meta: Cialis y Levitra. Se trata del primer medicamento genérico del producto y, según ha podido saber LA RAZÓN, va a comercializarse de manera inminente, en cuestión de días, en las oficinas de farmacia españolas.

Además, su precio será mucho más bajo que el fármaco original, al expirar en nuestro país los derechos de patente del mismo. Este genérico del principio activo que compone Viagra, el sildenafilo, se denominará Vizarsin, y ha comenzado ya a anunciarse con el lema de «corregir la disfunción eréctil está, por fin, más al alcance de todos». El fármaco, de ingestión oral, se comercializará por parte del laboratorio Kern Pharma en un total de



1. NOMBRE DEL MEDICAMENTO

Vizarsin 25 mg comprimidos recubiertos con película
Vizarsin 50 mg comprimidos recubiertos con película
Vizarsin 100 mg comprimidos recubiertos con película

2. COMPOSICIÓN CUALITATIVA Y CUANTI

El principio activo es sildenafilo.

Todo es intuitivo:
sólo hay que clicar.
Se usa una vez... y ya
nunca se olvida

SciFinder Scholar

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New Task

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Explore

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 - Research Topic
 - Author Name
 - Company Name / Organization
- Explore Substances**
 - Chemical Structure
 - Molecular Formula
- Explore Reactions**
 - Reaction Structure

Locate

Select One:

- Locate Literature**
 - Bibliographic Information Examples: journal name, title
 - Document Identifier Examples: patent number, CA abstract number
- Locate Substances**
 - Substance Identifier Examples: chemical name, CAS Registry Number

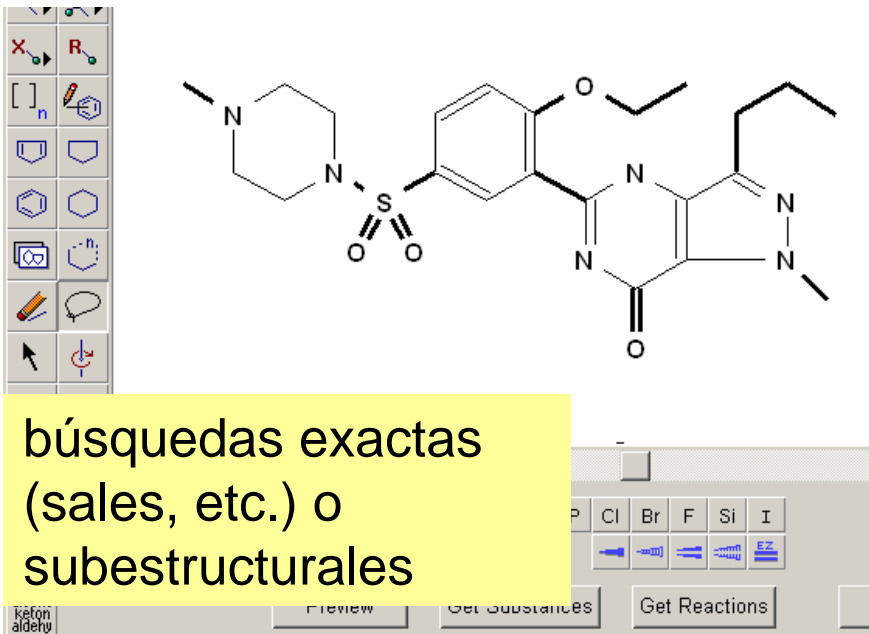
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- Accounts of Chemical Research
- ACH - Models in Chemistry
- ACS Chemical Biology
- ACS Symposium Series

Accounts of Chemical Research
Volume: 39 Issue: 10 2006

Cooperative Binding and Multiple Recognition by Bridged Bis(β -cyclodextrin)s with Functional Linkers Liu, Yu; Chen, Yong. Journal; General Review CAPLUS



139755-83-2

catálogos comerciales

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REGISTRY sildenafilo

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Bibliographic Information

Preparation of pyrazolo[4,3-d]pyrimidin-7-ones as cardiovascular agents. Bell, Andrew Simon; Brown, David; Terrett, Nicholas Kenneth. (Pfizer Ltd., UK; Pfizer Inc.). Eur. Pat. Appl. (1992), 26 pp. CODEN: EPXXDW EP 463756 A1 19920102 Designated States R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE. Patent written in English. Application: EP 91-305137 CAN 116:255626 AN 1992

Patent Family Information

Patent No.	Kind	Date	
Application No.		Date	
EP 463756	A1	19920102	EP
1991-305137	19910607		
EP 463756	B1	19950419	

Ref. CA de la 1ª familia de patentes

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Pyrazolopyrimidinone antianginal agents.

Bibliographic data Description Claims Mosaics

Publication number: EP0463756
Publication date: 1992-01-02

acceso al documento completo

ARTÍCULO CIENTÍFICO

- **TÍTULO** largo y muy descriptivo
- **AUTORES** (muchos; a veces alguno "ficticio")
- **INTRODUCCIÓN** con muchas citas a artículos (revisión bibliográfica)
- **RESULTADOS Y DISCUSIÓN**: justificación teórica (los porqués); distinción entre lo real (**en presente**) y lo posible (**en condicional**); trascendencia en relación con otros estudios; perspectivas (**en futuro**).
- **EXPERIMENTAL** (Materiales y Métodos; Ejemplos): Lo realmente realizado (**en pasado**), detallado para que sea reproducible.

PATENTE

- **TÍTULO** críptico y poco descriptivo
- **INVENTORES** (pocos y "reales") y **PROPIETARIOS** (registrados)
- **ESTADO DE LA TÉCNICA** con pocas citas a patentes; **problema técnico** planteado.
- **EXPLICACIÓN GENERAL**: soporte de las reivindicaciones, que muchas son extrapolaciones (**en presente**); **solución al problema**; uso industrial y ventajas.
- **EXPLICACIÓN DETALLADA**: lo realmente realizado (**en pasado**) y/o *paper examples* (**en presente**). **Dibujos y biosecuencias** al final.
- **REIVINDICACIONES**: definiciones de entidades/actividades protegidas

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Pyrazolopyrimidinone antianginal agents.

Bibliographic data

Description

Claims

Mosaics

Original document

INPADOC legal status

Publication number: EP0463756 (A1)

Publication date: 1992-01-02

Inventor(s): BELL ANDREW SIMON [GB]; BROWN DAVID [GB]; TERRETT NICHOLAS KENNETH [GB] +

Applicant(s): PFIZER LTD [GB]; PFIZER [US] +

Classification:

- international: A61K31/505; A61K31/519; A61P9/00; A61P9/08; A61P9/10; A61P9/12; C07D231/00; C07D231/02; C07D239/00; C07D239/08; C07D487/04; A61K31/505; A61K31/519; A61P9/00; C07D231/00; C07D239/00; C07D487/00; (IPC1-7): A61K31/505; A61K31/635; C07D487/04

- European: C07D487/04

Application number: EP19910305137 19910607

Priority number(s): GB19900013750 19900620

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Also published as:

- EP0463756 (B1)
- ZA9104707 (A)
- RU2114114 (C1)
- RU2047617 (C1)
- PT98011 (A)
- PT98011 (B)
- PL166490 (B1)
- NZ238586 (A)
- NO912366 (A)
- NL990005 (I1)
- LU90360 (A9)
- KR940006628 (B1)
- JP6041133 (A)
- IL98482 (A)
- IE912094 (A1)
- IE66040 (B1)
- HU218945 (B)
- HK219496 (A)
- FI913017 (A)
- FI95132 (B)
- FI95132 (C)
- ES2071919 (T3)
- EG19651 (A)



19



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11 Publication number:

0 463 756 B1

12

EUROPEAN PATENT SPECIFICATION

45 Date of publication of patent specification: **19.04.95** 51 Int. Cl.⁶: **C07D 487/04**, A61K 31/505,
A61K 31/635

21 Application number: **91305137.1**

22 Date of filing: **07.06.91**

The file contains technical information submitted after the application was filed and not included in this specification

EP 463.756 B1 (1/4): de la primera familia de patentes de Pfizer sobre sildenafil

54 **Pyrazolopyrimidinone antianginal agents.**

30 Priority: **20.06.90 GB 9013750**

43 Date of publication of application:
02.01.92 Bulletin 92/01

235 East 42nd Street
New York, N.Y. 10017 (US)

84 Designated Contracting States:
BE CH DE DK ES FR GR IT LI LU NL SE AT

54 **Pyrazolopyrimidinone antianginal agents.**

30 Priority: **20.06.90 GB 9013750**

43 Date of publication of application:
02.01.92 Bulletin 92/01

45 Publication of the grant of the patent:
19.04.95 Bulletin 95/16

84 Designated Contracting States:
AT BE CH DE DK ES FR GB GR IT LI LU NL SE

56 References cited:
EP-A- 0 201 188

PATENT ABSTRACTS OF JAPAN unexamined applications, C field, vol. 13, no. 56, February 8, 1989 THE PATENT OFFICE JAPANESE GOVERNMENT page 10 C 566

73 Proprietor: **Pfizer Limited**
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84 Designated Contracting States:
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84 Designated Contracting States:
BE CH DE DK ES FR GR IT LI LU NL SE AT

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74 Representative: **Moore, James William, Dr.**
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3 756 B1

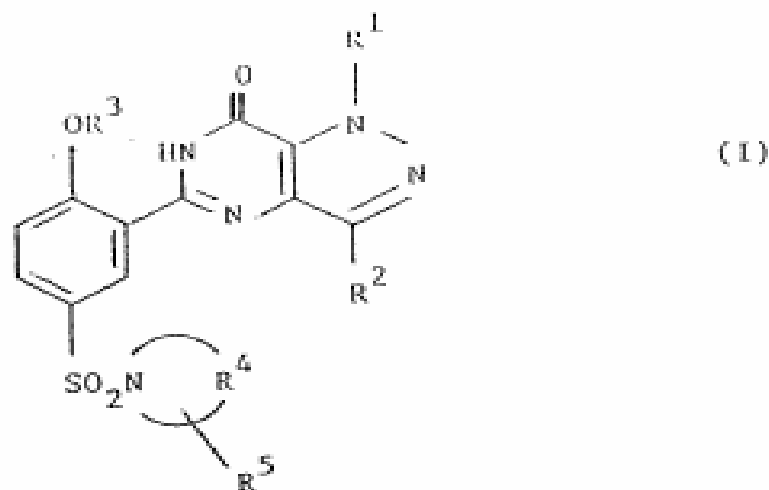
Description

This invention relates to a series of pyrazolo[4,3-d]pyrimidin-7-ones, which are potent and selective inhibitors of cyclic guanosine 3',5'-monophosphate phosphodiesterase (cGMP PDE), having utility in a variety of therapeutic areas including the treatment of various cardiovascular disorders such as angina, hypertension, heart failure and atherosclerosis.

The compounds of the invention exhibit selectivity for inhibition of cGMP PDEs rather than cyclic adenosine 3',5'-monophosphate phosphodiesterases (cAMP PDEs) and, as a consequence of this selective PDE inhibition, cGMP levels are elevated, which in turn can give rise to beneficial platelet anti-aggregatory, anti-vasospastic and vasodilatory activity, as well as potentiation of the effects of endothelium-derived relaxing factor (EDRF) and nitrovasodilators. Thus the compounds have utility in the treatment of a number of disorders, including stable, unstable and variant (Prinzmetal) angina, hypertension, congestive heart failure, atherosclerosis, conditions of reduced blood vessel patency e.g. post-percutaneous transluminal coronary angioplasty (post-PTCA), peripheral vascular disease, stroke, bronchitis, chronic asthma, allergic asthma, allergic rhinitis, glaucoma, and diseases characterised by disorders of gut motility, e.g. irritable bowel syndrome (IBS).

European patent application EP-A-0201188 discloses certain pyrazolo[4,3-d]pyrimidin-7-ones as adenosine receptor antagonists and PDE inhibitors, useful in the treatment of cardiovascular disorders such as heart failure or cardiac insufficiency. However these compounds are neither particularly potent PDE inhibitors, nor are they claimed to be selective inhibitors of cGMP PDE.

The compounds of the present invention are of the formula (I):



A particularly preferred group of compounds of the formula (I) is that wherein R¹ is methyl; R² is n-propyl; R³ is ethyl, n-propyl or allyl; R⁴ taken together with the nitrogen atom to which it is attached completes a 4-N-(R⁶) piperazinyl group; R⁵ is H; and R⁶ is H, C₁-C₃ alkyl or 2-hydroxyethyl.

Especially preferred individual compounds of the invention include:

20 5-[2-allyloxy-5-(4-methylpiperazinylsulphonyl)phenyl]-1-methyl-3-n-propyl-1,6-dihydro-7H-pyrazolo[4,3-d]pyrimidin-7-one;

5-[2-ethoxy-5-(piperazinylsulphonyl)phenyl]-1-methyl-3-n-propyl-1,6-dihydro-7H-pyrazolo[4,3-d]pyrimidin-7-one;

25 5-[2-ethoxy-5-(4-methylpiperazinylsulphonyl)phenyl]-1-methyl-3-n-propyl-1,6-dihydro-7H-pyrazolo[4,3-d]pyrimidin-7-one;

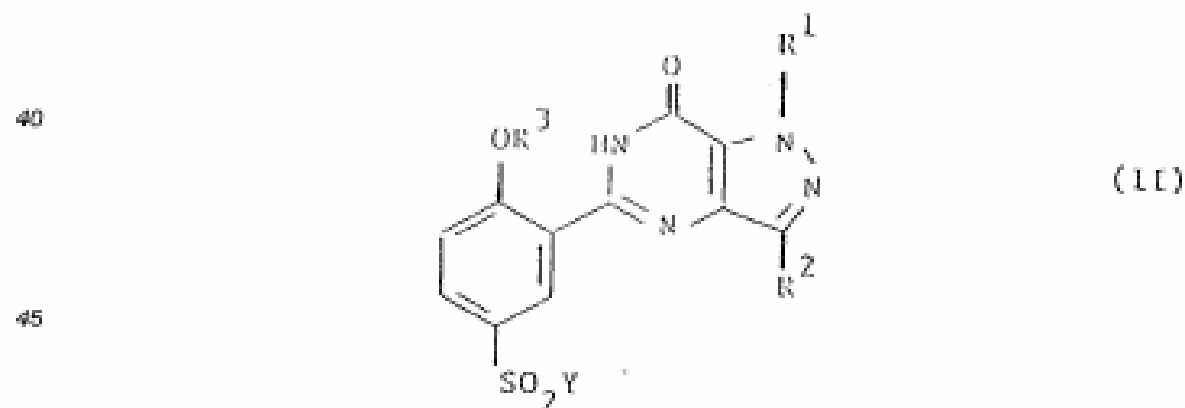
5-{2-ethoxy-5-[4-(2-propyl)piperazinylsulphonyl]phenyl}-1-methyl-3-n-propyl-1,6-dihydro-7H-pyrazolo[4,3-d]pyrimidin-7-one;

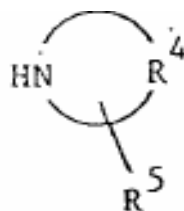
5-{2-ethoxy-5-[4-(2-hydroxyethyl)piperazinylsulphonyl]phenyl}-1-methyl-3-n-propyl-1,6-dihydro-7H-pyrazolo[4,3-d]pyrimidin-7-one;

30 1-methyl-5-[5-(piperazinylsulphonyl)-2-n-propoxyphenyl]-3-n-propyl-1,6-dihydro-7H-pyrazolo[4,3-d]pyrimidin-7-one;

and 5-[5-[4-(2-hydroxyethyl)piperazinylsulphonyl]-2-n-propoxyphenyl]-1-methyl-3-n-propyl-1,6-dihydro-7H-pyrazolo[4,3-d]pyrimidin-7-one.

35 The compounds of the general formula (I) may be prepared by the reaction of a compound of the general formula (II):



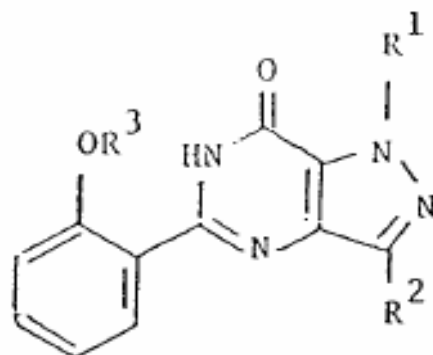


(III)

wherein R⁴ and R⁵ are as previously defined.

The reaction is generally carried out at room temperature, preferably in the presence of a solvent, for example an alkanol containing one to three carbon atoms, using an excess of (III) to scavenge the acid by-product (HY).

Compounds of the general formula (II) may be prepared from compounds of the general formula (IV):

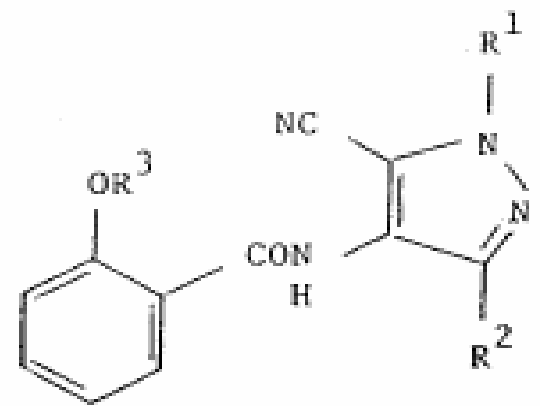
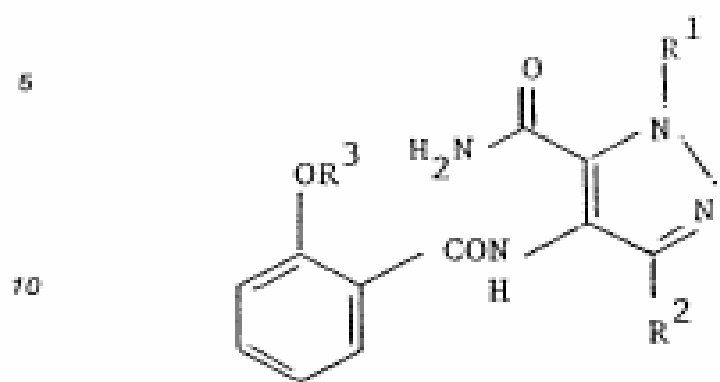


(IV)

(wherein R¹, R² and R³ are as previously defined) by the application of known methods for the introduction of a SO₂Y group (wherein Y is as previously defined) into an aromatic ring, for example, when Y represents a chlorine atom, by the action of chlorosulphonic acid at or near 0° C.

When R³ is a group susceptible to removal under the chlorosulphonylation conditions, e.g. allyl, said group can be introduced in the final stage of the synthesis. Thus the phenol of the general formula (IV), wherein R³ is H, and R¹ and R² are as previously defined, which is obtainable by Pd⁰-mediated deprotection of the O-allyl analogue as illustrated by Example 25, is chlorosulphonylated to provide a compound of the general formula (II), wherein Y is Cl, R³ is H, and R¹ and R² are as previously defined. The

Compounds of the general formula (IV) may be prepared from compounds of the general formula (V):

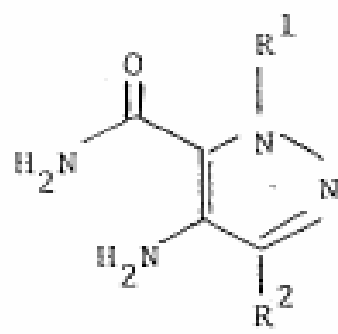


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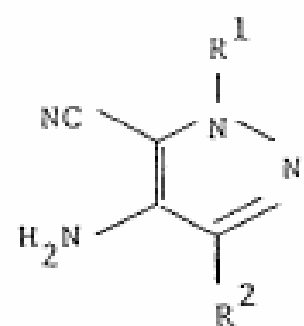
In an alternative cyclisation procedure, compounds of the general formula (IV) may be obtained by treatment of (V) with polyphosphoric acid at or near 140 °C for 6-18 hours.

Compounds of the general formulae (V) and (VI) may be prepared from compounds of the general formulae (VII) and (VIII) respectively:

30



35



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Phosphodiesterase activity

20 Compound affinities for cGMP and cAMP PDEs are assessed by determination of their IC₅₀ values (the concentration of inhibitor required for 50% inhibition of enzyme activity). The PDE enzymes are isolated from rabbit platelets and rat kidney, essentially by the method of W.J. Thompson et al. (Biochem., 1971 10, 311). The calcium/calmodulin (Ca/CAM)-independent cGMP PDE and the cGMP-inhibited cAMP PDE enzymes are obtained from rabbit platelets whilst, of the four major PDE enzymes of the rat kidney, the
25 Ca/CAM-dependent cGMP PDE (fraction I) is isolated. Assays are performed using a modification of the "batch" method of W.J. Thompson and M.M. Appleman (Biochem., 1979, 18, 5228). Results from these tests show that the compounds of the present invention are potent and selective inhibitors of both cGMP PDEs.

30 Platelet anti-aggregatory activity

This is assessed by the determination of a compound's ability to inhibit platelet aggregation in vitro induced by platelet activating factor (PAF), and to potentiate the platelet antiaggregatory action in vitro of activators of guanylate cyclase such as nitroprusside and EDRF. Washed platelets are prepared essentially
35 by the method of J.F. Mustard et al. (Methods in Enzymol., 1989, 169, 3) and aggregation is determined using standard turbidimetric techniques as described by G.V.R. Born, J. Physiol. (Lond), 1962, 162, 67P.

Antihypertensive activity

40 This is assessed following intravenous or oral administration of a compound to spontaneously hypertensive rats. Blood pressure is recorded via a cannula implanted in the carotid artery of either conscious or anaesthetised animals.

Thus the invention provides a pharmaceutical composition comprising a compound of the formula (I), or
5 a pharmaceutically acceptable salt thereof, together with a pharmaceutically acceptable diluent or carrier.

The invention also provides a compound of the formula (I), or a pharmaceutically acceptable salt thereof, for use in medicine, particularly for the treatment of angina, hypertension, heart failure or atherosclerosis.

The invention further provides the use of a compound of the formula (I), or a pharmaceutically
10 acceptable salt thereof, for the manufacture of a medicament for the treatment of stable, unstable and variant (Prinzmetal) angina, hypertension, congestive heart failure, atherosclerosis, stroke, peripheral vascular disease, conditions of reduced blood vessel patency e.g. post-PTCA, chronic asthma, bronchitis, allergic asthma, allergic rhinitis, glaucoma, or diseases characterised by disorders of gut motility, e.g. IBS.

The invention also includes any novel intermediates disclosed herein such as those of formulae (II) and
15 (IV).

The preparation of the compounds of the invention will now be more particularly illustrated by reference to the following experimental Examples. The purity of the compounds was routinely monitored by thin layer chromatography (TLC) using Merck Kieselgel 60 F₂₅₄ plates. ¹H-Nuclear magnetic resonance spectra were recorded using a Nicolet QE-300 spectrometer and were in all cases consistent with the proposed structures.

20


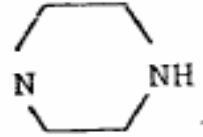
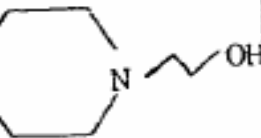
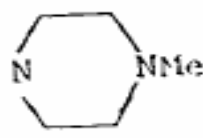
EXAMPLE 1

1-Methyl-3-n-propylpyrazole-5-carboxylic acid ethyl ester

25 A mixture of 3-n-propylpyrazole-5-carboxylic acid ethyl ester (24.1 g, 0.132 mol) (prepared by the method of Chem. Pharm. Bull., 1984, 32, 1568) and dimethyl sulphate (16.8 g, 0.133 mol) were heated to 90 °C for 2.5 hours. The mixture was dissolved in dichloromethane and the solution washed with sodium carbonate solution. The organic phase was separated, dried (MgSO₄) and evaporated under vacuum to give a solid. Chromatography on silica gel (300 g), eluting with dichloromethane gave the product as a colourless
30 oil (20.4 g, 79%). R_f 0.8 (silica; dichloromethane, methanol, acetic acid; 80:20:1).

36

5

Example		% yield	m.p. (°C)	Analysis % (Theoretical in brackets)		
				C	H	N
10		51	161-162	54.82 (54.77)	6.13 6.13	17.95 18.25)
11		79	194-196	54.63 (54.75)	6.47 6.39	16.50 16.65)
12		88	187-189	55.61 (55.68)	6.23 6.37	17.74 17.71)

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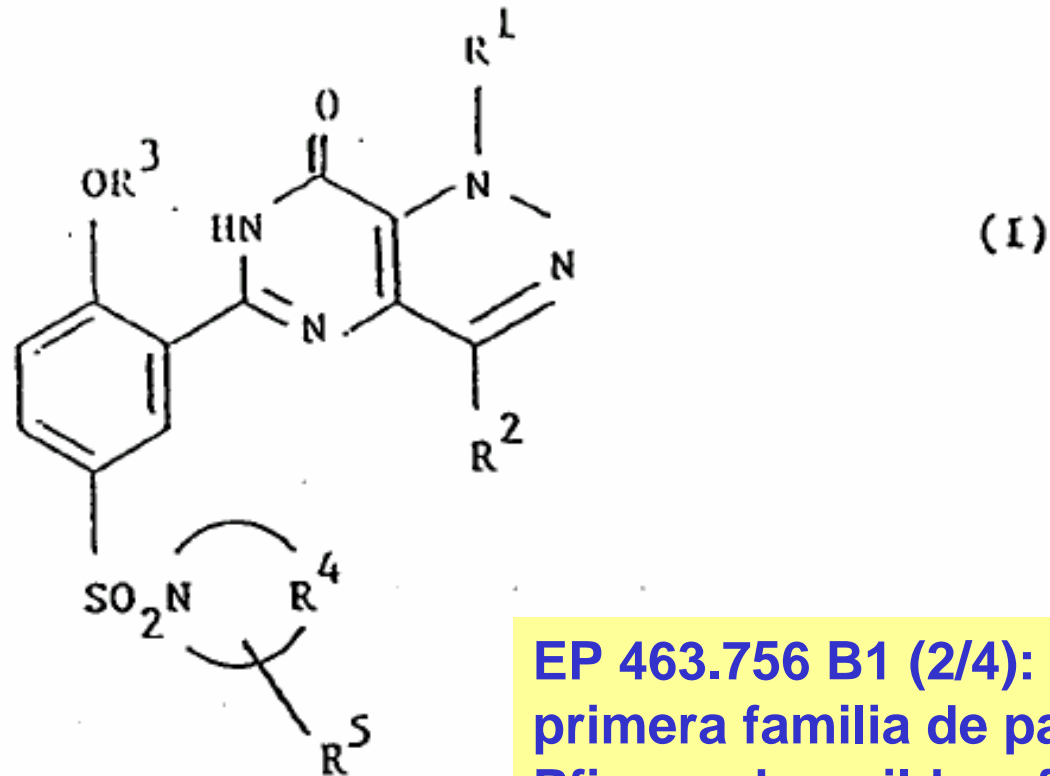
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Claims

Claims for the following Contracting States : AT, BE, CH, DE, DK, FR, GB, IT, LI, LU, NL, SE

1. A compound of the formula:



and pharmaceutically acceptable salts thereof.

EP 463.756 B1 (2/4): de la primera familia de patentes de Pfizer sobre sildenafil

4. A compound as claimed in Claim 3 wherein said compound is selected from:
5-{2-ethoxy-5-[4-(2-propyl)piperazinylsulphonyl]phenyl}-1-methyl-3-n-propyl-1,6-dihydro-7H-pyrazolo[4,3-d]pyrimidin-7-one; **sildenafil**

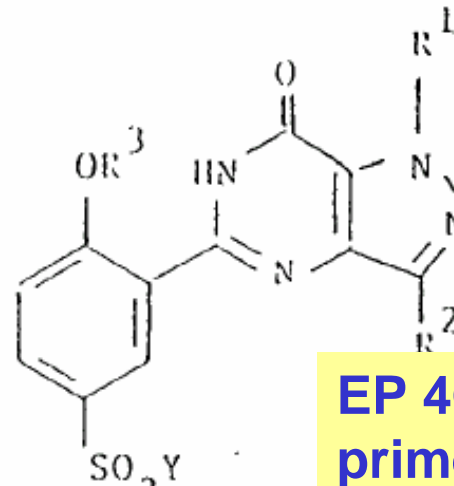
6. A compound of the formula (I) or a pharmaceutically acceptable salt thereof, as claimed in any one of Claims 1 to 4, for use in medicine, particularly for the treatment of angina, hypertension, heart failure or atherosclerosis.

reivindicación al estilo primer uso terapéutico

7. The use of a compound of the formula (I) or a pharmaceutically acceptable salt thereof, as claimed in any one of Claims 1 to 4, for the manufacture of a medicament, particularly for the treatment of angina, hypertension, heart failure, atherosclerosis, stroke, peripheral vascular disease, conditions of reduced blood vessel patency, chronic asthma, bronchitis, allergic asthma, allergic rhinitis, glaucoma or diseases characterised by disorders of gut motility.

reivindicación de segundo uso terapéutico a la suiza

8. A compound of the formula:



producto químico intermedio
(no farmacéutico)

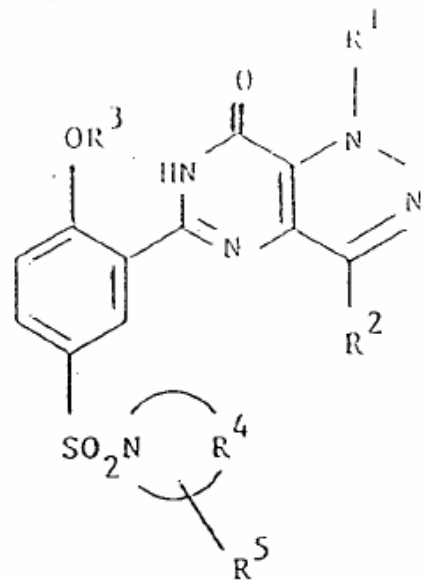
EP 463.756 B1 (3/4): de la primera familia de patentes de Pfizer sobre sildenafil

Estos tipos de reivindicaciones no eran patentables en España hasta el 7.10.1992. Pero está sub-judice una interpretación contraria, basada en el ADPIC

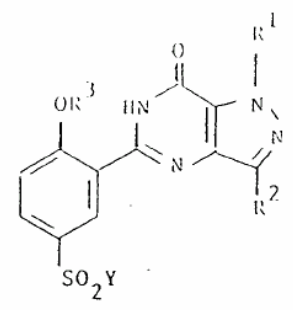
Claims for the following Contracting State : **ES**

1. A process for preparing a compound of the formula:

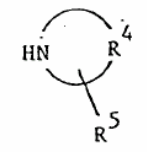
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and pharmaceutically acceptable salts thereof, which comprises reacting a compound of the formula:

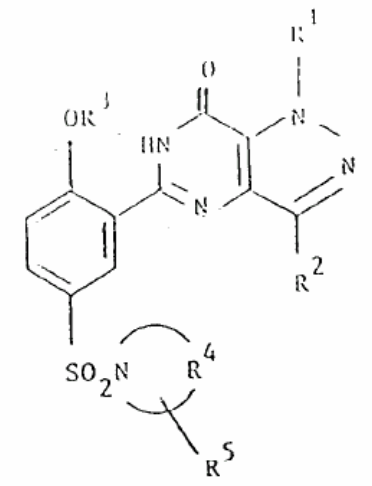


wherein R¹, R² and R³ are as previously defined and Y is chloro, bromo or fluoro, with a compound of the formula:



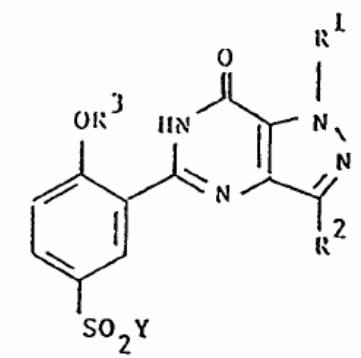
Claims for the following Contracting State : **GR**

1. A process for preparing a compound of the formula:



7. A compound of the formula:

producto químico
intermedio
(no farmacéutico)



EP 463.756 B1 (4/4): de la primera familia de patentes de Pfizer sobre sildenafil

①9



OFICINA ESPAÑOLA DE
PATENTES Y MARCAS

ESPAÑA

①1 N.º de publicación: **ES 2 071 919**

⑤1 Int. Cl.⁶: C07D 487/04

A61K 31/505

A61K 31/635

**Validación en España de la EP
463.756 B1: primera familia de
patentes de Pfizer sobre sildenafilo**

①2

TRADUCCION DE PATENTE EUROPEA

T3

⑧6 Número de solicitud europea: **91305137.1**

⑧6 Fecha de presentación : **07.06.91**

⑧7 Número de publicación de la solicitud: **0 463 756**

⑧7 Fecha de publicación de la solicitud: **02.01.92**

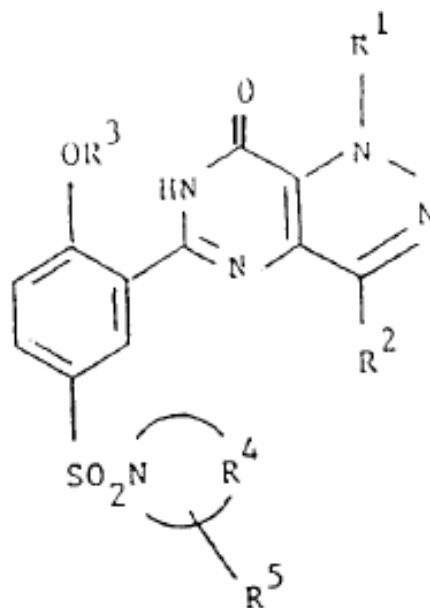
⑤4 Título: **Agentes antianginosos de pirazolopirimidina.**

③0 Prioridad: **20.06.90 GB 9013750**

⑦3 Titular/es: **Pfizer Inc.**
235 East 42nd Street
New York, N.Y. 10017, US

REIVINDICACIONES

1. Un procedimiento para la preparación de un compuesto de fórmula



en la que



15 2. Un procedimiento de acuerdo con la Reivindicación 1 en el que R^1 , R^2 , R^4 y R^5 son de acuerdo con la Reivindicación 1, y R^3 es H, seguido de O-alkilación del fenol y conversión opcional del producto requerido en una sal farmacéuticamente aceptable.

20 3. Un procedimiento de acuerdo con la Reivindicación 1 o Reivindicación 2 en el que R^1 , R^4 y R^5 son de acuerdo con la Reivindicación 1, y R^3 es de acuerdo con la Reivindicación 1 o Reivindicación 2, en el que R^2 contiene un sustituyente hidroxilo protegido por acetilo o benzosilo, siendo separado dicho grupo protector posteriormente por hidrólisis con bases antes de la conversión opcional del producto requerido en una sal farmacéuticamente aceptable.



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- Solicitud de registro de Diseños Industriales
- Presentación de recursos



- Marcas**
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- Patentes
- Modelo de utilidad
- Diseños industriales
- Topografías de productos semiconductores

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- Acceso CCRR
- CEVI CEVIPYME

Agenda OEPM

Noticias

Premios al inventor europeo del año 2010

Marzo 2010 - Febrero 2011: "Curso práctico para preparar el European Qualifyin..."

Abril 2010: "Course on Japanese Patent System: Law, Case-law and Practice on J..."

Bases de datos

- Localizador de marcas
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21 C 9900010 (5)

22 12-03-1999

Fecha de concesión: 12-02-2002

73 US Pfizer Inc
235 East 42ND Street
New York, New York 10017 U

68 2071919

54 **Agentes antianginosos de pirazolopirimidinona.**

92 EU/1/98/077/001-012 del 14-09-1998

93 UE EU/1/98/077/001-012 del 14-09-1998

94 14-09-2013

95 Sildenafil (viagra).

**Certificado
Complementario de
Protección (CCP) de
sildenafil en España,**
que extiende la protección
relativa al mismo de la
patente ES 2.071.919
(validación en España de
EP 463.756 B1) hasta el
14.09.2013
(BOPI 1.03.2002)

(19)



Europäisches Patentamt
European Patent Office
Office européen des brevets



(11)

EP 0 702 555 B1

(12)

EUROPEAN PATENT SPECIFICATION

(45) Date of publication and mention
of the grant of the patent:
11.03.1998 Bulletin 1998/11

(21) Application number: **94916236.6**

(22) Date of filing: **13.05.1994**

(51) Int. Cl.⁶: **A61K 31/505**

**EP 702.555 B1 (1/2): de la
segunda familia de patentes de
Pfizer sobre sildenafilo**

(54) **PYRAZOLOPYRIMIDINONES FOR THE TREATMENT OF IMPOTENCE**

PYRAZOLPYRIMIDINONE FÜR DIE BEHANDLUNG VON IMPOTENZ

PYRAZOLOPYRIMIDINONES UTILISEES POUR TRAITER L'IMPUISSANCE

(84) Designated Contracting States:
**AT BE CH DE DK ES FR GB GR IE IT LI LU NL PT
SE**

(30) Priority: **09.06.1993 GB 9311920**

(43) Date of publication of application:
27.03.1996 Bulletin 1996/13

(73) Proprietors:
• **Pfizer Limited**

• **TERRETT, Nicholas Kenneth**
Sandwich Kent CT13 9NJ (GB)

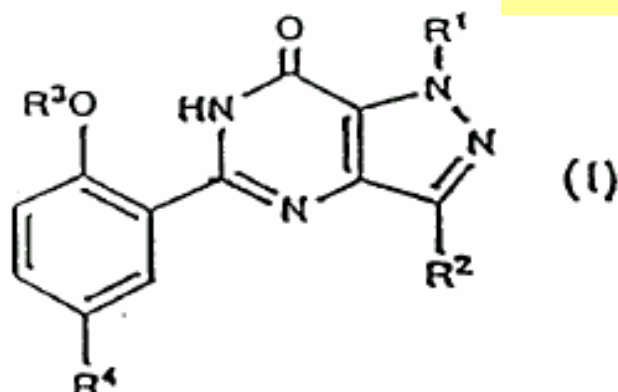
(74) Representative:
Moore, James William, Dr. et al
Pfizer Limited
Ramsgate Road
Sandwich Kent CT13 9NJ (GB)

(56) References cited:
EP-A- 0 463 756

EP-A- 0 526 004

Claims

1. The use of a compound of formula (I):



EP 702.555 B1: de la segunda familia de patentes de Pfizer sobre sildenafil

or a pharmaceutically acceptable salt thereof, or a pharmaceutical composition containing either entity, for the manufacture of a medicament for the curative or prophylactic treatment of erectile dysfunction in a male animal, including man.

6. The use according to claim 5 wherein the compound of formula (I) is 5-[2-ethoxy-5-(4-methyl-1-piperazinylsulphonyl)phenyl]-1-methyl-3-n-propyl-1,6-dihydro-7H-pyrazolo[4,3-d]pyrimidin-7-one.
8. The use of a compound of formula (I) as defined in any one of claims 1 to 7, or a pharmaceutically acceptable salt thereof, or a pharmaceutical composition containing either entity, for the manufacture of a medicament for the curative or prophylactic treatment of female sexual dysfunction. profético (sin pruebas)
9. The use according to any one of claims 1 to 8 wherein the medicament is adapted for oral treatment.
10. The use of a cGMP PDE inhibitor, or a pharmaceutically acceptable salt thereof, or a pharmaceutical composition containing either entity, for the manufacture of a medicament for the curative or prophylactic oral treatment of erectile dysfunction in man. ¡intolerable! (equivale a proteger el mecanismo de acción)
11. The use according to claim 10 wherein the inhibitor is a cGMP PDE_V inhibitor.

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PYRAZOLOPYRIMIDINONES FOR THE TREATMENT OF IMPOTENCE

Bibliographic data | Description | Claims | Mosaics | Original document | INPADOC legal status

Publication number: EP0702555 (A1)
Publication date: 1996-03-27
Inventor(s): ELLIS PETER [GB]; TERRETT NICHOLAS KENNETH [GB] +
Applicant(s): PFIZER LTD [GB]; PFIZER RES & DEV [IE] +
Classification:
 - international: **A61K31/00; A61K31/505; A61K31/519; A61K31/522; A61K31/529; A61K31/535; A61K45/00; A61P13/02; A61P15/00; A61P15/10; C07D487/04; A61K; A61K31/00; A61K31/505; A61K31/519; A61K31/529; A61K31/535; A61K45/00; A61P13/00; A61P15/00; C07D487/00; (IPC1-7): A61K31/505**
 - European: **A61K31/505; A61K31/535**
Application number: EP19940916236 19940513
Priority number(s): WO1994EP01580 19940513; GB19930011920 19930609

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- US6469012 (B1)
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- PL311948 (A1)
- NZ314110 (A)
- NZ266463 (A)
- NO321622 (B1)
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- KR100262926 (B1)
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Status	Patent revoked <i>Database last updated on 24.05.2010</i>		
Most recent event	28.11.2008	Lapse of the patent in a contracting state	published on 31.12.2008 [2009/01]
Applicant(s)	For: GB Pfizer Limited Ramsgate Road Sandwich, Kent CT13 9NJ / GB		
	For: AT BE CH DE DK ES FR GR IE IT LI LU NL PT SE		

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	16.07.2001	Date of oral proceedings
	11.10.2001	Despatch of communication that the patent will be revoked
	11.10.2001	Despatch of minutes of oral proceedings
	01.02.2005	Legal effect of revocation of patent [2005/47]
Appeal following opposition	12.11.2001	Appeal received No. T1212/01 
	17.01.2002	Statement of grounds filed
	03.02.2005	Result of appeal procedure: appeal of the proprietor was rejected
	01.02.2005	Date of oral proceedings
	04.02.2005	Minutes of the oral proceedings despatched
Fees paid	Renewal fee	
	27.03.1996	Renewal fee patent year 03
	10.04.1997	Renewal fee patent year 04
Lapse	GB	13.05.2003
		[2009/01]
Cited in	International search	[XD] EP0463756 ↻
		[XD] EP0526004 ↻
		[X] BR. J. PHARMAC. vol. 81, no. 4 , 1984 pages 665 - 674 A. BOWMANN ET AL. 'Cyclic GMP mediates neurogenic relaxation in the bovine retractor penis muscle'
		[X] AM. J. PHYSIOL. vol. 264 , February 1993 pages H419 - H422 F. TRIGO-ROCHA ET AL. 'Nitric oxide and cGMP: mediators of pelvic nerve-stimulated erection in dogs'

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Date of decision	03 February 2005	Case number	T 1212/01 - 3.3.2
Application number	94916236.6		
IPC	A61K31/505	Proceedings Language	EN
Title of the application	Pyrazolopyrimidinones for the treatment of impotence		
Applicant name	Pfizer Limited, et al	Opponent name	VIVUS INC. ICOS Corp. SCHERING-PLOUGH

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of 3 February 2005

Case Number: T 1212/01 - 3.3.2
Application Number: 94916236.6
Publication Number: 0702555
IPC: A61K 31/505
Language of the proceedings: EN
Title of invention:

Headword:

Pyrazolopyrimidinones for the treatment of impotence/PFIZER
LIMITED ET AL

Relevant legal provisions:

EPC Art. 123(2), 56

EPA Form 3030 06.03

- 2 -

Keyword:

"Main and auxiliary requests 1 and 2 - added matter - yes"

"Auxiliary requests 3 to 5 - inventive step - no"

"Neither technical prejudice nor commercial success
establishes inventive step"

Decisions cited:

T 0019/81, T 0060/82, T 0119/82, T 0104/83, T 0048/86,

"Viagra use patent invalid, court rules"

Pfizer's patent on the use of phosphodiesterase-5 (PDE(V)) inhibitors for treatment of male erectile dysfunction (MED) is invalid, the UK Court of Appeal ruled at the end of January. The Court was considering an appeal by Pfizer against a High Court judgement in November 2000 that the patent was **invalid on the grounds of obviousness**.

Pfizer originally sought patent protection for a number of PDE(V) inhibitors, including sildenafil citrate (Viagra), in 1991, but its patent application referred only to their potential in the treatment of cardiovascular disorders, and made no mention of erectile dysfunction. The patent relating to the use of PDE(V) inhibitors in the treatment of MED was not filed until June 1994.

However, in 1992 and 1993 a number of scientific publications appeared detailing studies of the role of nitric oxide in the relaxation of the smooth muscle of the penis. Such relaxation enables blood to fill the tissues, thereby causing an erection...

In its judgement, the Appeal Court said that several facts were known at the time the Viagra patent was filed. Not only had the structure of Viagra and its inhibitory effect on cGMP PDE(V) been elucidated, but it was also known that cGMP PDE(V) broke down the cGMP that contributed to an erection. It had also been suggested by this time that cGMP PDE(V) inhibitors might be useful in the treatment of impotence.

The Court considered that the difference between the content of these articles and the concept of claim 1 was obvious. In other words, anyone reading the articles would have realised that PDE(V) inhibitors were likely to be effective in the treatment of MED. "There was nothing inventive in trying them out for that purpose," it said.

However, the Court said that there was every reason to expect a good result in the treatment of MED by using cGMP PDE(V) selective inhibitors. The Court also rejected Pfizer's assertion that it discovered the potential of sildenafil in the treatment of MED through the observation of unwanted erections in patients taking part in trials of the drug's cardiovascular properties. In effect, it said the fact that the erections came as a surprise to Pfizer did not necessarily imply invention.

Philip W. Grubb

Patents for Chemicals, Pharmaceuticals and Biotechnology

Fundamentals of Global Law,
Practice and Strategy

⁵⁵
Oxford University Press, 2004 (4th edition, 511 pp.) ISBN 0-19-927378-2

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Fourth Edition

by

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European Patent Attorney

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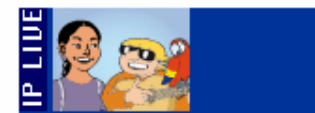
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Intellectual property (IP) refers to creations of the mind: inventions, literary and artistic works, and symbols, names, images, and designs used in commerce.

IP is divided into two categories: Industrial property, which includes inventions (patents), trademarks, industrial designs, and geographic indications of source; and Copyright, which includes literary and artistic works such as novels, poems and plays, films, musical works, artistic works such as drawings, paintings, photographs and sculptures, and architectural designs. Rights related to copyright include those of performing artists in their performances, producers of phonograms in their recordings, and those of broadcasters in their radio and television programs. For an introduction to IP for non-specialists, refer to:

- [Understanding Copyright and Related Rights](#)
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The innovations and creative expressions of indigenous and local communities are also IP, yet because they are "traditional" they may not be fully protected by existing IP systems. Access to, and equitable benefit-sharing in, genetic resources also raise IP questions. Normative and capacity-building programs are underway at WIPO to develop balanced and appropriate legal and practical responses to these issues. For more information, refer to:

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- Chapter 4 - Enforcement of Intellectual Property Rights
- Chapter 5 - International Treaties and Conventions on Intellectual Property
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- **Chapter 5** - International Treaties and Conventions on Intellectual Property 
- **Chapter 6** - Administration and Teaching of Intellectual Property 
- **Chapter 7** - Technological and Legal Developments in Intellectual Property 
- **Bibliography** 
- **Annex** 

Any information referred to in the text on the member States of WIPO treaties can be found by using the links indicated below:

- [Status of Adherences to WIPO Administered Treaties](#)
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 - [Can I discuss details of my invention with a potential investor before filing a patent application?](#)
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Patent Information in Brief

FAQs on Patent Information

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Various types of searches using patent documentation

- [Pre-Application Searches \(PAS\)](#)
- [State-of-the-Art Searches](#)
- [Novelty Searches](#)
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Patent Information in Br...

What are the characteristics of patent documents?

Hereafter are given brief descriptions of specific characteristics of patent documents, which make them extremely useful sources of technological information, with some clear advantages over other sources of information.

Description, Claims, Drawings

Patent documents generally have a fairly uniform structure that facilitates the extracting of information: the claims give the essence of what is new; the description gives the background to the invention (what was known before the invention, i.e., the "prior art"), and defines the difference between the pre-existent technology and what the invention contributes, as a new matter, as a step forward, to technology development; often patent documents contain also drawings, that illustrate the invention that is claimed.

Technological information is disclosed by describing the inventions in accordance with the requirements of the applicable patent law and by indicating the claimed novelty and inventiveness by reference to the existing state of the art. Certain patent documents are published together with a search report showing a series of references found at the occasion of a documentary search made to establish in a first instance the level of novelty of the claimed invention.

Abstracts

Many patent documents contain an abstract. Abstracts allow a general idea to be formed of the contents of the document within a few minutes, and in any case a much shorter time than would be required to read the full text of the patent document.

Classification

Patent documents bear "classification symbols" which facilitate very much finding and extracting relevant information from them. For the purposes of maintaining search files and performing searches for the state of the art, patent offices classify patent documents according to the field or fields of technology to which their contents relate. Although several classification systems exist, today the International Patent Classification (IPC), which was established by an intergovernmental agreement concluded more than 30 years ago and administered by WIPO, is the most widely applied by all the major industrial property offices. The main part of the high cost of processing and classifying patent documents for building up search files, and of keeping the classification system up to date, is borne directly by the



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GATEWAY TO:

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- IP for Development
- Vision IP

RESOURCES FOR:

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- Journalists
- Businesses
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MOST REQUESTED:

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- Development Agenda
- Domain name decisions
- Treaties
- Member states
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New at WIPO

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- WIPO Director General Highlights Key Areas of Work and Technology Transfer
- WIPO Member States Advance Genetic Resources
- WIPO Unveils New Logo
- World Intellectual Property Day
- Rescheduled Meetings due to the Global Financial Crisis
- WIPO to Provide Dispute Resolution Services

Developing laws and standards
IP for Development
Copyright issues
Traditional Knowledge, Folklore, Genetic Resources
Cooperation with Certain Countries in Europe and Asia
Global IP Infrastructure
Small and Medium-sized Enterprises
WIPO Academy
Public Outreach
Enforcement of IP Rights

... on June 5, 2010
 ... for Innovation
 ... Folklore And
 ... World
 ... at Industry



Cartoon - Copyright [Video]



The WIPO Convention - Life Begins at 40!

DIRECTOR GENERAL



Francis Gurry
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Forthcoming Events

- Standing Committee on Copyright and Related Rights - June 21 to 24
- WIPO Seminar on the Economics of Intellectual Property - June 28
- WIPO-WTO Colloquium for Teachers of Intellectual Property - June 28 to July 9
- Standing Committee on the Law of Trademarks, Industrial Designs and

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WIPO Worldwide Academy

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WIPO Worldwide Academy

The WIPO Worldwide Academy was founded in March 1998 in response to demand for knowledge and skills in intellectual property (IP). It serves as a center of excellence in teaching, training and research in IP. Its programs cater to different target audiences - inventors and creators, business managers and IP professionals, policy makers and government officials of IP institutions, diplomats and representatives, students and teachers of intellectual property and the civil society.

Its objectives are achieved through five core programs - professional training, distance learning, policy development, teaching and research, education and degree. The tailor-made programs, including its distance learning with more than 87,000 participants since its inception in 1999, benefit large numbers of people from all walks of life.

The Academy seeks to continuously stay innovative by offering new programs to keep up with the ever-changing IP landscape. It also aims to promote international cooperation for enhancing IP human capital through global networking with stakeholders and partners.

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Academy Programs:

- [Distance Learning](#)
- [Professional Development](#)
- [Education & Degree](#)
- [Summer School on IP](#)

ANNOUNCEMENTS:

- New** 4th meeting of the Global Network on IP Academies (GNIPA), Seoul, ROK, August 24 to 26, 2010
- New** WIPO Summer Schools on Intellectual Property - 2010

DL Objectives, info, methodology - Mozilla Firefox

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DL Objectives, info, met...

WIPO PROGRAM ACTIVITIES

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The WIPO Worldwide Academy uses distance learning as an alternative and a complement to traditional training methods in order to make course materials accessible to large audiences worldwide. Distance learning courses are delivered primarily via the Internet and offer new teaching methodologies, specially-designed course materials, evaluation tools, and tailored means of delivery. Where appropriate, videoconferencing sessions are organized to simulate an academic environment by linking remote sites. Courses are specifically adapted to allow student-teacher interaction, student tests, course monitoring, and on-line registration and evaluation systems.

The greatest advantage of distance learning as a study methodology is that its reach is not confined by such constraints as geographical location and time. Thus, any registered student, anywhere in the world, can benefit from the WIPO Worldwide Academy's distance learning program at a time and place convenient to him/her.

This has revolutionized the way in which we both teach and learn.

Through distance learning, the Academy strives to increase the educational opportunities of a broad spectrum of beneficiaries worldwide, using this website as a delivery platform.

Distance Learning Program Course Calendar 2010 (subject to change)

Primers:

Open Registration:

- DL-001 Primer on Intellectual Property
- 101PCT Introduction to the Patent Cooperation Treaty

➤ Register online at any time to take these courses

General Courses:

Session 1:

Course Dates	Course Title
March 1 to April 15, 2010 Exam : April 16 to 18	DL-101 General Course on Intellectual Property

➤ Register online from December 1, 2009 to February 18, 2010

Session 2:

Course Dates	Course Title
October 1 to November 15 Exam : November 16 to 18	DL-101 General Course on Intellectual Property

➤ Register online from July 1 to September 20, 2010

Advanced Courses:

Session 1:

Course Dates	Course Title
March 9 to May 17	DL-301 Patent
March 10 to May 18	DL-302 Trademarks, Industrial Designs and Geographical Indications
March 16 to April 27	DL-317 Arbitration
March 11 to May 19	DL-318 Patent Information Search
March 11 to May 19	DL-320 Basics of Patent Drafting
July 7 to September 15	New DL-450 Intellectual Property Management *

- Register online from December 1, 2009 to February 21, 2010
- * Register for DL-450 until March 19, 2010

Session 2:

Course Dates	Course Title
September 16 to November 25	DL-201 Copyright and Related Rights
September 16 to October 28	DL-202 Electronic Commerce and Intellectual Property
September 16 to November 25	DL-204 Biotechnology and Intellectual Property

- Register online from June 21 to July 31, 2010
- For further information and to register online, please visit <http://academy.wipo.int>

Updated: 17.05.2010

DL-301E Patents

Summary: This advanced course is intended to explain the basic principles of patents, their economic impact, the process of patenting, describe technology transfer, patent pool and the traditional use of patents by centers of knowledge such as universities. It covers the important aspects of the patent document used in the enforcement of patent rights and the various aspects of enforcement.

Tutored: Yes **Duration:** 100 hours **Cost:** [Fee List](#)

Next Session: March 9 to May 17, 2010

Enrollment: December 1, 2009 to February 18, 2010

Course Administrator: DL301e.academy@wipo.int

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Advanced Courses Fees

Currency	Amount	Category
US dollar	400	standard fee
US dollar	250	student fee

DL-320E Basics of Patent Drafting

Summary: The intention of this advanced distance learning course on the basics of patent drafting is to introduce you to, and illustrate the concepts, of patent drafting. Some practical exercises are proposed with enough background and description to help you gain confidence to form a credible set of claims.

Tutored: Yes **Duration:** 100 hours **Cost:** [Fee List](#)

Next Session: March 11 to May 19, 2010

Enrollment: December 1, 2009 to February 18, 2010

Course Administrator: DL320e.academy@wipo.int

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- New** WIPO Summer Schools on Intellectual Property - 2010



Present Members

List of present members of the Global Network:

COUNTRY	INSTITUTION	URL
Australia	Intellectual Property Research Institute of Australia (IPRIA)	www.ipria.org
Brazil	National Institute of Industrial Property of Brazil (INPI)	www.inpi.gov.br
Bulgaria	Centre for Intellectual Property of the University of National and World Economy	www.unwe.acad.bg
China	State Intellectual Property Office of China (SIPO)	www.sipo.gov.cn
Croatia	State Intellectual Property Office of Croatia (SIPO)	www.dziv.hr
Cuba	Industrial Property Office of Cuba (OCPI)	www.ocpi.cu
Japan	National Center for Industrial Property Information and Training	www.inpit.go.jp

United States of America	United States Patent and Trademark Office Global Intellectual Property Academy	http://www.uspto.gov/web/offices/dcom/olia/training_history.htm

ACRONYM	INSTITUTION	URL
ARIPO	African Regional Intellectual Property Organization	www.aripo.wipo.net
EPO	European Patent Academy	www.epo.org/about-us/office/academy.html 
OAPI	Intellectual Property Training Center Denis Ekani	www.oapi.wipo.net
WWA	WIPO Worldwide Academy	www.wipo.int/academy

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European Patent Academy

"Promoting and supporting education and training in patent-related intellectual property"

The European Patent Academy ensures the overall co-ordination of the external education and training activities of the European Patent Office.

The mandate of the European Patent Academy, based at the European Patent Office in Munich, reflects the need to improve patent-related intellectual property training and education structures in Europe.



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The Academy's activities are divided into five programme areas, aimed at different target

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The EPO's learning management system (LMS) is an e-learning platform which provides access to materials covering a wide range of patent-related topics. Since you can access the modules and courses at a time and pace that suits you, the LMS is a cost-effective and flexible alternative to traditional classroom-based learning.

On the left you will find a link to our open-access **public modules** accessible without prior registration. These modules cover everything from the European patent system to patent searching and innovation in business. To view the modules on offer, simply click on the link in the top left-hand corner of this page.

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European Patent System

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<u>The extended European Search Report</u> Charlotte Schmidt, Principal Examiner, Practise and Procedure, EPO	English (GB)	<input type="button" value="▶"/>



Unity of Invention


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Unity of Invention (04:22 / 09:39) EXIT

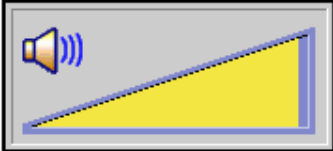


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 - 11. Example
- 12. Special technical feature approach
- 13. Corresponding special technical features
- 16. Common situations
- 17. Unitary combination of categories
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Assessing unity of invention

- Single general inventive concept approach
- Special technical feature approach



20. Self Evaluation

21. Quiz Questions

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Novelty

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Novelty (00:43 / 12:35)



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Overview

- The requirement of novelty
- The meaning of *novelty*

- Construal of claims
 - Implicit features
 - Equivalent features

- Common situations
 - Generic vs. specific disclosures
 - Selection inventions
 - Overlapping ranges
 - Selection from two or more lists





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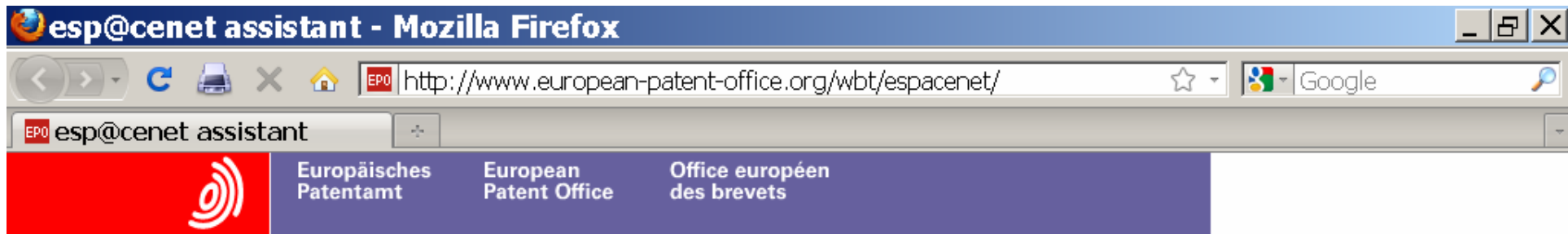
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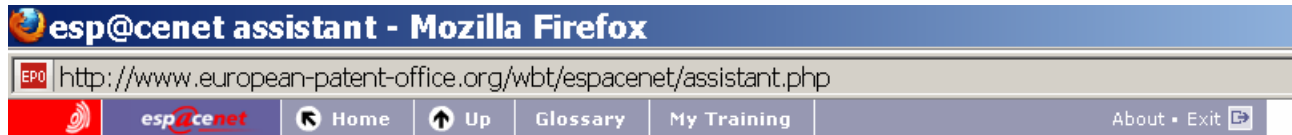
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<ul style="list-style-type: none"> European Patent System Searching and documentation <ul style="list-style-type: none"> Patent information - general The European Patent Classification esp@cenet "Search matters" seminar IP, innovation and business EPO Online Services - the way to do IP Special topics European Patent Academy General useage information How to Get a European Patent 	Contents	Data	Action
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A Guided Tour through esp@cenet

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How to Get a European Patent

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How to get a European Patent

Guide for applicants

Module 1 - General


European Patent Academy



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How to get a European Patent Part 1A (01:04 / 82:39) EXIT



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Welcome

to the web-based training of the **European Patent Academy** on

How to get a European Patent



Content overview

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- Relationship to other international conventions
- Choosing a route: national, European or international
- Extending European patents to non-EPC states

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El 80-85% de las patentes (no modelos utilidad) llegan a España por la vía europea (concedidas tras examen en la Oficina Europea de Patentes)

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Amendments to the Implementing Regulations as of 1.4.2010

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Albania becomes the 37th member state of the EPO. European patents are now valid in up to 40 countries and reach a market of about 570 million people.

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How to apply for a European patent

A step-by-step guide to the grant procedure

This guide provides basic information about the steps involved in the European patent granting procedure. Before applying for a patent, you should make sure that this is the best option for your invention. If you are unsure, please refer to the "[About patents](#)" page and the [FAQ](#), which are linked to from step 1.

1 Before applying for a European patent

Make sure that you know the answer to these questions before you apply:


- What is an invention?
- What is a patent?
- What is the purpose of a patent?
- What are the advantages of a European patent?
- How can I get patent protection?
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2 Application

There are different routes to patent protection and the best route for you will depend on your invention and the markets your company operates in. The European Patent Office accepts applications under the European Patent Convention (EPC) and the Patent Cooperation Treaty (PCT). If you are seeking protection in only a few countries, it may be best to apply direct for a national patent to each of the national offices.

A European patent application consists of:

- a request for grant
- a description of the invention
- claims
- drawings (if any)
- an abstract.

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Guide for applicants. Part 1

How to get a European patent

The "Guide for applicants" has been designed to provide inventors, companies and their representatives with an outline of the procedure involved in applying for a European patent, offering practical advice to smooth the way through the various stages.

The Guide cannot go into the details or specific issues of the European patent grant procedure, and it does not constitute an official commentary on the European Patent Convention (EPC).

If you need more detailed information, you are advised to consult the Guidelines for Examination in the European Patent Office, a comprehensive guide to every stage of the grant procedure and to EPO practice.

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Guide for applicants

Part 1

May 2010
(13th edition)
Updated to 1.5.2010

3 Filing and formalities examination

The first step in the European patent granting procedure is the examination on filing. This involves checking whether all the necessary information and documentation has been provided, so that the application can be accorded a filing date.

- [Fees and expenses](#)
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4 Search

While the formalities examination is being carried out, a European search report is drawn up, listing all the documents available to the Office that may be relevant to assessing novelty and inventive step. The search report is based on the patent claims but also takes into account the description and any drawings. Immediately after it has been drawn up, the search report is sent to the applicant together with a copy of any cited documents and an initial opinion as to whether the claimed invention and the application meet the requirements of the

- [Guidelines for Examination , Part B](#) 
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Guidelines for Examination in the European Patent Office (status April 2010)

1. By decision of the President of the EPO dated 19 November 2009, the Guidelines for Examination have been amended pursuant to [Article 10\(2\) EPC](#). The amendments are being published in the form of a complete "April 2010" edition of the Guidelines. These have been revised following consultation with the Standing Advisory Committee before the EPO (SACEPO). The amended Guidelines will apply as from 1 April 2010.

2. The updated Guidelines for Examination are published in all three EPO languages on the EPO website and are available for downloading free of charge. They will also be issued in paper form.

3. The English draft of these Guidelines was published on the EPO website in November 2009 in order to accommodate public interest in gaining the earliest possible access to information on the future amendments.

4. It should be noted that the "April 2010" edition of the Guidelines for Examination is the only valid official version, and supersedes the "April 2009"

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EPO Guidelines for Examination, April 2009

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 - 3.1 Obvious and consequently non-inventive selection among a number of known possibilities:
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CHAPTER V PRIORITY

"EPO Guidelines for Examination, April 2009, Part C, Chapters I-IV" is included on PDF as a general reference. **Reading this material is strongly recommended for this course.**

Note: Some of the slides of this course (those in English with a number at the beginning of the paragraph) are taken from an older version of the EPO Guidelines. Their numbering may vary in respect to the current version, but their contents virtually not.



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Fechas

Barcelona: 9-12 de marzo

Madrid: 23-26 de noviembre

Profesor

Pascual Segura

Licenciado en química por la Universidad de Valencia y doctor por la Universidad de Barcelona. Agente de la propiedad industrial de la UB y director de su Centro de Patentes. Member of the first Academic Advisory Board of the European Patent Academy, EPO. President de la secció tècnica "Patents" del Col.legi Oficial de Químics de Catalunya.

Contenido

- **Generalidades.** Obtener la mejor protección posible como objetivo. Aspectos previos a decidir. Alcance de la protección, derechos conferidos y actos prohibidos. Intentar que la posible infracción sea directa y literal (no indirecta o por equivalencia). Elementos estructurales, funcionales, intencionales y paramétricos. *Comprising vs. consisting of*. Procurar incluir reivindicaciones (reivs.) de entidad (= producto), además de reivs. de actividad (= procedimiento o método). Control de costes asociados al número de págs. y al número de reivs.
- **Metodología general para redactar reivindicaciones.** Cubrir todos los posibles actos infractores. No reivindicar lo que tenemos, sino lo que el estado de la técnica no tiene. Reivindicar la invención, no el producto. Reivindicar la invención *on the shelf* y a un nivel adecuado. Identificar el elemento nuevo. Seleccionar la categoría de la reiv. Escoger su "nombre o sujeto". Chequear su validez (¿es nueva? ¿tenemos algún argumento para justificar su actividad inventiva?)

A quién va dirigido

A quien tenga conocimientos sobre patentes o que haya asistido al módulo de Fundamentos. Está especialmente dirigido a técnicos que quieran realizar o controlar la redacción de solicitudes de patentes preparadas para OEPM, PCT, EPO y USPTO. Se necesitan conocimientos de inglés

Contenido (cont.)

¿es un mero desiderátum?) Chequear su infracción (¿tiene algún elemento o palabra demasiado limitante? ¿protege lo que se fabrica o vende? ¿es autosuficiente?).

- **Metodología para redactar reivindicaciones dependientes.** Jerarquizar la importancia comercial de los elementos. Partir de una reiv. para el mejor prototipo disponible, y progresivamente eliminar-generalizar-combinar sus elementos. Diseñar estructuras de dependencias apropiadas (pirámide, cadena, cadenas-en-pirámide, selección de ramas por separado, selección de ramas simultáneamente, etc.). Dependencia múltiple para crear posiciones de retroceso.

- **Tipos especiales de reivindicaciones.** Reivs. de medio-más-función. Reivs. en-dos-partes (*Jepson*), con *characterized in that*. Casos en los que resultan apropiadas y casos en los que no. Uso obsoleto de "caracterizado por" en reivs. que realmente no son en-dos-partes, o en reivs. dependientes. Reivs. con grupos de Markush. Reivs. de productos definidos por parámetros. Reivs. *product-by-process*. Reivs. con "para" (*purpose-limited product claims*). La 1ª y 2ª indicación terapéutica como excepciones. Reivs. de *method of treatment* en US. Reivs. de uso. Reivs. de procedimiento de obtención. Reivs. de procedimiento de simple mezcla. Anticipación accidental y *disclaimers*.

- **La claridad** como principal habilidad del redactor. La aproximación *KISS (Keep It Short and Simple)*. Ser claro, sin resultar farragoso ni prolijo. A un mismo elemento designarlo siempre con un único nombre (o acrónimo) y con un único número (si procede). Trucos. **La unidad de invención** y su trascendencia económica. Directrices consensuadas PCT-EPO-USPTO. Prever las modificaciones posteriores durante el examen, para que no impliquen **adición de materia nueva**.

- **Cuestiones formales sobre presentación de solicitudes.** Partes de una solicitud de patente. Normas generales para presentar la solicitud. Elaboración de un archivo-plantilla para controlar márgenes, paginación, espaciado, numeración de líneas, tipo de letra, etc. Subtítulos y notas precautorias en el archivo-plantilla. Confección de dibujos, gráficas y fotos. Biosecuencias y el programa *Patent-In*.



La práctica de la redacción de memorias y reivindicaciones

Contenido (cont.)

- **Cuestiones prácticas sobre redacción de memorias.** Qué no puede -o no debe- incluirse en la memoria. Mantener flexible la definición de la invención. Redactar en inglés sencillo, con la terminología y simbología habituales. "Inventarse" nueva terminología si conviene. Evitar los "falsos amigos" del inglés. Usar títulos que no sean "demasiado" descriptivos. El campo de la técnica. La parte del estado de la técnica (*background art*) como educación de los potenciales lectores y preparación de argumentos de actividad inventiva, señalando limitaciones, inconvenientes o prejuicios que supera la invención. Aprovechar la bibliografía de los inventores y/o realizar nuevas búsquedas. Cómo citar documentos. Incorporar el texto de las reivs. a la explicación (*summary*) de la invención, "contando la historia" para que la pueda entender un directivo y un juez. Procurar suficiencia de descripción y soporte para todas las reivs. Mencionar ventajas reales, sin hacer afirmaciones despreciativas. Rangos (*ranges*) y fórmulas generales. *Fallback positions* según se desee permitir o impedir futuras invenciones de selección. Ejemplos y realizaciones detalladas: su distribución y su reproducibilidad. El requisito US de *best mode*. Esquema típico en electromecánica: estructura, funcionamiento, fabricación, ventajas y variantes. El resumen (*abstract*). Trucos para ahorrar espacio.
- **Cuestiones prácticas sobre inventores.** La identificación correcta de los inventores y su importancia. Inventoría vs. propiedad. Errores típicos de los inventores. Tipos de inventores. Entrevistas con el inventor de contacto: delimitar los límites de no-funcionamiento; buscar elementos equivalentes.
- **Ejemplos y ejercicios prácticos** de química, farmacia, biotecnología, electromecánica e informática, distribuidos a lo largo de toda la exposición.

El inventor es el protagonista principal de la invención. El técnico redactor de patentes es fundamental para protegerla. Y la colaboración del abogado especializado lo es para transferir o hacer valer sus derechos.

Títulos oficiales

ES: agente de la propiedad industrial

EP: European patent attorney

US: patent agent & patent attorney

GB: patent agent

DE: Patentanwalt



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Objetivo del curso

El curso tiene por objetivo formar candidatos españoles que quieran mejorar su práctica profesional y presentarse al *European Qualifying Examination (EQE)* para convertirse en Agentes de Patentes Europeas, esencialmente a través de casos prácticos y con la orientación del Convenio de la Patente Europea. Para información sobre el EQE, ver www.epo.org. Este Primer Año del curso está programado para que los candidatos puedan presentarse a la Prueba A (redacción) y a la Prueba B (modificaciones) del examen en 2011, contando con la asistencia de los tutores a lo largo de toda la preparación. Entre marzo de 2011 y enero de 2012 se ofrecerá un Segundo Año preparatorio para presentarse en 2012 a la Prueba C (oposición) y a la D (jurídica).

Curso organizado por



Centre de Patents
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Curso práctico para preparar el *European Qualifying Examination (EQE)*

V Edición, Primer Año
Prueba A (redacción) y
Prueba B (modificaciones)

Madrid y Barcelona, marzo 2010 - enero 2011

★ = del sector
química-farma-
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Funcionamiento

Para funcionar de la manera más sencilla posible, no hay ningún coste de inscripción ni de documentación y no es necesario comunicar la intención de asistir. El local lo proporciona la OEPM o el Centro de Patentes de la UB.

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Anna Barlocchi

Qualified European Patent Attorney y socia fundadora de ZBM Patents; coordinadora del "Curso práctico para preparar el *European Qualifying Examination*" de la OEPM y el Centre de Patents de la UB

y Mathieu de Rooij

Qualified European Patent Attorney de ZBM Patents; antiguo examinador de la EPO

Conflictos entre innovadores y genéricos sobre la aplicación de la normativa relativa a patentes farmacéuticas en España: Crónica de una 'guerra' con varios frentes, narrada por un observador independiente

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